Theories of Personality
Fourth Edition

Calvin S. Hall
University of California
Santa Cruz, California

Gardner Lindzey
Center for Advanced Study in
the Behavioral Sciences
Stanford, California

John B. Campbell
Franklin & Marshall College
Lancaster, Pennsylvania

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To Our Teachers and Friends

Gordon W. Allport
Henry A. Murray
Edward C. Tolman
Preface

The original edition of Hall and Lindzey (1957) defined the field of personality, led to dozens of textbooks on personality theory, spawned hundreds of college and university courses, and yet remained a classic text through two revisions. The third edition (1978) is now almost twenty years old. The bulk of the material in that edition remains relevant today, but it has become dated in two major respects. First, the theories it emphasized exclude several positions that are of major contemporary importance. Second, the text obviously omits any reference to the body of research conducted during the past twenty years. The fourth edition of Hall and Lindzey has been designed to correct the inadequacies resulting from the passage of time. It is important to emphasize, however, that this fourth edition does not alter those attributes that are responsible for the enduring stature of Hall and Lindzey. That is, the revision provides a comprehensive, rigorous, and sympathetic treatment of centrally important theories of personality. Instructors and students who welcome this approach comprise the audience for whom this text is intended.

The need to include new material, combined with inevitable space limitations, has forced us to make difficult decisions about which theories to include. We reluctantly have deleted the chapters on Sheldon and on Existential and Eastern approaches, despite their continuing appeal. In addition, we have omitted the chapter on Organismic models, but portions of the material on Kurt Goldstein and Abraham Maslow have been incorporated into the chapter on Carl Rogers. Similarly, we have dropped the chapter on Kurt Lewin, but some of that material has been added to a new chapter on George Kelly. We also include new chapters on Hans Eysenck, who was mentioned in the chapter
on Raymond Cattell in the third edition, and on Albert Bandura, who previously was covered in the Stimulus-Response chapter. These changes, along with the revisions made to chapters carried over from the third edition, are intended to produce a text that will introduce the reader to those theories that are most directly relevant to current work in personality and related areas.

This revision will be familiar to readers acquainted with previous editions of Hall and Lindzey. We continue the practice of presenting each theoretical position in the most positive manner possible, and the format of individual chapters has largely been preserved. We have added an expanded Contents to help guide the reader, and we provide an outline to introduce each individual chapter. In a further attempt to assist the reader in understanding individual theories and their interrelationships, we divide the theories into four groups. The theorists within these groups are distinct, but they share a common emphasis, either on psychodynamics, personality structure, perceived reality, or learning.

The reader should be aware of several general considerations. First, we remain committed to a "theorists" approach to personality, rather than a "research" or a "topics" approach. The distinguishing feature of personality models is their recognition and preservation of the fundamental integrity of individuals, as we point out in Chapter 1. Texts organized around classes of behaviors or structural or dynamic units inevitably impair this integrity. Second, this presentation emphasizes translations of constructs across the theories. For example, Freud and Rogers both proposed a conflict model, although the models differed substantially in their assumptions and operation. Cattell also discussed conflict, but he attempted to define it quantitatively. Freud, Kelly, and Rogers all emphasized anxiety, but they defined the construct in very different ways. Bandura emphasized self-efficacy, which in turn sounds like Adler's striving for superiority, White's effectance motivation, and Allport's principle of mastery and competence. Karen Horney's dynamics of the self clearly anticipated Carl Rogers' very influential formulation a generation later.

And so on. Such translations are interesting in their own right. In addition, they demonstrate that connections exist among the theories. By extension, there is substance to the construct of personality. Finally, we believe that it is important to show connections between theories of personality and current research. These theories have heuristic value. Our not-so-hidden agenda is to make a case that these models of personality are not clumsy and outdated dinosaurs. Rather, they suggest hypotheses and connect with much of the work in our journals. We hope that study of the theories we present will convince the reader of their empirical and practical utility.

Gardner Lindzey
John B. Campbell
Preface to the First Edition

In spite of the deepening interest of psychologists in personality theory, there is no single source to which the student can turn for a survey of existing theories of personality. The present volume is intended to correct this shortcoming. It provides compact yet comprehensive summaries of the major contemporary theories of personality written at a level of difficulty that is appropriate for undergraduate or graduate instruction. From this book the student can secure a detailed overview of personality theory and at the same time he can prepare himself to read original sources with more appreciation and greater facility. It is our hope that this volume will serve a function in the area of personality similar to that served by Hilgard's *Theories of Learning* in the area of learning.

What theories should be included in a volume on personality theory? Although it is not easy to specify precisely what a theory of personality is, it is even more difficult to agree as to what are the most important of these theories. As set forth in the first chapter, we are willing to accept any general theory of behavior as a theory of personality. In judging importance we have relied primarily upon our evaluation of the degree of influence the theory has had upon psychological research and formulation. Also involved in this complex judgment is the matter of distinctiveness. When two or more theories have appeared to us to be very similar, we have either treated them in a single chapter or selected one theory to focus upon to the exclusion of the others. Given these broad criteria of importance and distinctiveness, there will probably be little objection to the particular theories we have elected to include in the volume. There may be less unanimity, however, concerning our decision to omit certain theories from consideration. Notable among the omissions are
McDougall's Hormic Theory, Role Theory, Guthrie's Contiguity Theory, Tolman's Purposive Behaviorism, and some of the recently developed positions such as David McClelland's, Julian Rotter's, and George Kelly's.

We originally planned to include both McDougall's Hormic Theory and Role Theory but limitations of space forced us to reduce the number of chapters and these were the theories we judged to be most expendable. Hormic Theory was omitted because its influence is somewhat more indirect than in the case of the other theories. Although we regard McDougall as a theorist of great importance, his contemporary impact is largely mediated by more recent theorists who have borrowed features of his theory. Role Theory, it seems to us, is less systematically developed than most of the other positions we elected to include. It is true that the theory contains a leading idea of considerable value and importance but this idea has not as yet been incorporated into a network of concepts which deal comprehensively with human behavior. Guthrie and Tolman were omitted in favor of Hull's reinforcement theory simply because there has been less extensive research application of these theories outside of the area of learning. McClelland, Rotter, and Kelly were not included because of their recency and because, in some respects, their positions resemble theories or combinations of theories that we have included.

Having decided upon what theories to include, we were still faced with the problem of how to organize and describe these positions. Some consistency in mode of presentation seemed desirable; yet at the same time we wished to preserve the integrity of the individual theories. Our compromise consisted of providing general categories in terms of which the theories could be described while permitting ourselves a good deal of latitude within these categories so as to present each theory in the manner that seemed most natural. Even these general categories were not adhered to rigidly. In some instances new ones were necessary in order to represent a particular theory adequately, and in one or two cases it seemed advisable to combine categories. Typically, however, each theory is introduced with an Orientation section which recounts briefly the personal history of the theorist, outlines the main lines of influence upon the theory, and provides a summary of the salient features of the theory. Next the reader will find a section on the Structure of Personality in which are included the concepts designed to represent the acquisitions or enduring portions of personality. Following this is a section on Dynamics of Personality which sets forth the motivational or dispositional concepts and principles espoused by the theorist. Then comes a section on Development of Personality which deals with growth and change as represented by the theory. A section on Characteristic Research and Research Methods follows, in which representative investigations and empirical techniques are presented. There is a concluding section entitled Current Status and Evaluation which outlines briefly the present state of the theory and summarizes the major contributions of the theory as well as the chief criticisms it has elicited. At the end of each chapter
is a brief list of Primary Sources which represents the most important of the original sources concerning the theory. All of the publications referred to in the text are brought together in a final section at the end of each chapter entitled References.

We have attempted to present each theory in a positive light, dwelling upon those features of the theory that seem to us most useful and suggestive. Although we have included a brief critique of each theory it has not been our primary intention to evaluate these theories. Rather, we have attempted to present them in expository terms that will demonstrate what they are good for or what promise they hold for the individual who adopts them. The length of a chapter does not reflect our judgment of the relative importance of the theory. Each theory is written in what seemed to us the smallest number of pages necessary to represent its essential features accurately and comprehensively. The reader will observe that in some chapters there appears to be more detailed and personal information concerning the theorist and the development of his theory than in other chapters. This was determined solely by availability of information. In those instances where we knew a good deal about the theorist, we decided to include as much of this information as seemed vital even though this would result in some chapters appearing more personalized than others.

In the preparation of this volume we sought and received invaluable assistance from a number of colleagues. It is with deep gratitude and appreciation that we acknowledge the personal contribution made by many of the theorists whose work is presented here. They clarified our thinking upon a number of points and made numerous suggestions both as to form and content which greatly improved the manuscript. Whatever merit this book possesses must be attributed in large measure to the meticulous care with which each of the following theorists read and criticized the chapter devoted to his theory: Gordon W. Allport, Raymond B. Cattell, H. J. Eysenck, Kurt Goldstein, Carl Jung, Neal E. Miller, Gardner Murphy, Henry A. Murray, Carl Rogers, Robert R. Sears, and William Sheldon. In addition to illuminating comments concerning the chapter dealing with his own theory, Gordon Allport provided us with penetrating criticisms and generative suggestions concerning all of the remaining chapters. He also used many of the chapters in his undergraduate and graduate courses and provided us with the comments and suggestions of these students. We are greatly indebted not only to these Harvard and Radcliffe students but also to many students at Western Reserve University who read and commented upon the chapters. We are pleased to acknowledge our further indebtedness to the following individuals, each of whom read and improved by their suggestions one or more chapters in this book: John A. Atkinson, Raymond A. Bauer, Urie Bronfenbrenner, Arthur Combs, Anthony Davids, Frieda Fromm-Reichmann, Eugene L. Hartley, Ernest Hilgard, Robert R. Holt, Edward E. Jones, George S. Klein, Herbert McClosky, George Mandler, James G. March,
A. H. Maslow, Theodore M. Newcomb, Helen S. Perry, Stewart E. Perry, M. Brewster Smith, Donald Snygg, S. S. Stevens, Patrick Suppes, John Thibaut, Edward C. Tolman, and Otto A. Will, Jr. We are indebted to Heinz and Rowena Ansbacher for providing us with page proof of their book *The Individual Psychology of Alfred Adler* prior to its publication. It was very helpful to us in writing the section on Adler's theory of personality. In the final preparation of the manuscript we received invaluable assistance from Virginia Caldwell, Marguerite Dickey, and Kenneth Wurtz.

The completion of this volume was greatly facilitated by a half-year leave of absence granted by Western Reserve University to Calvin S. Hall and by a fellowship at the Center for Advanced Study in the Behavioral Sciences granted to Gardner Lindzey. The writing was also facilitated by the permission granted Lindzey to use the facilities of the Dartmouth College Library during the summer of 1954.

*Calvin S. Hall  
Gardner Lindzey*
Preface to the Second Edition

In the thirteen years that have intervened between the first edition of *Theories of Personality* and the present edition, a number of changes in personality theory have taken place. Death has diminished the role of the major theorists: Angyal (1960), Jung (1961), Goldstein (1965), and Allport (1967). Some of the theories have been substantially revised and elaborated by their originators. All of the theories to a greater or lesser extent, have stimulated additional empirical activities. More importantly, new viewpoints have appeared on the scene that merit attention.

Let us reflect on the new viewpoints. It was difficult to decide which of the new theories that have emerged since 1957 should be discussed here. Few readers will object strenuously to the choices we made. Friend and foe alike will agree that B. F. Skinner's viewpoint (dare we call it a theory?) has become a major influence in American psychology and should not be omitted from consideration. Nor could we ignore an important European contribution to personality theory. Existential psychology has acquired an impressive constituency in the past ten years, not only in its European homeland but also in the United States. It is one of the mainstreams of the flourishing humanist movement. Although there may be little disagreement with these choices, we anticipate complaints about the omissions, notably Piaget and cognitive theory. Both were given careful consideration and both would have been included if space had permitted. The final decision was based on the criterion of their centrality for the psychology of personality. Skinner and existential psychology seemed to us to meet this criterion somewhat better than does either Piaget's developmental theory or cognitive theory.
Space limitations also required some excisions. Cattell emerged as the principal representative of factor theory. Eysenck, who shared the stage with Cattell in the first edition, has been increasingly involved in behavior theory and appears in the stimulus response theory chapter (Chapter Eleven) as well as in the factor theory chapter (Chapter Ten). Murphy's biosocial theory was reluctantly sacrificed on the grounds that it is an eclectic theory and, as such, its main concepts are adequately represented in other chapters. All of the remaining chapters have been updated. Some of the chapters (particularly those that deal with Allport, factor theory, S-R theory, and Rogers) were extensively revised. Other chapters needed fewer alterations.

The format of the chapters has not been changed. All of the viewpoints are still presented in a positive light. We have made every effort to depict with clarity and accuracy the essential features of each theory.

We were extremely fortunate to have B. F. Skinner and Medard Boss, whose positions are represented in the two new chapters (Chapters Twelve and Fourteen), read and comment on what we had written concerning their viewpoints. Preparation of the new chapter on Skinner's operant reinforcement theory and revision of the chapters on S-R theory and factor theories were greatly facilitated by the detailed and substantial contributions of Richard N. Wilton, Janet T. Spence, and John C. Loehlin. Also we are grateful to G. William Domhoff, Kenneth MacCorquodale, and Joseph B. Wheelwright, who made critical contributions to the revision. Florence Strong and Allen Stewart were diligent proofreaders and indexers.

Calvin S. Hall

Gardner Lindzey
Preface to the Third Edition

This edition of Theories of Personality contains a number of new features. Most prominent of these are two new chapters, one on Contemporary Psychoanalytic Theory; the other on Eastern Psychology. The former describes some of the changes that have taken place in psychoanalytic theory and research since the death of its founder, Sigmund Freud. Particular attention is paid to the important contributions of Erik H. Erikson in this chapter.

Because of the growing interest in Eastern thought, we considered it appropriate and timely to present an overview of Eastern personality theory and its influence on Western psychology. We were fortunate to have Daniel Goleman, an authority on Eastern psychology, draft this chapter for us.

Another innovation is a change in the order of the chapters. Clinically oriented theories are grouped together in the first half of the book; the more experimental and quantitative theories are grouped together in the second half of the book.

Chapters that appeared in the second edition have undergone varying amounts of revision, amplification, and condensation. In every case we have tried to discuss all major theoretical or research contributions published since our last edition.

Our publishers have made every effort to produce an attractively designed book, one that has clearly emphasized headings and subheadings for easier reading. Photographs appear in the book for the first time.

We have received significant assistance from a number of individuals. Erik Erikson read the section of Chapter 3 devoted to his views and made numerous helpful suggestions for improving it. Medard Boss provided us with new infor-
mation about his activities since 1970, and Jason Aronson and Paul J. Stern
made available to us the manuscripts of English translations of two recent
books by Boss. Raymond B. Cattell and B. F. Skinner have identified what they
consider their major recent contributions. Once again John Lochlin and Janet
T. Spence have provided essential services in the revision of the Factor Theory
and S-R Theory chapters respectively. Jim Mazur provided a comparable service
in connection with the chapter dealing with Operant Theory.

William McGuire of Princeton University Press and Janet Dallett of the
C. G. Jung Clinic, Los Angeles, were helpful in the revision of the Jung chapter.
Vernon J. Nordby assisted in the preparation of the new chapter on Contempo-
rary Psychoanalytic Theory. Ruth Wylie provided us with unpublished material
for use in the chapter on Rogers. Rosemary Wellner provided skillful editorial
advice and Gen Carter was very helpful in the final preparation of much of the
manuscript. Gardner Lindzey's contributions were facilitated by the Center for
Advanced Study in the Behavioral Sciences.

Calvin S. Hall

Gardner Lindzey
Contents

The Nature of Personality Theory

Personality Theory and the History of Psychology
What Is Personality?
What Is a Theory?
A Theory of Personality
Personality Theory and Other Psychological Theories
The Comparison of Theories of Personality
  Formal Attributes
  Substantive Attributes

Emphasis on Psychodynamics

Chapter 2
Sigmund Freud's Classical Psychoanalytic Theory

Introduction and Context
Personal History 31
The Structure of Personality 35
The Id 35
The Ego 36
The Superego 37
The Dynamics of Personality 38
Instinct 39
The Distribution and Utilization of Psychic Energy 43
Anxiety 46
The Development of Personality 47
Identification 47
Displacement 48
The Defense Mechanisms of the Ego 50
Stages of Development 52
Characteristic Research and Research Methods 57
Freud’s Scientific Credo 59
Free Association and Dream Analysis 61
Freud’s Case Studies 63
Freud’s Self-analysis 66
Current Research 67
Subliminal Psychodynamic Activation 67
New Look 3 71
Current Status and Evaluation 73

Chapter 3
Carl Jung’s Analytic Theory 78

Introduction and Context 79
Personal History 80
The Structure of Personality 84
The Ego 84
The Personal Unconscious 84
The Collective Unconscious 85
The Self 90
The Attitudes 91
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Functions</td>
<td>91</td>
</tr>
<tr>
<td>Interactions Among the Systems of Personality</td>
<td>94</td>
</tr>
<tr>
<td>The Dynamics of Personality</td>
<td>96</td>
</tr>
<tr>
<td>Psychic Energy</td>
<td>97</td>
</tr>
<tr>
<td>The Principle of Equivalence</td>
<td>99</td>
</tr>
<tr>
<td>The Principle of Entropy</td>
<td>100</td>
</tr>
<tr>
<td>The Use of Energy</td>
<td>101</td>
</tr>
<tr>
<td>The Development of Personality</td>
<td>101</td>
</tr>
<tr>
<td>Causality Versus Teleology</td>
<td>101</td>
</tr>
<tr>
<td>Synchronicity</td>
<td>102</td>
</tr>
<tr>
<td>Heredity</td>
<td>103</td>
</tr>
<tr>
<td>Stages of Development</td>
<td>105</td>
</tr>
<tr>
<td>Progression and Regression</td>
<td>106</td>
</tr>
<tr>
<td>The Individuation Process</td>
<td>106</td>
</tr>
<tr>
<td>The Transcendent Function</td>
<td>107</td>
</tr>
<tr>
<td>Sublimation and Repression</td>
<td>107</td>
</tr>
<tr>
<td>Symbolization</td>
<td>109</td>
</tr>
<tr>
<td>Characteristic Research and Research Methods</td>
<td>109</td>
</tr>
<tr>
<td>Experimental Studies of Complexes</td>
<td>110</td>
</tr>
<tr>
<td>Case Studies</td>
<td>110</td>
</tr>
<tr>
<td>Comparative Studies of Mythology, Religion, and the Occult Sciences</td>
<td>110</td>
</tr>
<tr>
<td>Dreams</td>
<td>112</td>
</tr>
<tr>
<td>Current Research</td>
<td>113</td>
</tr>
<tr>
<td>Jung's Typology</td>
<td>113</td>
</tr>
<tr>
<td>The Myers–Briggs Type Indicator</td>
<td>115</td>
</tr>
<tr>
<td>Current Status and Evaluation</td>
<td>118</td>
</tr>
<tr>
<td><strong>Chapter 4</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Social Psychological Theories: Adler, Fromm, Horney, and Sullivan</strong></td>
<td></td>
</tr>
<tr>
<td>Introduction and Context</td>
<td>122</td>
</tr>
<tr>
<td><em>ALFRED ADLER</em></td>
<td>123</td>
</tr>
<tr>
<td></td>
<td>124</td>
</tr>
</tbody>
</table>
Contents

Fictional Finalism 128
Striving for Superiority 129
Inferiority Feelings and Compensation 130
Social Interest 131
Style of Life 132
The Creative Self 135
Neurosis 136
Characteristic Research and Research Methods 137
Order of Birth and Personality 137
Early Memories 138
Childhood Experiences 139
Current Research 139
Social Interest 139
ERICH FROMM 140
KAREN Horney 146
Horney and Freud 147
Basic Anxiety 149
The Neurotic Needs 150
Three Solutions 152
Alienation 152
HARRY STACK SULLIVAN 153
The Structure of Personality 157
Dynamisms 157
Personifications 159
Cognitive Processes 160
The Dynamics of Personality 161
Tension 161
Energy Transformations 162
The Development of Personality 163
Stages of Development 163
Determiners of Development 166
Characteristic Research and Research Methods 167
The Interview 167
Research on Schizophrenia 168
Current Status and Evaluation 169
# Chapter 5

**Erik Erikson and Contemporary Psychoanalytic Theory**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction and Context</td>
<td>174</td>
</tr>
<tr>
<td>Ego Psychology</td>
<td>175</td>
</tr>
<tr>
<td>Anna Freud</td>
<td>176</td>
</tr>
<tr>
<td>Object Relations</td>
<td>179</td>
</tr>
<tr>
<td>Heinz Kohut</td>
<td>181</td>
</tr>
<tr>
<td>The Merging of Psychoanalysis and Psychology</td>
<td>183</td>
</tr>
<tr>
<td>George Klein</td>
<td>184</td>
</tr>
<tr>
<td>Robert White</td>
<td>187</td>
</tr>
<tr>
<td><em>ERIK II. ERIKSON</em></td>
<td>190</td>
</tr>
<tr>
<td>Personal History</td>
<td>190</td>
</tr>
<tr>
<td>The Psychosocial Theory of Development</td>
<td>195</td>
</tr>
<tr>
<td>I. Basic Trust Versus Basic Mistrust</td>
<td>196</td>
</tr>
<tr>
<td>II. Autonomy Versus Shame and Doubt</td>
<td>198</td>
</tr>
<tr>
<td>III. Initiative Versus Guilt</td>
<td>199</td>
</tr>
<tr>
<td>IV. Industry Versus Inferiority</td>
<td>200</td>
</tr>
<tr>
<td>V. Identity Versus Identity Confusion</td>
<td>201</td>
</tr>
<tr>
<td>VI. Intimacy Versus Isolation</td>
<td>203</td>
</tr>
<tr>
<td>VII. Generativity Versus Stagnation</td>
<td>203</td>
</tr>
<tr>
<td>VIII. Integrity Versus Despair</td>
<td>204</td>
</tr>
<tr>
<td>A New Conception of the Ego</td>
<td>205</td>
</tr>
<tr>
<td>Characteristic Research and Research Methods</td>
<td>207</td>
</tr>
<tr>
<td>Case Histories</td>
<td>207</td>
</tr>
<tr>
<td>Play Situations</td>
<td>211</td>
</tr>
<tr>
<td>Anthropological Studies</td>
<td>211</td>
</tr>
<tr>
<td>Psychohistory</td>
<td>213</td>
</tr>
<tr>
<td>Current Research</td>
<td>214</td>
</tr>
<tr>
<td>Identity Status</td>
<td>214</td>
</tr>
<tr>
<td>Other Stages</td>
<td>215</td>
</tr>
<tr>
<td>Cross-Cultural Status</td>
<td>216</td>
</tr>
<tr>
<td>Current Status and Evaluation</td>
<td>217</td>
</tr>
</tbody>
</table>
## Emphasis on Personality Structure

### Chapter 6
**Henry Murray’s Personology**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction and Context</td>
<td>221</td>
</tr>
<tr>
<td>Personal History</td>
<td>222</td>
</tr>
<tr>
<td>The Structure of Personality</td>
<td>223</td>
</tr>
<tr>
<td>- Definition of Personality</td>
<td>228</td>
</tr>
<tr>
<td>- Proceedings and Serials</td>
<td>229</td>
</tr>
<tr>
<td>- Serial Programs and Schedules</td>
<td>230</td>
</tr>
<tr>
<td>- Abilities and Achievements</td>
<td>231</td>
</tr>
<tr>
<td>- Establishments of Personality</td>
<td>231</td>
</tr>
<tr>
<td>The Dynamics of Personality</td>
<td>233</td>
</tr>
<tr>
<td>- Need</td>
<td>234</td>
</tr>
<tr>
<td>- Press</td>
<td>239</td>
</tr>
<tr>
<td>- Tension Reduction</td>
<td>241</td>
</tr>
<tr>
<td>- Thema</td>
<td>241</td>
</tr>
<tr>
<td>- Need Integrate</td>
<td>242</td>
</tr>
<tr>
<td>- Unity-Thema</td>
<td>242</td>
</tr>
<tr>
<td>- Regnant Processes</td>
<td>243</td>
</tr>
<tr>
<td>- Vector–Value Scheme</td>
<td>243</td>
</tr>
<tr>
<td>The Development of Personality</td>
<td>244</td>
</tr>
<tr>
<td>- Infantile Complexes</td>
<td>246</td>
</tr>
<tr>
<td>- Genetic–Maturational Determinants</td>
<td>249</td>
</tr>
<tr>
<td>- Learning</td>
<td>249</td>
</tr>
<tr>
<td>- Sociocultural Determinants</td>
<td>249</td>
</tr>
<tr>
<td>- Uniqueness</td>
<td>250</td>
</tr>
<tr>
<td>- Unconscious Processes</td>
<td>250</td>
</tr>
<tr>
<td>- The Socialization Process</td>
<td>251</td>
</tr>
<tr>
<td>Characteristic Research and Research Methods</td>
<td>251</td>
</tr>
<tr>
<td>- Intensive Study of Small Numbers of Normal Subjects</td>
<td>252</td>
</tr>
<tr>
<td>- The Diagnostic Council</td>
<td>252</td>
</tr>
<tr>
<td>- Instruments of Personality Measurement</td>
<td>252</td>
</tr>
<tr>
<td>- Representative Studies</td>
<td>254</td>
</tr>
</tbody>
</table>
Chapter 7
Gordon Allport and the Individual 267

Introduction and Context 267

Personal History 268

The Structure and Dynamics of Personality 273

Personality, Character, and Temperament 274

Trait 275

Intentions 279

The Proprium 280

Functional Autonomy 281

The Unity of Personality 285

The Development of Personality 285

The Infant 285

Transformation of the Infant 286

The Adult 287

Characteristic Research and Research Methods 289

Idiographic Versus Nomothetic 289

Direct and Indirect Measures of Personality 291

Studies of Expressive Behavior 292

Letters from Jenny 297

Current Research 298

Interactionism and the “Person–Situation Debate” Revisited 298

Idiographies and Idioethics 300

Allport Revisited 302

Current Status and Evaluation 305
Chapter 8
Raymond Cattell's Factor-Analytic Trait Theory

Introduction and Context
Factor Analysis
Personal History
The Nature of Personality: A Structure of Traits
Traits
Ability and Temperament Traits
The Specification Equation
Dynamic Traits
Cattell and Freud
The Development of Personality
Heredity–Environment Analysis
Learning
Integration of Maturation and Learning
The Social Context
Characteristic Research and Research Methods
A Factor-Analytic Study of a Single Individual
The VIDAS Systems Model of Personality
Current Research
The Big Five Factors of Personality
Behavior Genetics
Evolutionary Personality Theory
Current Status and Evaluation

Chapter 9
Hans Eysenck's Biological Trait Theory

Introduction and Context
Personal History
The Description of Temperament
Extraversion and Neuroticism
Psychoticism
Causal Models
Eysenck (1957)
Eysenck (1967)
# Chapter 10

**George Kelly's Personal Construct Theory**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction and Context</td>
<td>395</td>
</tr>
<tr>
<td><strong>KURT LEWIN</strong></td>
<td></td>
</tr>
<tr>
<td>The Structure of Personality</td>
<td>396</td>
</tr>
<tr>
<td>The Life Space</td>
<td>397</td>
</tr>
<tr>
<td>Differentiation</td>
<td>398</td>
</tr>
<tr>
<td>Connections Between Regions</td>
<td>399</td>
</tr>
<tr>
<td>The Number of Regions</td>
<td>400</td>
</tr>
<tr>
<td>The Person in the Environment</td>
<td>403</td>
</tr>
<tr>
<td>The Dynamics of Personality</td>
<td>403</td>
</tr>
<tr>
<td>Energy</td>
<td>404</td>
</tr>
<tr>
<td>Tension</td>
<td>405</td>
</tr>
<tr>
<td>Need</td>
<td>405</td>
</tr>
<tr>
<td>Tension and Motoric Action</td>
<td>406</td>
</tr>
<tr>
<td>Valence</td>
<td>406</td>
</tr>
<tr>
<td>Force or Vector</td>
<td>407</td>
</tr>
<tr>
<td>Locomotion</td>
<td>408</td>
</tr>
<tr>
<td>The Development of Personality</td>
<td>410</td>
</tr>
<tr>
<td><strong>GEORGE KELLY</strong></td>
<td></td>
</tr>
<tr>
<td>Personal History</td>
<td>410</td>
</tr>
<tr>
<td>Basic Assumptions</td>
<td>411</td>
</tr>
<tr>
<td>Constructive Alternativism</td>
<td>413</td>
</tr>
<tr>
<td>Man-the-Scientist</td>
<td>413</td>
</tr>
</tbody>
</table>
Focus on the Construer 415
Motivation 416
Being Oneself 417
Personal Constructs 418
Scales 419
The Fundamental Postulate and Its Corollaries 420
The Continuum of Cognitive Awareness 425
Constructs About Change 426
Characteristic Research and Research Methods 427
Current Research 429
Current Status and Evaluation 430

Chapter 11
Carl Rogers's Person-Centered Theory 434

Introduction and Context 435
KURT GOLDSTEIN 437
The Structure of the Organism 439
The Dynamics of the Organism 440
Equalization 440
Self-Actualization 441
"Coming to Terms" with the Environment 442
The Development of the Organism 443
ABRAHAM MASLOW 444
Assumptions about Human Nature 446
Hierarchy of Needs 448
Syndromes 452
Self-Actualizers 453
CARL ROGERS 454
Personal History 458
The Structure of Personality 461
The Organism 461
The Self 463
Organism and Self: Congruence and Incongruence 463
The Dynamics of Personality 464
The Development of Personality 466
Chapter 12

B. F. Skinner's Operant Conditioning

Introduction and Context

Personal History

Some General Considerations
  Lawfulness of Behavior
  Functional Analysis

The Structure of Personality

The Dynamics of Personality

The Development of Personality
  Classical Conditioning
  Operant Conditioning
  Schedules of Reinforcement
  Superstitious Behavior
  Secondary Reinforcement
  Stimulus Generalization and Discrimination
  Social Behavior
  Abnormal Behavior

Characteristic Research and Research Methods

Qualitative Studies

Content Analysis

Rating Scales

Q-Technique Studies

Experimental Studies of the Self-Concept

Other Empirical Approaches

Current Research
  Cognitive Dissonance Theory
  Self-Discrepancy Theory
  The Dynamic Self-Concept

Current Status and Evaluation

Emphasis on Learning
Chapter 13
Dollard and Miller’s Stimulus-Response Theory

Introduction and Context 535
Personal Histories 539
An Illustrative Experiment 544
The Structure of Personality 550
The Dynamics of Personality 551
The Development of Personality 551
  Innate Equipment 552
  The Learning Process 552
Secondary Drive and the Learning Process 554
Higher Mental Processes 555
The Social Context 557
  Critical Stages of Development 558
Applications of the Model 561
  Unconscious Processes 561
  Conflict 563
  How Neuroses Are Learned 566
  Psychotherapy 569
Characteristic Research and Research Methods 571
Current Research 573
  Wolpe 573
  Seligman 579
Current Status and Evaluation 586

Chapter 14
Albert Bandura and Social Learning Theories 590

Introduction and Context 590
ALBERT BANDURA 591
Personal History 593
Reconceptualization of Reinforcement 594
Principles of Observational Learning 596
Contents

Attentional Processes 597
Retention Processes 598
Production Processes 598
Motivational Processes 598
Reciprocal Determinism 600
The Self-System 603
Self-Observation 604
Judgmental Process 604
Self-Reaction 604
Applications to Therapy 606
Self-Efficacy 607
Characteristic Research and Research Methods 612
WALTER MISCHEL 616
Cognitive Person Variables 619
The Consistency Paradox and Cognitive Prototypes 620
A Cognitive-Affective System Theory of Personality 622
Current Status and Evaluation 626

Perspectives and Conclusions 629

Chapter 15
Personality Theory in Perspective 630
The Comparison of Theories of Personality 631
Some Reflections on Current Personality Theory 642
Theoretical Synthesis Versus Theoretical Multiplicity 648

References 652

Photo Credits 722

Name Index 723

Subject Index 730
The Nature of Personality Theory

In this volume we will present an organized summary of the major contemporary theories of personality. In addition to providing a digest of each theory, we will discuss relevant research and provide a general evaluation of the theory. Before proceeding, however, something should be said about what personality theories are as well as how the various personality theories can be distinguished from one another. Further, we will place these theories in a general context, relating them to what has gone on historically in psychology as well as locating them in the contemporary scene.

In this chapter we begin with a very general and somewhat informal outline of the role of personality theory in the development of psychology, followed by a discussion of what is meant by the terms personality and theory. From these considerations it is an easy step to the question: What constitutes a personality theory? We will also consider very briefly the relation between personality...
theory and other forms of psychological theory and present a number of dimensions by means of which personality theories can be compared with one another.

PERSONALITY THEORY AND THE HISTORY OF PSYCHOLOGY

A comprehensive view of the development of personality theory must surely begin with conceptions of man advanced by the great classical scholars such as Hippocrates, Plato, and Aristotle. An adequate account would also be obligated to deal with the contributions of dozens of thoughtful individuals, for example, Aquinas, Bentham, Comte, Hobbes, Kierkegaard, Locke, Nietzsche, and Machiavelli, who lived in the intervening centuries and whose ideas are still detected in contemporary formulations. It is not our intention here to attempt any such general reconstruction. Our goal is much more limited. We shall merely consider in broad terms the general role personality theory has played in the development of psychology during the past century.

To begin with, let us examine five relatively recent sources of influence upon personality theory. A tradition of clinical observation beginning with Charcot and Janet but including most importantly Freud, Jung, and McDougall has done more to determine the nature of personality theory than any other single factor. In a moment we shall examine some of the effects of this movement. A second path of influence stems from the Gestalt tradition and William Stern. These theorists were tremendously impressed with the unity of behavior and consequently were convinced that a fragmented study of small elements of behavior could never prove enlightening. As we shall discover, this point of view is deeply embedded in current personality theory. There is also the more recent impact of experimental psychology in general and learning theory in particular. From this avenue has come increased concern with carefully controlled empirical research, a better understanding of the nature of theory construction, and a more detailed appreciation of how behavior is modified. A fourth determinant is represented by the psychometric tradition with its focus upon the measurement and study of individual differences. This source has provided increasing sophistication in scaling or measuring dimensions of behavior and the quantitative analysis of data. Finally, genetics and physiology have played a crucial role in attempts to identify and describe personality characteristics. This influence has been particularly strong in recent models, such as those proposed by Eysenck (see Chapter 9) and the Big Five theorists (see Chapter 8), but it also is clear in Freud's early work and in statements such as Henry Murray's "No brain, no personality."

The specific background out of which each of the theories presented in this book emerged is briefly discussed in the following chapters. Historical discussions of the development of contemporary personality theory will be found in Allport (1937, 1961), Boring (1950), and Sanford (1963, 1985). The

Let us turn now to some of the distinctive features of personality theory. Although this body of theory is part of the broad field of psychology, there are still appreciable differences between personality theory and research and theory and research in other areas of psychology. These differences are particularly pronounced in regard to personality theory in its early stages of development, and they exist in spite of a great deal of variation among personality theories themselves. The striking differences among personality theories, however, imply that almost any statement that applies with detailed accuracy to one theory of personality will be somewhat inaccurate when applied to many other theories. In spite of this, there are modal qualities or central tendencies inherent in most personality theories, and it is upon these that we shall focus our discussion.

Granted that there are important congruences in the streams of influence that determined the early paths of general psychology and of personality theory; still there are significant differences. It is true that Darwin was a potent factor in the development of both general and personality psychology. It is also true that physiology of the nineteenth century had its influence upon personality theorists as well as a marked effect upon general psychology. Nevertheless the broad flavor of the factors influencing these two groups during the past three-quarters of a century has been distinguishably different. While personality theorists were drawing their leading ideas primarily from clinical experience, experimental psychologists were paying heed to the findings of the experimental laboratory. The names Charcot, Freud, Janet, McDougall, and Stern are in the forefront of the work of early personality theorists, but we find Helmholtz, Pavlov, Thorndike, Watson, and Wundt cast in a comparable role in experimental psychology. The experimentalists derived their inspirations and their values from the natural sciences, while personality theorists remained closer to clinical data and their own creative reconstructions. One group welcomed intuitive feelings and insights but scorned the trappings of science with its restriction upon the imagination and its narrow technical skills. The other applauded the rigor and precision of delimited investigation and shrank in distaste from the unrestrained use of clinical judgment and imaginative interpretation. In the end it was clear that early experimental psychology had little to say concerning problems of interest to the personality theorist and that the personality theorist had little respect for problems of central importance to the experimental psychologist.
Recent scholarship suggests that Wundt may have been somewhat of an exception to these generalizations. For example, Stelmack and Stalikas (1991) describe how Wundt’s classification of temperaments based on two dimensions, strength of emotions and changeability, corresponds to the subsequent descriptions provided by Hans Eysenck (see Chapter 9) based on underlying dimensions of neuroticism and extraversion. Despite such connections, the “two disciplines of scientific psychology” (Cronbach, 1957, 1975) have remained remarkably separate.

It is well known that psychology developed in the late-nineteenth century as the offspring of philosophy and experimental physiology. The origin of personality theory owes much more to the medical profession and to the conditions of medical practice. In fact, the early giants in this area (Freud, Jung, and McDougall) were not only trained in medicine but also practiced as psychotherapists. This historical link between personality theory and practical application has remained evident throughout the development of psychology and provides an important distinction between this brand of theory and certain other types of psychological theory.

Two generalizations concerning personality theory are consistent with what we have said thus far. First, it is clear that personality theory has occupied a dissident role in the development of psychology. Personality theorists in their own times have been rebels: rebels in medicine and in experimental science, rebels against conventional ideas and usual practices, rebels against typical methods and respected techniques of research, and most of all rebels against accepted theory and normative problems. The fact that personality theory has never been deeply embedded in the mainstream of academic psychology has had several important implications. On the one hand, it tended to free personality theory from the deadly grip of conventional modes of thought and preconceptions concerning human behavior. By being relatively uninvolved in the ongoing institution of psychology, it was easier for personality theorists to question or reject assumptions that were widely accepted by psychologists. On the other hand, this lack of involvement also freed them from some of the discipline and the responsibility for reasonably systematic and organized formulation that is the heritage of the well-socialized scientist.

A second generalization is that personality theories are functional in their orientation. They are concerned with questions that make a difference in the adjustment and survival of the individual. At a time when the experimental psychologist was engrossed with such questions as the existence of imageless thought, the speed with which nerve impulses travel, specifying the content of the normal conscious human mind, and deciding whether there was localization of function within the brain, the personality theorist was concerned with why it was that certain individuals developed crippling neurotic symptoms in the absence of organic pathology, the role of childhood trauma in adult adjustment, the conditions under which mental health could be regained, and the
major motivations that underlay human behavior. Thus, it was the personality theorist, and only the personality theorist, who in the early days of psychology dealt with questions that to the average person seem to lie at the core of a successful psychological science. Some exciting recent developments in the field continue to reflect this functionalist orientation. A clear example comes from David Buss (1991), who employs evolutionary metatheory to identify major goals for humans, resulting psychological mechanisms, and individual differences in behavioral strategies that people employ to reach goals or solve adaptive problems.

The reader should not construe what has just been said as an indictment of general psychology and a eulogy of personality theory. It is still not clear whether the path to a comprehensive and useful theory of human behavior will proceed most rapidly from the work of those who have aimed directly at such a goal or whether it will eventually owe more to the efforts of those who have focused upon relatively specific and limited problems. The strategy of advance in science is never easy to specify, and the general public is not usually considered an adequate final court for deciding what problems should be focused upon. In other words, while it is a statement of fact that personality theorists have dealt with issues that seem central and important to the typical observer of human behavior, it remains to be seen whether this willingness to tackle such issues will prove to advance the science of psychology.

As we have implied, there is no mystery concerning why personality theories were broader in scope and more practical in orientation than the formulations of most other psychologists. The great figures of academic psychology in the nineteenth century were men such as Wundt, Helmholtz, Ebbinghaus, Titchener, and Kulpe, who carried out their work within university settings with few pressures from the outside world. They were free to follow their own intellectual inclinations with little or no compulsion to deal with what others considered important or significant. In fact, they were able to define what was significant largely by their own interests and activities. In contrast, the early personality theorists were practitioners as well as scholars. Faced with the problems of everyday life, magnified by neurosis or worse, it was natural that they should address themselves to formulations that had something to contribute to these problems. A set of categories for the analysis of emotions that could be applied by trained subjects in a laboratory setting was of scant interest to a therapist who daily observed the operation of emotions that were hampering, disabling, and even killing fellow humans. Thus, the strong functional flavor of personality theories, their concern with problems of significance to the survival of the individual, seems a natural outgrowth of the setting in which these theories developed.

It is clear that personality theorists have customarily assigned a crucial role to the motivational process. At a time when many psychologists ignored motivation or attempted to minimize the contribution of such factors in their
studies, the personality theorists saw in these same variables the key to understanding human behavior. Freud and McDougall were the first to give serious consideration to the motivational process. The wide gap between the arena of life and the theory developed by laboratory psychologists is pictured by McDougall as he justifies his attempts to develop an adequate theory of social behavior (which was more of a theory of personality than it was a theory of social behavior):

The department of psychology that is of primary importance for the social sciences is that which deals with the springs of human action, the impulses and motives that sustain mental and bodily activity and regulate conduct; and this, of all the departments of psychology, is the one that has remained in the most backward state, in which the greatest obscurity, vagueness, and confusion still reign. (McDougall, 1908, pp. 2–3)

Thus, variables that were primarily of nuisance value to the experimental psychologist became a matter for intensive study and focal interest for the personality theorist.

Related to this interest in the functional and motivational is the personality theorist’s conviction that an adequate understanding of human behavior will evolve only from the study of the whole person. Most personality psychologists insisted that the subject should be viewed from the vantage of the entire functioning person in a natural habitat. They pleaded strongly for the study of behavior in context, with each behavioral event examined and interpreted in relation to the rest of the individual’s behavior. Such a point of view was a natural derivative of clinical practice, where the entire person presented him or herself for cure and where it was indeed difficult to limit consideration to one sense modality or a limited array of experience.

If we accept the intent of most personality theorists to promote the study of the whole, unsegmented person, it is easy to understand why many observers have considered that one of the most distinctive features of personality theory is its function as an integrative theory. Although psychologists in general have shown increased specialization, leading to the complaint that they were learning more and more about less and less, the personality theorist accepted at least partial responsibility for bringing together and organizing the diverse findings of specialists. The experimentalist might know a great deal about motor skills, audition, perception, or vision but usually knew relatively little about the way in which these special functions related to one another. The personality psychologist was, in this sense, more concerned with reconstruction or integration than with analysis or the segmental study of behavior. From these considerations comes the somewhat romantic conception of the personality theorist as the individual who will put together the jigsaw puzzle
provided by the discrete findings of separate studies within the various specialties that make up psychology.

It should be noted that various writers have deplored the lack of adherence by personality researchers to the personality theorist’s focus on whole persons. Rae Carlson has written: “The present impoverishment of personality research is distressing because it suggests that the goal of studying whole persons has been abandoned” [1971, p. 207; see Kenrick (1986) for a rejoinder]. Similar concerns have been raised by White (1981) and by Sanford (1985).

In broad terms, then, what has distinguished personality theorists from traditional psychological theorists? They are more speculative and less tied to experimental or measuremental operations. The stiffening brush of positivism has spread much more lightly over the personality psychologist than over the experimental psychologist. They develop theories that are multidimensional and more complex than those fashionable within general psychology. As a consequence, their theories tend to be somewhat more vague and less well specified than the experimentalist’s theories. They are willing to accept any aspect of behavior that possesses functional significance as legitimate data for their theoretical mill, whereas most experimental psychologists are content to fix their attention upon a limited array of observations or recordings. They insist that an adequate understanding of individual behavior can be achieved only when it is studied in a broad context that includes the total, functioning person. The personality theorist sees motivation, the "why" or underlying impetus for behavior, as the crucial empirical and theoretical problem. By contrast, experimentalists see this as one of many problems and deal with it by means of a small number of concepts closely linked to physiological processes.

There are few words in the English language that have such a fascination for the general public as the term personality. Although the word is used in various senses, most of these popular meanings fall under one of two headings. The first use equates the term to social skill or adroitness. An individual’s personality is assessed by the effectiveness with which he or she is able to elicit positive reactions from a variety of persons under different circumstances. It is in this sense that the teacher who refers to a student as presenting a personality problem is probably indicating that his or her social skills are not adequate to maintain satisfactory relations with fellow students and the teacher. The second use considers the personality of the individual to consist of the most outstanding or salient impression that he or she creates in others. A person may thus be said to have an “aggressive personality” or a “submissive personality” or a “fearful personality.” In each case the observer selects an attribute or quality that is highly typical of the subject and that is presumably an important part of the over-all impression created in others and the person’s
personality is identified by this term. It is clear that there is an element of evaluation in both usages. Personalities as commonly described are good and bad.

While the diversity in ordinary use of the word personality may seem considerable, it is overshadowed by the variety of meanings with which the psychologist has endowed this term. In an exhaustive survey of the literature, Allport (1937) extracted almost fifty different definitions that he classified into a number of broad categories. Here we will concern ourselves with only a few of these definitions.

It is important initially to distinguish between what Allport calls biosocial and biophysical definitions. The biosocial definition shows a close correspondence with the popular use of the term as it equates personality to the "social stimulus value" of the individual. It is the reaction of other individuals to the subject that defines the subject's personality. One may even assert that the individual possesses no personality but that provided by the response of others. Allport objects vigorously to the implication that personality resides only in the "responding-other" and suggests that a biophysical definition that roots the personality firmly in characteristics or qualities of the subject is much to be preferred. According to the latter definition, personality has an organic side as well as a perceived side and may be linked to specific qualities of the individual that are susceptible to objective description and measurement.

Another important type of definition is the rag-bag, or omnibus, definition. This definition embraces personality by enumeration. The term personality is used here to include everything about the individual. The theorist ordinarily lists the concepts considered of primary importance in describing the individual and suggests that personality consists of these. Other definitions place primary emphasis upon the integrative, or organizational, function of personality. Such definitions suggest that personality is the organization or pattern that is given to the various discrete responses of the individual. Alternatively, they suggest that the organization results from the personality that is an active force within the individual. Personality is that which gives order and congruence to all the different kinds of behavior in which the individual engages. A number of theorists have chosen to emphasize the function of personality in mediating the adjustment of the individual. Personality consists of the varied and yet typical efforts at adjustment that are carried out by the individual. In other definitions, personality is equated to the unique or individual aspects of behavior. In this case, it is a term to designate those things about the individual that are distinctive and set him or her apart from all other persons. Finally, some theorists have considered personality to represent the essence of the human condition. These definitions suggest that personality refers to that part of the individual that is most representative of the person, not only in that it differentiates the individual from others, but more importantly because it is what he or she actually is. Allport's suggestion that "personality is what a
man really is." illustrates this type of definition. The implication here is that personality consists of what, in the final analysis, is most typical and deeply characteristic of the person.

We could spend much more time dealing with the problem of defining personality, but the reader will encounter many detailed definitions of personality in the ensuing chapters. Furthermore, it is our conviction that no substantive definition of personality can be applied with any generality. By this we mean simply that the way in which given individuals will define personality will depend completely upon their particular theoretical preference. Thus, if the theory places heavy emphasis upon uniqueness and the organized, unified qualities of behavior, it is natural that the definition of personality will include uniqueness and organization as important attributes of personality. Once the individual has created or adopted a given theory of personality, the definition of personality will be rather clearly implied by the theory. Thus, we submit that personality is defined by the particular empirical concepts that are a part of the theory of personality employed by the observer. Personality consists concretely of a set of scores or descriptive terms that describe the individual being studied in terms of the variables or dimensions that occupy a central position within the particular theory.

If this seems an unsatisfactory definition, let the reader take consolation in the thought that in the pages to follow a number of specific definitions will be encountered. Any one of these will become the reader's if he or she adopts that particular theory. In other words, what we have said is that it is impossible to define personality without coming to agreement concerning the theoretical frame of reference within which personality will be viewed. If we were to attempt a single substantive definition now, we would be settling implicitly many of the theoretical issues that we intend to explore.

Just as everyone knows what a personality consists of, so everyone knows what a theory is! The most common conviction is that a theory exists in opposition to a fact. In this view, a theory is an unsubstantiated hypothesis or a speculation concerning reality that is not yet definitely known to be so. When the theory is confirmed, it becomes a fact. There is a grain of correspondence between this view and the usage we will advocate here, for it is agreed that theories are not known to be true. There is also an element of disagreement as the commonsense view asserts that a theory will become true or factual when the appropriate confirmatory data have been collected. In our view, theories are never true or false, although their implications or derivations may be either.

The passages to follow represent a relatively conventional summary of the thinking of methodologists or logicians of science. There is by no means com-
plete agreement concerning all of the issues discussed, but the point of view presented is intended to be modal rather than original. The beginning student may find it a little difficult to grasp fully some of these ideas, and it is only fair to indicate that an understanding of them is not essential in order to read and appreciate the remainder of the volume. On the other hand, if the reader is seriously interested in the field and has not yet been immersed in this area of scholarship, it would be well to consult the relevant literature (for good introductions appropriate for psychologists, see Gholson & Barker, 1985; the Introduction in Leahey, 1991; Manicas & Secord, 1983; Rorer & Widiger, 1983; and Suppe, 1977; for general treatments, consider Bechtel, 1988; Eagle, 1984; Earman, 1992; Kuhn, 1970; Lakatos & Musgrave, 1970; Popper, 1962, 1992).

Let us commence by considering what a theory is and subsequently turn to the more important question of what are the functions of a theory. To begin with, a theory is a set of conventions created by the theorist. Viewing a theory as a “set of conventions” emphasizes the fact that theories are not “given,” or predetermined, by nature, the data, or any other determinant process. Just as the same experiences or observations may lead a poet or novelist to create any one of a multitude of different art forms, so the data of investigation may be incorporated in any of countless different theoretical schemes. The theorist, in choosing one particular option to represent the events in which he or she is interested, is exercising a free creative choice that is different from the artist’s only in the kinds of evidence upon which it focuses and the grounds upon which its fruitfulness will be judged. We are emphasizing here the creative and yet arbitrary manner in which theories are constructed. This leads naturally to the observation that we can specify how a theory should be evaluated or appraised but we cannot specify how a theory should be constructed. There is no formula for fruitful theory construction any more than there is a formula for making enduring literary contributions.

Because a theory is a conventional choice, rather than something that is inevitable or prescribed by known empirical relations, truth and falsity are not attributes to be ascribed to a theory. A theory is only useful or not useful. These qualities are defined, as we shall see, primarily in terms of how efficiently the theory can generate predictions or propositions concerning relevant events that turn out to be verified (true).

Let us be somewhat more specific. A theory, in its ideal form, should contain two parts: a cluster of relevant assumptions systematically related to each other and a set of empirical definitions.

The assumptions must be relevant in that they bear upon the empirical events with which the theory is concerned. If it is a theory of audition, the assumptions must have something to do with the process of hearing; if it is a theory of perception, the assumptions must bear upon the perceptual process. Ordinarily the nature of these assumptions represents the distinctive quality of the theory. The good theorist is the person who can ferret out useful or
predictive assumptions concerning the empirical events within a domain of interest. Depending upon the nature of the theory, these assumptions may be very general or quite specific. A behavioral theorist, for example, might choose to assume that all behavior is motivated, that events taking place early in life are the most important determinants of adult behavior, or that the behavior of different animal species is governed by the same general principles. These assumptions may also vary in form from the precision of mathematical notation to the relative inexactness of most of the assumptions we have just used as illustrations.

Not only must the assumptions be stated clearly but also the assumptions and the elements within the theory must be explicitly combined and related to one another. That is, there must be rules for the systematic interaction between the assumptions and their embedded concepts. To give the theory logical consistency and permit the process of derivation, these internal relations must be clear. Without such specification it would be difficult or impossible to extract empirical consequences from the theory. Because of their similarity to the rules of grammar, these statements are sometimes referred to as the syntax of the theory. For example, a theorist might choose to assume that an increase in anxiety would lead to a decrement in motor performance. In addition, it might be assumed that an increase in self-esteem would lead to an improvement in motor performance. If we knew nothing more than this, the relation between these two assumptions would be indeterminant. We need to find out something about the relation between anxiety and self-esteem before we can make any predictions concerning what may take place under circumstances where both variables are involved. An adequate statement of the theoretical assumptions would provide the user of the theory with a clear specification of the relation between these two assumptions.

The empirical definitions (coordinating definitions) permit the more or less precise interaction of certain terms or concepts within the theory with empirical data. Thus, by means of these definitions the theory at certain prescribed places comes into definite contact with reality or observational data. These definitions are frequently called operational definitions because they attempt to specify operations by means of which the relevant variables or concepts can be measured. It is safe to say that if a theory is eventually to make a contribution in an empirical discipline it must possess some means for empirical translation. On the other hand, it should be clear that these definitions exist on a continuum ranging from complete and exact specification to a very general and qualitative statement. Although the more precision the better, an early insistence upon complete specification can destroy many fruitful paths of inquiry. Defining intelligence as simply "what intelligence tests measure", or equating anxiety solely to certain physiological changes may be exact, but neither definition alone seems likely to lead to much productive
thought or inquiry. The proper attitude toward empirical definitions is that they should be as precise as present conditions within the relevant field permit.

We have now seen, in general terms, of what a theory consists. The next question is, What does it do? First, and most important, it leads to the collection or observation of relevant empirical relations not yet observed. The theory should lead to a systematic expansion of knowledge concerning the phenomena of interest, and this expansion ideally should be mediated or stimulated by the derivation from the theory of specific empirical propositions (statements, hypotheses, predictions) that are subject to empirical test. In a central sense, the core of any science lies in the discovery of stable empirical relationships between events or variables. The function of a theory is to further this process in a systematic manner. The theory can be seen as a kind of proposition mill, grinding out related empirical statements that can then be confirmed or rejected in the light of suitably controlled empirical data. It is only the propositions or ideas derived from the theory that are opened to empirical test. The theory itself is assumed, and acceptance or rejection of it is determined by its utility, not by its truth or falsity. In this instance, utility has two components: verifiability and comprehensiveness. **Verifiability** refers to capacity of the theory to generate predictions that are confirmed when the relevant empirical data are collected. **Comprehensiveness** refers to the scope or completeness of these derivations. We might have a theory that generated consequences that were often confirmed but dealt with only a few aspects of the phenomena of interest. Ideally the theory should lead to accurate predictions that deal very generally or inclusively with the empirical events the theory purports to embrace.

It is important to distinguish between what may be called the systematic and the heuristic generation of research. It is clear that in the ideal case the theory permits the derivation of specific testable propositions, and these in turn lead to specific empirical studies. However, it is also the case that many theories, for example, Freud's and Darwin's, have had a great effect upon investigative paths without the mediation of explicit propositions. This capacity of a theory to generate research by suggesting ideas or even by arousing disbelief and resistance may be referred to as the **heuristic influence of the theory**. Both types of influence are of great importance.

A second function that a theory should serve is that of permitting the **incorporation of known empirical findings** within a logically consistent and reasonably simple framework. A theory is a means of organizing and integrating all that is known concerning a related set of events. An adequate theory of psychotic behavior should be able to arrange all that is known concerning schizophrenia and other psychoses in an understandable and logical framework. A satisfactory learning theory must embrace in a consistent manner all the dependable findings dealing with the learning process. Theories always commence with that which has thus far been observed and reported. That is,
theories begin in an inductive phase and are guided and to some extent controlled by what is known. However, if the theories did nothing more than make consonant and orderly what was presently known, they would serve only a very minor function. Under such circumstances the dogged investigator would be justified in the conviction that theories are mere verbal fluff floating in the wake of the experimenter, who has done the real business of science. The empiricist who insists that theories are mere after-the-fact rationalizations of what the investigator has already reported fails to appreciate that the main function of the theory is to point out the new and as-yet unobserved relations. The productiveness of the theory is tested before the fact, not after the fact.

Simplicity, or parsimony, is also of importance, but only after matters of comprehensiveness and verifiability have been settled. It becomes an issue only under circumstances where two theories generate exactly the same consequences. As long as the theories differ in the derivations that can be made concerning the same empirical events, the choice between two theories should be decided in terms of the extent to which these predictions differ in verification. Thus, it is only when one has a tautology—two theories arriving at the same conclusions from different terms—that simplicity becomes an important question. There are few examples of such a state of affairs in science and none, to our knowledge, in psychology. Simplicity, as opposed to complexity, is a matter of personal value or preference in personality theorizing, rather than an attribute that is necessarily to be prized or sought after.

Another function that a theory should serve is that of preventing the observer from being dazzled by the full-blown complexity of natural or concrete events. The theory is a set of blinders, and it tells its wearer that it is unnecessary to worry about all of the aspects of the event one is studying. To the untrained observer any reasonably complex behavioral event seems to offer countless different possible means for analyzing or describing the event—and indeed it does. The theory permits the observer to go about abstracting from the natural complexity in a systematic and efficient manner. People abstract and simplify whether they use a theory or not. If one does not follow the guidelines of an explicit theory, however, the principles determining one's view will be hidden in implicit assumptions and attitudes of which one is unaware. The theory specifies to the user a limited number of more or less definite dimensions, variables, or parameters that are of crucial importance. The other aspects of the situation can to a certain extent be overlooked from the point of view of this problem. A useful theory will detail rather explicit instructions as to the kinds of data that should be collected in connection with a particular problem. Consequently, as might be expected, individuals occupying drastically different theoretical positions may study the same empirical event and share little in the way of common observations.

In recent years a growing number of psychologists have adopted the theoretical reasoning and terminology of Thomas Kuhn (1970). In an engaging, if
oversimplified, monograph. Kuhn has suggested that scientific advance may be depicted most accurately as consisting of a series of revolutionary steps, each accompanied by its own characteristic and dominant paradigm. According to Kuhn, every scientific field emerges in a sprawling and uncoordinated manner, with the development of disparate lines of investigation and theoretical ideas that preserve their autonomous and competitive position, until a particular set of ideas assumes the status of a paradigm. He suggests that these paradigms serve to

Define the legitimate problems and methods of a research field for succeeding generations of practitioners. They were able to do so because they shared two essential characteristics. Their achievement was sufficiently unprecedented to attract an enduring group of adherents away from competing modes of scientific activity. Simultaneously, [they were]... sufficiently open-ended to leave all sorts of problems for the redefined group of practitioners to resolve. ... These are the traditions which the historian describes under such rubrics as 'Ptolemaic astronomy' (or 'Copernican'), 'Aristotelian dynamics' (or 'Newtonian'), 'corpuscular optics' (or 'wave optics'), and so on. (p. 10)

It is interesting to speculate concerning the paradigmatic status of personality theory and research. For those who adopt this idiom, it seems easiest to view this area as in a pre-paradigmatic state. That is, while there are plentiful sets of systematic, or somewhat systematic, ideas, none of these has gained a position of real dominance. There is no single theory that serves as a "paradigm" to order known findings, determine relevance, provide an establishment against which rebels may struggle, and dictate the major path of future investigation. A number of personality theorists have begun to address the paradigmatic status of the field. Eysenck, in particular, has claimed that his dimensional model of personality provides "the beginnings at least of a paradigm in the personality field" (1983, p. 369; see also 1991).

We have agreed that personality is defined by the particular concepts contained within a given theory that are considered adequate for the complete description or understanding of human behavior. We have also agreed that a theory consists of a set of related assumptions concerning the relevant empirical phenomena and empirical definitions to permit the user to move from the abstract theory to empirical observation. By simple addition we have the implication that a theory of personality must be a set of assumptions relevant to human behavior together with the necessary empirical definitions. There is the further requirement that the theory must be relatively comprehensive. It must be prepared
to deal with, or make predictions concerning, a wide range of human behavior. In fact, the theory should be prepared to deal with any behavioral phenomenon that can be shown to possess significance for the individual.

What has been said to this point possesses a formal validity that, however, cannot be sustained upon close scrutiny of existing theories of personality. Our discussion is of value in identifying the qualities toward which all theorists aspire, and it also gives some idea of what, eventually, personality theories should look like. It is clear, nevertheless, that at the present time they do not look like this. A word should be said concerning the manner in which they fail to resemble the ideal both in structure and in function.

First of all, as we shall see, most of them lack explicitness. It is generally very hard to get at the assumptions or the axiomatic base of these theories. Personality theories are frequently packaged in a great mass of vivid word images that may serve very well as a means of persuading the reluctant reader but frequently serve to cloak and conceal the specific assumptions that underlie the theory. In other words, most of the theories are not presented in a straightforward and orderly manner. In fact, many of them seem more oriented toward persuasion than exposition. Related to this lack of definiteness is a frequent confusion between that which is given or assumed and that which is stated empirically and open to test. As we have already agreed, it is only the derivations or the predictions generated by the theory that are open to empirical test. The remainder of the theory is assumed or given and is not to be judged on grounds of confirmation or disconfirmation but rather in terms of how successfully it generates verified propositions. In general, then, the distinction between the personality theory itself and its implications or derivations is very poorly maintained.

An inevitable consequence of the lack of explicitness concerning the nature of the assumptions underlying the theory is the existence of serious confusion in the process of deriving empirical statements from the theory. Thus, there is the possibility that different individuals using the same theory will arrive at conflicting derivations. Actually, the derivation process in most personality theories is haphazard, obscure, and inefficient. This is a reflection not only of the lack of explicitness of these theories but also of the fact that most personality theorists have been oriented toward after-the-fact explanation rather than toward the generation of new predictions concerning behavior. Finally, it is clear that although personality theories vary in how carefully they specify empirical definitions, none of these theories achieves a very high standard in absolute terms.

The statements we have just made concerning the formal status of personality theories may seem sufficiently discouraging to warrant abandoning attempts to construct such theories at this time. Would it not be better at present to forget about theories and focus upon empirical tools and specific empirical findings? Emphatically no! Such a decision does not involve giving up inadequate theory
for no theory but rather involves the substitution of implicit theory for explicit theory. There is no such thing as "no theory"; consequently, the moment we attempt to forget about theory "for the present" we are really using implicit, personally determined and perhaps inconsistent assumptions concerning behavior. These unidentified assumptions then will determine what will be studied and how. The observation of any concrete empirical event is carried out under the dictates of some "theory"—that is, certain things are attended to and certain things are overlooked—and one of the purposes of theorizing is to make explicit the rules determining this abstraction process. The possibility of improving upon the assumptions that are controlling research is eliminated the moment one gives up the attempt to define the theoretical base from which one operates.

Poor though personality theories may be when compared to the ideal, they still represent a considerable step forward when compared to the thinking of the naive observer who is convinced that he or she is embracing or viewing reality in the only way in which it can reasonably be viewed. Even though personality theories do not possess the degree of explicitness that one might wish, their mere existence makes it possible to work toward this goal in a systematic manner.

Granted that personality theories do not ordinarily permit as explicit a derivation process as we might wish, just what function do they serve for the individual who wields them? At the very least they represent a cluster of attitudes (assumptions) concerning behavior that in a broad way limits the kinds of investigation to be considered crucial or important. In addition to stimulating certain general kinds of research, they also provide specific parameters or dimensions that are considered important in the exploration of these problems. Thus, even if the theory does not provide an exact proposition for test, it orients the theorist toward certain problem areas and indicates that particular variables are of central importance in studying these problems. Moreover, there is the heuristic value of these theories to be considered. Taken as a group, personality theories are highly provocative and, as we shall discover, they have led to large quantities of research even though relatively little of this has been the result of a formal derivation process. In other words, the capacity of these theories to generate ideas, to stimulate curiosity, to stir doubts, or to lead to convictions has resulted in a healthy flourishing of investigation in spite of their lack of formal elegance.

Our discussion thus far has led to the conclusion that a theory of personality should consist of a set of assumptions concerning human behavior together with rules for relating these assumptions and definitions to permit their interaction with empirical or observable events. At this point the question may be asked reasonably whether this definition in any way differentiates personality
theories from other psychological theories. In answering this question it will be helpful to begin with a distinction between two types of psychological theory.

It is evident that certain psychological theories appear ready to deal with any behavioral event that can be shown to be of significance in the adjustment of the human organism. Other theories specifically limit themselves to behavior as it occurs under certain carefully prescribed conditions. These theories profess an interest in only limited aspects of human behavior. A theory that attempts to deal with all behavioral phenomena of demonstrated significance may be referred to as a general theory of behavior, and those theories that restrict their focus to certain classes of behavioral events are called single-domain theories.

Clearly, personality theories fall into the first category; they are general theories of behavior. This simple observation serves to separate personality theory from the bulk of other psychological theories. Theories of perception, audition, memory, motor learning, discrimination, and the many other special theories within psychology are single-domain theories and can be distinguished from personality theory on grounds of scope or comprehensiveness. They make no pretense at being a general theory of behavior and are content to develop concepts appropriate for the description and prediction of a limited array of behavioral events. Theories of personality, however, have generally accepted the challenge of accounting for or incorporating events of the most varied nature so long as they possess demonstrated functional significance for the individual.

The fact that personality tests designed to measure components of personality often are used in social psychology and other branches of psychology should not obscure this point. As Lamie has pointed out, a distinction exists between personality psychology, which focuses on “temporal and transsituational” consistencies within persons, that is, at the level of the individual (1981, p. 280) and differential psychology, which focuses on the relative performance of people in general on a characteristic of interest. Personality theories subsume a wide range of behaviors and processes, and they focus on the individual as an integrated unit. Personality research is predicated on a general theory of the individual as a functioning whole, and it does not employ ad hoc or isolated measures of response tendencies.

The question remains whether there are general theories of behavior that would not ordinarily be called personality theories. One possibility is that learning theory may in some instances be sufficiently generalized so that it constitutes a general theory of behavior. This is clearly the case, and as we shall see in detail later, a number of theorists have attempted to generalize learning theories so that they are comparable in comprehensiveness to any other general theory of behavior. In such instances, the theory of learning ceases to be merely a learning theory and becomes a personality theory or a general theory of behavior. It is true that such generalized models possess
certain distinctive characteristics that are reminiscent of their origin, but in
intent and in logical properties they are no different from any other theory
of personality.

This lumping together of theories that have had their origins in the animal
laboratories and theories that originated in the therapist’s chambers may
appear forced to many observers. However, if we consider the theories from
the point of view of what they intend to do and their general structure, rather
than from the point of where they come from or the detailed assumptions they
make about behavior, it is clear that any general theory of behavior is the
same as any other. In this sense all general theories of behavior are personality
theories and vice versa. Within this large group of theories, of course, many
distinctions can be made. The following section will deal with a number of
attributes in terms of which theories of personality can be differentiated or com-
pared.

THE COMPARISON
OF THEORIES OF
PERSONALITY

The most striking fact confronting the beginning student of personality is the
multitude of personality theories. The confusion is compounded when he or
she is told that it is impossible to say which theory is right or even best. This
uncertainty typically is attributed to the youth of the field and the difficulty of
the subject matter. At this point, rather than asking whether each theory in
turn is right or wrong, the student is advised to adopt a comparative strategy.
A good rationale for this approach comes from George Kelly, whose theory is
presented in Chapter 10. Kelly approaches personality from the philosophical
position he calls constructive alternativism. Simply put, Kelly suggests that
people differ in how they perceive, or construe, reality. Different people con-
strue the world in different ways, and they therefore act in different ways.
None of these alternative construals is necessarily right or wrong; rather,
each has different implications. This same approach suggests that personality
theories might be considered to provide alternative construals of personality,
none of which is completely right or wrong, each of which has different
strengths and weaknesses, and each of which emphasizes different components
of behavior.

This text has been organized to facilitate such a comparative process.
First, the theories are grouped into four families, where the theories within
each family share certain characteristics. Psychodynamic theories emphasize
unconscious motives and resulting intrapsychic conflict. Structural theories
focus on the different behavioral tendencies that characterize individuals.
Experiential theories emphasize the way the person perceives reality and
experiences his or her world. Finally, learning theories emphasize the learned
basis of response tendencies, with an emphasis on the learning process rather
than the resulting tendencies. Each set of theories will be introduced with a fuller description of the family characteristics.

Second, a number of aspects of personality are discussed by different theorists. For example, anxiety, sense of competence, intrapsychic conflict, and level of sociability play central roles in many of the theories the student will confront in this book. On the one hand, this is reassuring because the convergence by different theorists on particular facets of personality suggests that these characteristics are real and important. On the other hand, it can be confusing because the different theorists necessarily employ language specific to their own theories to discuss these characteristics. In order to help the student see these convergences, we will include explicit discussion of the *translations* between the theories we present.

Finally, there are a number of qualities by which personality theories can be compared and distinguished. We now point to a few of the more important of these dimensions. The attributes divide naturally into those concerned with matters of formal adequacy and those concerned with the substantive nature of the theory.

Here we are interested in how adequately the structure of the theory is developed and presented. These qualities represent an ideal, and the closer the theory comes to reaching this ideal, the more effectively it can be used.

The question of *clarity and explicitness* is of huge importance. This is a matter of how clearly and precisely the assumptions and embedded concepts that make up the theory are presented. In the limiting case the theory may be stated in terms of mathematical notation, with a precise definition of all but the primitive terms, so that the person who has been adequately trained can employ the theory with a minimum of ambiguity. Under such circumstances different individuals employing the theory independently will arrive at highly similar foundations or derivations. At the other extreme, we find theories presented with such a rush of vivid and complex description that it is extremely difficult for the individual who would employ the theory to be certain of just what he or she is grappling with. Under these circumstances there is little likelihood that individuals using the theory independently will arrive at the same formulations or derivations. It will become clear as we progress that there is no theory of personality that approaches very far toward the ideal of mathematical notation; still, granted the free use of verbal description, we shall find that there is considerable variation among personality theories in the clarity of their exposition.

A further question is the matter of *how well the theory is related to empirical phenomena*. Here we are concerned with the explicitness and practicality of the definitions proposed to translate the theoretical conceptions into measurement operations. At one extreme we find theories that prescribe
relatively exact operations for assessing or measuring each of the empirical terms within the theory. In other cases the theorist appears to assume that the name assigned to the concept is a sufficient defining operation by itself.

Perhaps this is an appropriate place to emphasize again our conviction that all matters of formal adequacy pale alongside the question of what empirical research is generated by the theory. However vague and poorly developed the theory, and however inadequate its syntax and empirical definitions, it passes the crucial test if it can be shown to have had a generative effect upon significant areas of research. Thus, the payoff question that overrides, and actually makes trivial, all questions of formal adequacy is the matter of how much important research the theory has produced. It is not easy to agree upon what is important research, particularly since importance will largely be determined by the theoretical position of the judge. It is also true that it is not always easy to say just what the process was that led to a particular investigation being conducted. Thus the generative role of the theory may be difficult to assess. In spite of this there are clear and perceptible differences between theories of personality in the extent to which they have been translated into investigations that are of general interest.

While the formal attributes we have just described all present a normative or valued standard in terms of which each theory can be compared, the following attributes possess no such evaluative implication. They are neutral in regard to good and bad and merely reflect the particular assumptions concerning behavior that the theory embraces.

Differences between personality theories in content naturally reflect the major issues that currently exist in this area. Thus, in the following pages we not only outline dimensions that can be used for the comparison of personality theories but we also point to the major options that face a theorist in this area. We could with perfect appropriateness label this section “issues in personality theory.”

Older than the history of psychology is the question of whether human behavior should be viewed as possessing purposive or teleological qualities. Some theories of behavior create a model of the individual in which goal striving, purpose, and seeking are viewed as essential and central aspects of the individual’s behavior. Other theories assume that the striving and seeking aspects of behavior are unimportant and believe that behavior can be accounted for adequately without such an emphasis. The latter theorists consider the subjective elements of striving and seeking as an epiphenomenon, accompanying behavior but not playing a determinant role in its instigation. Generally, theories that minimize the importance of purpose or teleology are labeled “mechanistic.”
Another ancient debate is concerned with the relative importance of conscious and unconscious determinants of behavior. This issue also could be phrased in terms of the relative rationality or irrationality of human behavior. The term unconscious is used here simply to refer to determinants of behavior of which the individual is unaware and unable to bring to awareness except under special conditions. Theories of personality range from those that explicitly reject any consideration of unconscious determinants of behavior, or refuse to accept the existence of such determinants, to theories that consider them the most important or powerful determinants of behavior. A middle ground is occupied by those theorists who are willing to assign a central role to unconscious determinants in the behavior of disturbed or abnormal individuals while claiming that for the normal individual conscious motives are the ruling forces.

A fundamental distinction between theories of personality has to do with the extent to which the learning process, or the modification of behavior, is a matter for detailed and explicit attention. Some personality theorists see in the understanding of the learning process the key to all behavioral phenomena. For other theorists learning is an important but secondary problem. Although no personality theorist would deny the significance of learning, we shall find that some theorists prefer to focus upon the acquisitions or outcomes of learning rather than on the process itself. This issue thus becomes a matter of disagreement between those who propose to deal primarily with the process of change and those who show themselves most interested in the stable structures or acquisitions of personality at a given time.

An issue as old as human thought about humanity is the question of the relative importance of genetic, or hereditary, factors in determining behavior. Almost no one will deny that hereditary factors have implications for behavior, but there are personality theorists who have dramatically undercut their importance, insisting that all the major behavioral phenomena can be understood without recourse to the biological and genetic. In America the role of hereditary factors has historically been played down in favor of some brand of environmentalism, but there is considerable variation as to how much and how explicitly the various theorists are willing to deal with genetic factors.

An additional dimension in terms of which personality theories show considerable variation has to do with the relative importance of early developmental experiences. This is a question of whether the theory assigns a strategic and critical importance to events taking place in infancy and childhood that is not matched in importance by events taking place at later stages of development. As we shall discover, some theories imply that the key to adult behavior is to be found in events that have taken place in the earliest years of development, while other theories state quite explicitly that behavior can be understood and accounted for solely in terms of contemporary or ongoing events. Related
to this question is the extent to which theorists consider the personality structure at a given point in time to be autonomous or functionally distinct from the experiences that have preceded this point. For certain theorists the understanding of behavior in terms of contemporaneous factors is not only possible but also the only defensible path to understanding. For others a reasonable understanding of the present must always depend partly upon some knowledge of events that have taken place in the past. Naturally, those who emphasize the contemporaneous point of view are convinced of the functional independence of the personality structure at any particular point in time, while those who emphasize the importance of past or early experience are less convinced of the freedom of present structure from the influence of past events.

Closely related to the preceding issue is the question of the continuity or discontinuity of behavior at different stages of development. Most theories that emphasize the learning process and/or the importance of early developmental experiences tend to view the individual as a continuously developing organism. The structure that is observed at one point in time is related in a determinant manner to the structure and experiences that occurred at an earlier point. Other theories tend to consider the organism as going through stages of development that are relatively independent and functionally separated from the earlier stages of development. The latter point of view may lead to the construction of drastically different theories for infant behavior and adult behavior.

A major difference between personality theories lies in the extent to which they embrace holistic principles. That is, do they consider it legitimate to abstract and analyze so that at a given time, or in a particular study, only a small part of the individual is being examined? The individuals who adopt a holistic position consider behavior to be understandable only in context, so that the total, functioning person together with the significant portions of his or her environment must be given simultaneous consideration if there is to be a fruitful outcome. Other theories accept the fact that the very nature of science necessitates analysis. These positions usually show no special concern over violation to the integrity of the whole organism that may be involved in segmental studies.

This emphasis upon the wholeness of the individual and the environment can be broken down into two rather distinct forms. The first is usually referred to as an organismic position. Here there is great stress upon the interrelatedness of everything the individual does; that is, each act can be understood only against the background provided by the person’s other acts. Not only is there an implication that all behavior is essentially interrelated and not susceptible to techniques of analysis but also there is usually an interest in the organic underpinnings of behavior. Consequently, behavior should be viewed against the perspective provided by the individual’s other acts as well as the perspective offered by accompanying physiological and biological processes.
All of the person's behavior and biological functioning make up an organic whole that is not to be understood if it is studied segmentally. The second holistic position is usually referred to as a field emphasis. Here the theory is primarily concerned with the inextricable unity between a given behavioral act and the environmental context within which it occurs. To attempt to understand a given form of behavior without specifying in detail the "field" within which it occurs is to strive for understanding with a large proportion of the significant factors missing. Although behavior is partially a result of determinants that inhere in the individual, there are equally compelling forces that act upon the person from without. It is only when the individual's significant environment is fully represented that these forces acting outside of the person can be given their due. There is a strong tendency for theorists who emphasize the importance of the "field" to minimize the importance of hereditary factors as well as events taking place early in development. This is not a logical necessity, but in practice most theorists who have focused strongly upon the environmental context of the individual have emphasized the present rather than the past and have been more interested in what is "out there" rather than what inheres in the individual.

Related to the issue of holism is the matter of uniqueness or individuality. Certain theories place a heavy emphasis upon the fact that each individual and, in fact, each act is unique and not to be duplicated by any other individual or act. They point out that there are always distinctive and important qualities that set off the behavior of any single individual from the behavior of all other persons. In general, the individual who strongly embraces a field or organismic point of view tends to stress uniqueness also. This follows naturally from the fact that if one broadens sufficiently the context that must be considered in connection with each behavioral event, the event will come to have so many facets that it is bound to display distinct differences in comparison to all other events. Some theories accept the fact that each individual is unique but propose that this uniqueness can be accounted for in terms of differences in the patterning of the same underlying variables. Other theories maintain that individuals cannot even be compared fruitfully in terms of common or general variables as these distort and misrepresent the individual's uniqueness. Personality theories vary from those that make no special mention of uniqueness to those for which this is one of the most central assumptions. Such theories typically describe a hierarchy ranging from specific behaviors through broader behavioral tendencies up to general behavioral principles (e.g., Raymond Cattell and Hans Eysenck). That is, such theories suggest that the degree of individuality or generality depends on the level of analysis one chooses to adopt.

Intimately associated with the issues of holism and uniqueness is the breadth of the unit of behavior employed in the analysis of personality. Those theorists who are relative or absolute holists choose to analyze behavior only at the level of the complete person, while other personality theorists employ
constructs of varying degrees of specificity or elementalism. On occasion this has been referred to as a choice between a *molar* (general) and a molecular (specific) approach to the study of behavior. At the most segmental end of this continuum is the theorist who believes that behavior should be analyzed in terms of reflexes or specific habits; at the other extreme is the observer who is unwilling to view behavior at any level more molecular than the entire functioning person. As we shall see, recent research concerning the differential utility of broad versus narrow personality constructs and the importance of “aggregating” single observations into scales has played an important role in resolving the debate between those who view behavior as determined by the situation and those who emphasize the determining role of personality characteristics.

A related distinction exists between theories that deal extensively with the content of behavior and its description as opposed to those that deal chiefly with general principles, laws, and formal analyses. Largely, this is a matter of whether theorists concentrate upon the concrete details of experience and behavior or whether they are principally concerned with laws or principles that can be very widely generalized. Typically, the more abstract the theory, the less the concern with the content or concrete details of behavior.

Certain personality theorists have centered their theoretical position about the importance of the *psychological environment* or the subjective frame of reference. This is a matter of emphasizing that the physical world and its events can affect individuals only as they perceive or experience them. Thus, it is not objective reality that serves as a determinant of behavior but rather objective reality as it is *perceived* or assigned meaning by the individual. It is the psychological environment, not the physical environment, that determines the manner in which the individual will respond. In contrast, there are theoretical positions that assume a firm theory of behavior can never be built on the shifting sands of subjective reports or the complicated inferences needed to infer “meaning” from physical events. Such theories maintain that greater progress can be achieved through largely overlooking individual differences in the manner in which the same objective event is experienced and focusing upon relations involving external and observable events.

A further distinction between personality theorists has to do with whether or not they find it necessary to introduce a *self-concept*. For certain theorists the most important single human attribute is the view or perception the individual has of himself or herself. This self-viewing process is often seen as the key to understanding the multitude of puzzling behavioral events displayed by any single person. In other theories no such concept is elaborated, and the subject’s perception of the self is considered of little general significance.

One feature of the self-concept that deserves special attention is the individual’s sense of *competence*. Some theorists have proposed that establishing and maintaining a sense of power, control, or personal competence serves
as a predominant motive. Furthermore, the degree of competence, either in
general or in specific domains, exists as a central feature of the individual’s
self-definition and sense of worth. Other theorists refuse to recognize the
existence of such an autonomous motive. This construct may be described in
various terms, but it serves as an organizing principle for the self-concept
in those theories that include it.

Personality theorists show great variation in the extent to which they
explicitly emphasize cultural or group membership determinants of behavior.
In some theories these factors are assigned a primary role in shaping and
controlling behavior; in others the emphasis is almost exclusively upon deter-
nnants of behavior that operate independently of the society or cultural groups
to which the individual is exposed. In general, theorists who are characterized
by a heavy organismic emphasis tend to play down the role of group membership
determinants. Those who emphasize the field within which behavior occurs
are more sympathetic to the role of sociocultural or group membership deter-
nnants. The extreme examples of this position, usually referred to as examples
of cultural determinism, are found among anthropological and sociological
theorists, but psychological theorists also show considerable variation on
this issue.

Further, we have the more general question of how explicitly personality
theorists attempt to relate their theory to the theorizing and empirical findings
in neighboring disciplines. This might be referred to as a question of interdis-
ciplinary anchoring. Some personality theorists are relatively content to deal
with behavioral phenomena in terms of psychological concepts and findings
with little or no attention to what is going on in neighboring disciplines. Others
feel that psychological theorizing should lean heavily upon the formulations
and findings of other disciplines. The “other-oriented” personality psycholo-
gists can be neatly divided into two basic types: those who look toward the
natural sciences (biology, physiology, neurology, genetics) for guidance and
those who look toward the social sciences (sociology, anthropology, economics,
history) for guidance.

Theories of personality show a great deal of variation in the number of
motivational concepts they employ. In some cases one or two such concepts
are considered to lie at the base of all behavior; for other theories there is an
extremely large number of hypothesized motives; and for still others the number
is theoretically limitless. There is also considerable difference between theo-
ries in how much attention is paid to primary, or innate, motives as opposed
to secondary, or acquired, motives. Further, some theories provide a relatively
detailed picture of the process whereby acquired motives develop while others
show very little interest in the derivation or acquisition of motives.

A further respect in which personality theories show considerable variation
is the extent to which they deal with evaluative or ideal aspects of behavior.
Some theorists provide a rich description of the healthy or ideal components
of personality, while others limit themselves to an objective or factual description with no effort to indicate the positive and negative or even the normal and abnormal. Some theorists are much concerned with the characteristics of the mature or ideal person, while others are reluctant to consider one form of adjustment as necessarily superior to another.

Some personality theories are derived from and have great relevance for the description of abnormal or pathological behavior. Other theories and theorists are focused on the normal or better than normal. Clearly those theories whose origins lie in psychiatric clinics, counseling centers, and therapists' offices tend to have more to say about deviant or abnormal behavior, while those that derive more heavily from the study of children and college students are more descriptive and representative of the relatively normal range of personality.

We have now completed our list of dimensions for the comparison of theories of personality, but we hope readers will not put them from their minds. The very brief guide provided here can be given richer meaning and greater significance if these issues are considered while reading the chapters describing the individual theories of personality. It will also become clear that the most distinctive features of these theories have evolved from decisions concerning the issues we have just discussed. In the final chapter we shall reconsider these dimensions in the light of the specific theories of personality.

This brings us to the close of our introductory discussion, and we can now proceed to the essence of this volume—the theories of personality themselves. If the reader is to retain a lone thought from what has been said to this point, let it be the simple impression that personality theories are attempts to formulate or represent significant aspects of the behavior of individuals and that the fruitfulness of these attempts is to be judged primarily by how effectively they serve as a spur to research.
Emphasis on Psychodynamics

The personality theorists described in this section share a central concern with dynamic forces that determine our behavior and with the defensive structures we unknowingly erect to shield ourselves from those forces. The first position considered, of course, is that of Sigmund Freud. Freud developed the first systematic theory of personality, and in many respects all subsequent theorists have provided reactions to his position.

The core of Freud's theory was his advocacy of a conflict model of motivation. According to this position, behavior is driven by unconscious, biologically based urges that demand gratification. When expression of these demands is blocked by moral constraints, we negotiate behavioral compromises that focus on substitutions for or symbolic representations of the originally desired object. As we mature, we become better able to delay gratification until an appropriate time and place. We continue to carry the unconscious residue of unresolved infantile conflicts, however, and these provide the basis for much of our adult behavior. One of Freud's key assumptions was that of psychic determinism, according to which all behavior occurs for a reason. Consequently, our task as psychologists is to uncover the buried determinants of behavior. This position of "depth psychology" led Freud to fascinating analyses of such everyday phenomena as dreams, jokes, and slips of the tongue. Other assumptions adopted by Freud in his separate developmental models for males and females have proven difficult to accept. On this point the reader should be forewarned: Freud provides the first, and in many respects the clearest, illustration of the necessity
of identifying a theorist’s assumptions. Once the assumptions are accepted, 
the logic of the theory itself becomes difficult to challenge.

Two final notes about Freud. First, Freud was a rationalist, not an advocate 
of the unchecked expression of irrational urges. He wrote, “Where Id was, 
there Ego shall be” and “The voice of the intellect is a soft one, but it does 
not rest until it has gained a hearing.” Second, Freud considered himself to 
be an empiricist. This is not surprising, given his original career in anatomy 
and what we now would call neuroscience, but it leads to a paradox. Freud’s 
theory often is dismissed as nonscientific according to the criteria we presented 
in Chapter 1. Any theory that is predicated on unconscious structure and forces 
must prove difficult, if not impossible, to test, and testability of predictions is 
the hallmark of scientific theory. Indeed, Freud was arguably more engaged 
in “postdiction,” or explanation after the fact, than in prediction. You, the 
reader, must reach your own conclusion about the scientific stature and credi-

tility of Freud’s theory.

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<thead>
<tr>
<th>Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensional comparison of psychodynamic theories</strong></td>
</tr>
<tr>
<td><strong>Parameter compared</strong></td>
</tr>
<tr>
<td>Purpose</td>
</tr>
<tr>
<td>Unconscious determinants</td>
</tr>
<tr>
<td>Learning process</td>
</tr>
<tr>
<td>Structure</td>
</tr>
<tr>
<td>Heredity</td>
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<tr>
<td>Early development</td>
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<td>Continuity</td>
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<td>Organismic emphasis</td>
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<tr>
<td>Field emphasis</td>
</tr>
<tr>
<td>Uniqueness</td>
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<tr>
<td>Molar emphasis</td>
</tr>
<tr>
<td>Psychological environment</td>
</tr>
<tr>
<td>Self-concept</td>
</tr>
<tr>
<td>Competence</td>
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<tr>
<td>Group membership</td>
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<tr>
<td>Biology anchoring</td>
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<tr>
<td>Social science anchoring</td>
</tr>
<tr>
<td>Multiple motives</td>
</tr>
<tr>
<td>Ideal personality</td>
</tr>
<tr>
<td>Abnormal behavior</td>
</tr>
</tbody>
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*Note: H indicates high (emphasized), M indicates moderate, L indicates low (deemphasized).*
The five other major theorists discussed in this section share much with Freud, but they depart in substantial ways. Carl Jung was endorsed by Freud as his "crown prince," but they later had a bitter separation. Jung never was able to accept Freud's emphasis on sexuality as a motive, and he proposed that the unconscious determinants of behavior were largely ancestral in origins, not personal. Alfred Adler never was as close to Freud on a personal or a theoretical level as Jung had been. Adler was much more interested in the conscious determinants of behavior than Freud had been, and he also emphasized "social interest" as the basis for healthy functioning. Karen Horney challenged Freud's assumptions and conclusions with respect to psychosexual development. She also proposed a cogent but underappreciated model of basic anxiety and conflicts among components of the self-concept. Harry Stack Sullivan employed a heavy emphasis on developmental stages, and much of his model is built on constructs of energy and anxiety. Sullivan's inclusion in the present group nonetheless is ensured by the interpersonal context in which he conceptualizes the individual's behavior. Erik Erikson maintained much of Freud's model, but he reinterpreted Freudian instincts as "drive fragments," which are only given meaning through cultural forces and child-rearing practices. Erikson transformed Freud's psychosexual developmental stages into psychosocial stages, and he extended the developmental analysis throughout the life span. Despite these differences, the theorists share a pervasive emphasis on intrapsychic conflict and on the importance of the anxiety that results.

As Table 1 indicates, the psychodynamic theorists generally emphasize the purpose and unconscious determinants of behavior. They are concerned both with the ideal personality and with pathological behavior, and some version of the self-concept plays a key role in each of their positions. Notice the variability, however, in the importance they attach to group membership and to heredity. These similarities and discrepancies will become clear as we turn to the theories themselves.
When psychology emerged as an independent scientific discipline in Germany during the middle of the nineteenth century, it defined its task as the analysis of consciousness in the normal, adult human being. It conceived of consciousness as being made up of structural elements that were closely correlated
with processes in the sense organs. Visual sensations of color, for example, were correlated with photochemical changes in the retina of the eye and tones with events taking place in the inner ear. Complex experiences resulted from the joining together of a number of elementary sensations, images, and feelings. The task of psychology was to discover the basic elements of consciousness and to determine how they formed compounds. Psychology was often referred to as mental chemistry.

Objections to this kind of psychology came from many directions and for a variety of reasons. There were those who opposed the exclusive emphasis on structure and who insisted with considerable vigor that the outstanding characteristics of the conscious mind are its active processes and not its passive contents. Sensing and not sensations, thinking and not ideas, imagining and not images—these processes, it was asserted, should be the principal subject matter of the science of psychology. Others protested that conscious experience could not be dissected without destroying the very essence of experience, namely, its quality of wholeness. Direct awareness, they said, consists of patterns or configurations and not of elements joined together. Another large and vocal group asserted that mind is not amenable to investigation by the methods of science because it is too private and too subjective. They urged instead that psychology be defined as the science of behavior.

Freud’s attack upon the traditional psychology of consciousness came from quite a different direction. He likened the mind to an iceberg in which the smaller part showing above the surface of the water represents the region of consciousness while the much larger mass below the water level represents the region of unconsciousness. In this vast domain of the unconscious are to be found the urges, the passions, the repressed ideas and feelings, a great underworld of vital, unseen forces that exercise an imperious control over the conscious thoughts and deeds of individuals. From this point of view, a psychology that limits itself to the analysis of consciousness is wholly inadequate for understanding the underlying motives of human behavior.

For over forty years, Freud explored the unconscious by the method of free association and developed what is generally regarded as the first comprehensive theory of personality. He mapped the contours of its topography, penetrated to the headwaters of its stream of energy, and charted the lawful course of its growth. By performing these incredible feats, he became one of the most controversial and influential figures in modern times. (For an account of the status of the unconscious before Freud see Whyte, 1962.)

Sigmund Freud was born in Moravia on May 6, 1856, and died in London on September 23, 1939. For nearly eighty years, however, he resided in Vienna, and he left that city only when the Nazis overran Austria. As a young man he
decided that he wanted to be a scientist. With this goal in mind he entered the medical school of the University of Vienna in 1873, graduating eight years later. Freud never intended to practice medicine, but the scanty rewards of scientific work, the limited opportunities for academic advancement for a Jew, and the needs of a growing family forced him to enter private practice. In spite of his practice, he found time for research and writing, and his accomplishments as a medical investigator earned him a solid reputation.

Freud's interest in neurology caused him to specialize in the treatment of nervous disorders, a branch of medicine that had lagged behind in the forward march of the healing arts during the nineteenth century. In order to improve his technical skills Freud studied for a year with the famous French psychiatrist Jean Charcot, who was using hypnosis in the treatment of hysteria. Although Freud tried hypnosis with his patients, he was not impressed by its efficacy. Consequently, when he heard about a new method that had been devised by a Viennese physician, Joseph Breuer, a method by which the patient was cured of symptoms by talking about them, he tried it out and found it effective. Breuer and Freud collaborated in writing up some of their cases of hysteria that had been treated by the talking-out technique (1895).

However, the two men soon parted company over the importance of the sexual factor in hysteria. Freud felt that sexual conflicts were the cause of hysteria while Breuer held a more conservative view (see Ellenberger, 1970, for a discussion of historical antecedents of Freud's position). Thereafter, Freud worked pretty much alone, developing the ideas that were to form the foundation of psychoanalytic theory and culminated in the publication of his first great work, *The interpretation of dreams* (1900). Other books and articles soon brought his views to the attention of physicians and scientists throughout the world, and it was not long before Freud was surrounded by a group of disciples from various countries, among them Ernest Jones of England, Carl Jung of Zurich, A. A. Brill of New York, Sandor Ferenczi of Budapest, Karl Abraham of Berlin, and Alfred Adler of Vienna. Jung and Adler later withdrew from the circle and developed rival viewpoints.

It is impossible within the brief space permitted us to cover even the highlights of Freud's intellectual and personal life: the early years as a medical student and investigator; the decisive influence of the great German physiologist Ernst Brücke, who was one of the leaders in the Helmholtz School of Medicine and from whom Freud learned to regard the individual as a dynamic system subject to the laws of nature (Amacher, 1965); his marriage to Martha Bernays and his lifelong devotion to her and to his six children, one of whom, Anna, followed her father's calling; the stimulating year with Charcot in Paris; his searching self-analysis begun in the 1890s and continuing throughout his life; the abortive attempt to account for psychological phenomena in terms of cerebral anatomy; the years of isolation from the medical community of Vienna; the invitation from G. Stanley Hall, the eminent American psychologist
and president of Clark University, to address the meetings commemorating the founding of that university; the establishing of the International Psychoanalytic Association and the secession of such important disciples as Jung, Adler, Rank, and Stekel; the influence of World War I upon Freud's thinking and his thoroughgoing revision of the basic tenets of psychoanalytic theory; the application of psychoanalytic concepts in all fields of human endeavor; Freud's personal characteristics and the long torment of cancer of the jaw; and finally his melodramatic escape from the clutches of the Nazis. Fortunately, every nook and cranny of Freud's long life has been surveyed by the foremost English psychoanalyst, Ernest Jones, and brilliantly related in a three-volume biography (1953, 1955, 1957). More recently, Peter Gay (1988) has provided a comprehensive, albeit sympathetic, biography of Freud.

Nor does space permit us to list the published works of Freud. Beginning with *The interpretation of dreams* in 1900 and terminating in the posthumously
published *Outline of psychoanalysis* in 1940, Freud's psychological writings fill twenty-four volumes in the definitive, standard English edition (1953–1974). For the reader who is unfamiliar with Freud's theory of personality, the following books are recommended: *The interpretation of dreams* (1900), *The psychopathology of everyday life* (1901), *General introductory lectures on psycho-analysis* (1917), *New introductory lectures on psychoanalysis* (1933), and *An outline of psychoanalysis* (1940).

In the following account of Freud's ideas we shall limit ourselves to those matters that pertain to Freud's theory of personality. In the process, we exclude from consideration the psychoanalytic theory of neurosis, which, in any event, has been covered so well by Otto Fenichel (1945), the techniques of psychoanalysis, and the far-flung applications of Freudian psychology in the social sciences (see Hall & Lindzey, 1968), the arts, and the humanities. Nor shall we be able to take notice of the evolution of Freud's thinking with respect to the basic concepts of his personality theory: it will have to suffice to present Freud's final word on such concepts as we shall discuss. In Chapter 5, we will discuss some of the additions to and modifications of Freud's classical theory by his followers. The dissenting theories of Jung and Adler, who started out as proponents of psychoanalysis, are presented in Chapters 3 and 4.

The personality is made up of three major systems: the *id*, the *ego*, and the *superego*. Although each of these provinces of the total personality has its own functions, properties, components, operating principles, dynamisms, and mechanisms, they interact so closely with one another that it is difficult, if not impossible, to disentangle their effects and weigh their relative contribution to human behavior. Behavior is nearly always the product of an interaction among these three systems; rarely does one system operate to the exclusion of the other two.

The *id* is the original system of the personality; it is the matrix within which the *ego* and the *superego* become differentiated. The *id* consists of everything psychological that is inherited and that is present at birth, including the instincts. It is the reservoir of psychic energy and furnishes all the power for the operation of the other two systems. It is in close touch with the bodily processes from which it derives its energy. Freud called the *id* the "true psychic reality" because it represents the inner world of subjective experience and has no knowledge of objective reality. (For a discussion of the *id*, see Schur, 1966.)

The *id* cannot tolerate increases of energy that are experienced as uncomfortable states of tension. Consequently, when the tension level of the organism is raised, as a result of either external stimulation or internally produced
excitations, the id functions in such a manner as to discharge the tension immediately and return the organism to a comfortably constant and low energy level. This principle of tension reduction by which the id operates is called the pleasure principle.

To accomplish its aim of avoiding pain and obtaining pleasure, the id has at its command two processes. These are reflex actions and the primary process. Reflex actions are inborn and automatic reactions like sneezing and blinking; they usually reduce tension immediately. The organism is equipped with a number of such reflexes for dealing with relatively simple forms of excitation. The primary process involves a somewhat more complicated psychological reaction. It attempts to discharge tension by forming an image of an object that will remove the tension. For example, the primary process provides the hungry person with a mental picture of food. This hallucinatory experience in which the desired object is present in the form of a memory image is called wish-fulfillment. The best example of the primary process in normal people is the nocturnal dream, which Freud believed always represents the fulfillment or attempted fulfillment of a wish. The hallucinations and visions of psychotic patients are also examples of the primary process. Autistic or wishful thinking is highly colored by the action of the primary process. These wish-fulfilling mental images are the only reality that the id knows.

Obviously, the primary process by itself is not capable of reducing tension. The hungry person cannot eat mental images of food. Consequently, a new or secondary psychological process develops. When this occurs, the structure of the second system of the personality, the ego, begins to take form.

The ego comes into existence because the needs of the organism require appropriate transactions with the objective world of reality. The hungry person has to seek, find, and eat food before the tension of hunger can be eliminated. This means that the person has to learn to differentiate between a memory image of food and an actual perception of food as it exists in the outer world. Having made this crucial differentiation, it is then necessary to convert the image into a perception, which is accomplished by locating food in the environment. In other words, the person matches the memory image of food with the sight or smell of food as they come to the person through the senses. The basic distinction between the id and the ego is that the id knows only the subjective reality of the mind whereas the ego distinguishes between things in the mind and things in the external world.

The ego is said to obey the reality principle and to operate by means of the secondary process. The aim of the reality principle is to prevent the discharge of tension until an object that is appropriate for the satisfaction of the need has been discovered. The reality principle suspends the pleasure principle temporarily, but the pleasure principle is eventually served when the needed
object is found and the tension is thereby reduced. The reality principle asks in effect whether an experience is true or false—that is, whether it has external existence or not—while the pleasure principle is only interested in whether the experience is painful or pleasurable.

The secondary process is realistic thinking. By means of the secondary process the ego formulates a plan for the satisfaction of the need and then tests this plan, usually by some kind of action, to see whether or not it will work. The hungry person thinks where he or she may find food and then proceeds to look in that place. This is called reality testing. In order to perform its role efficiently, the ego has control over all the cognitive and intellectual functions; these higher mental processes are placed at the service of the secondary process.

The ego is said to be the executive of the personality because it controls the gateways to action, selects the features of the environment to which it will respond, and decides what instincts will be satisfied and in what manner. In performing these highly important executive functions, the ego has to try to integrate the often conflicting demands of the id, the superego, and the external world. This is not an easy task and often places a great strain upon the ego.

It should be kept in mind, however, that the ego is the organized portion of the id, that it comes into existence in order to forward the aims of the id and not to frustrate them, and that all of its power is derived from the id. It has no existence apart from the id, and it never becomes completely independent of the id. Its principal role is to mediate between the instinctual requirements of the organism and the conditions of the surrounding environment; its superordinate objectives are to maintain the life of the individual and to see that the species is reproduced. Freud once summarized the lot of the ego by saying that it has “three harsh masters”: the id, external reality, and the superego.

The third and last system of personality to be developed is the superego. It is the internal representative of the traditional values and ideals of society as interpreted to the child by its parents and enforced by means of a system of rewards and punishments imposed upon the child. The superego is the moral arm of personality. It represents the ideal rather than the real and strives for perfection rather than pleasure. Its main concern is to decide whether something is right or wrong so that it can act in accordance with the moral standards authorized by the agents of society.

The superego as the internalized moral arbiter of conduct develops in response to the rewards and punishments meted out by the parents. To obtain the rewards and avoid the punishments, the child learns to guide its behavior along the lines laid down by the parents. Whatever they say is improper and punish the child for doing tends to become incorporated into its conscience, which is one of the two subsystems of the superego. Whatever they approve
of and reward the child for doing tends to become incorporated into its ego-ideal, the other subsystem of the superego. The mechanism by which this incorporation takes place is called introjection. The child takes in or introjects the moral standards of the parents. The conscience punishes the person by making him or her feel guilty; the ego-ideal rewards the person by making him or her feel proud. With the formation of the superego, self-control is substituted for parental control. (We will draw parallels to this process of self-evaluation when we discuss Bandura’s self-system in Chapter 14.)

The main functions of the superego are (1) to inhibit the impulses of the id, particularly those of a sexual or aggressive nature, since these are the impulses whose expression is most highly condemned by society; (2) to persuade the ego to substitute moralistic goals for realistic ones; and (3) to strive for perfection. That is, the superego is inclined to oppose both the id and the ego and to make the world over into its own image. However, it is like the id in being irrational and like the ego in attempting to exercise control over the instincts. Unlike the ego, the superego does not merely postpone instinctual gratification; it tries to block it permanently. (A historical analysis of the superego has been made by Turiel, 1967.)

We conclude this brief description of the three systems of the personality by pointing out that the id, ego, and superego are not to be thought of as manikins that operate the personality. They are merely names for various psychological processes that obey different system principles. Under ordinary circumstances these different principles do not collide with one another or work at cross purposes. On the contrary, they work together as a team under the administrative leadership of the ego. The personality normally functions as a whole rather than as three separate segments. In a very general way, the id may be thought of as the biological component of personality, the ego as the psychological component, and the superego as the social component.

**THE DYNAMICS OF PERSONALITY**

Freud was brought up under the influence of the strongly deterministic and positivistic philosophy of nineteenth-century science. He regarded the human organism as a complex energy system that derives its energy from the food it consumes and expends its limited pool of energy for such various purposes as circulation, respiration, muscular exercise, perceiving, thinking, and remembering. Freud saw no reason to assume that the energy that furnishes the power for breathing or digesting is any different, save in form, from the energy that furnishes the power for thinking and remembering. After all, as nineteenth-century physicists were firmly insisting, energy has to be defined in terms of the work it performs. If the work consists of a psychological activity such as thinking, then it is perfectly legitimate, Freud believed, to call this form of energy psychic energy. According to the doctrine of the conservation
of energy, energy may be transformed from one state into another state but can never be lost from the total cosmic system. It follows from this that psychic energy may be transformed into physiological energy and vice versa. The point of contact or bridge between the energy of the body and that of the personality is the id and its instincts.

An instinct is defined as an inborn psychological representation of an inner somatic source of excitation. The psychological representation is called a wish, and the bodily excitation from which it stems is called a need. Thus, the state of hunger may be described in physiological terms as a condition of nutritional deficit in the tissues of the body whereas psychologically it is represented as a wish for food. The wish acts as a motive for behavior. The hungry person seeks food. Instincts are considered therefore to be the propelling factors of personality. Not only do they drive behavior but they also determine the direction that the behavior will take. In other words, an instinct exercises selective control over conduct by increasing one’s sensitivity for particular kinds of stimulation. The hungry person is more sensitive to food stimuli, and the sexually aroused person is more likely to respond to erotic stimuli.

Parenthetically, it may be observed that the organism can also be activated by stimuli from the external world. Freud felt, however, that these environmental sources of excitation play a less important role in the dynamics of personality than do the inborn instincts. In general, external stimuli make fewer demands upon the individual and require less complicated forms of adjustment than needs. One can always flee from an external stimulus, but it is impossible to run away from a need. Although Freud relegated environmental stimuli to a secondary place, he did not deny their importance under certain conditions. For example, excessive stimulation during the early years of life, when the immature ego lacks the capacity for binding large amounts of free energy (tension), may have drastic effects upon the personality, as we shall see when we consider Freud’s theory of anxiety.

An instinct is a quantum of psychic energy or, as Freud put it, “a measure of the demand made upon the mind for work” (1905a, p. 168). All the instincts taken together constitute the sum total of psychic energy available to the personality. As previously pointed out, the id is the reservoir of this energy and it is also the seat of the instincts. The id may be considered to be a dynamo that furnishes psychological power for running the manifold operations of personality. This power is derived, of course, from the metabolic processes of the body.

An instinct has four characteristic features: a source, an aim, an object, and an impetus. The source has already been defined as a bodily condition or a need. The aim is the removal of the bodily excitation. The aim of the hunger instinct, for example, is to abolish the nutritional deficiency, which is accom-
plished, of course, by eating food. All of the activity that intervenes between
the appearance of the wish and its fulfillment is subsumed under the heading
of object. That is, object not only refers to the particular thing or condition
that will satisfy the need but also includes all the behavior that takes place
in securing the necessary thing or condition. For instance, when a person is
hungry, he or she usually has to perform a number of actions before reaching
the final goal of eating. The impetus of an instinct is its force or strength, which is determined by
the intensity of the underlying need. As the nutritional deficiency becomes
greater, up to the point where physical weakness sets in, the force of the
instinct becomes correspondingly greater.

Let us briefly consider some of the implications in this way of conceptualiza-
ing an instinct. In the first place, the model that Freud provides is a tension
reduction one. The behavior of a person is activated by internal irritants and
subsides as soon as an appropriate action removes or diminishes the irritation.
This means that the aim of an instinct is essentially regressive in character
since it returns the person to a prior state, one that existed before the instinct
appeared. This prior state to which the personality returns is one of relative
quiescence. An instinct is also said to be conservative because its aim is to
conserve the equilibrium of the organism by abolishing disturbing excitations.
Thus, we can picture an instinct as a process that repeats as often as it appears
a cycle of events starting with excitement and terminating with repose. Freud
called this aspect of an instinct repetition compulsion. The personality is
compelled to repeat over and over again the inevitable cycle from excitation
to quiescence. (The term repetition compulsion is also employed to describe
perseverative behavior that occurs when the means adopted for satisfying the
need are not completely appropriate. A child may perseverate in sucking its
thumb when it is hungry.)

According to Freud's theory of instincts, the source and aim of an instinct
remain constant throughout life, unless the source is changed or eliminated
by physical maturation. New instincts may appear as new bodily needs develop.
In contrast to this constancy of source and aim, the object or means by which
the person attempts to satisfy the need can and does vary considerably during
the lifetime of the person. This variation in object-choice is possible because
psychic energy is displaceable; it can be expended in various ways. Conse-
sequently, if one object is not available, either by virtue of its absence or by virtue
of barriers within the personality, energy can be invested in another object.
If that object proves also to be inaccessible, another displacement can occur,
and so forth, until an available object is found. In other words, objects can be
substituted for one another, which is definitely not the case with either the
source or the aim of an instinct.

When the energy of an instinct is more or less permanently invested in a
substituté object, that is, one that is not the original and innately determined
object, the resulting behavior is said to be an *instinct derivative*. Thus, if the first sexual object-choice of the baby is the manipulation of its own sex organs and it is forced to give up this pleasure in favor of more innocuous forms of bodily stimulation such as sucking the thumb or playing with the toes, the substitute activities are derivatives of the sexual instinct. The aim of the sexual instinct does not change when a substitution takes place; the goal sought is still that of sexual gratification.

The displacement of energy from one object to another is the most important feature of personality dynamics. It accounts for the apparent plasticity of human nature and the remarkable versatility of human behavior. Practically all of the adult person's interests, preferences, tastes, habits, and attitudes represent the displacements of energy from original instinctual object-choices. They are almost all instinct derivatives. Freud's theory of motivation was based solidly on the assumption that the instincts are the sole energy sources for human behavior. We shall have a great deal more to say about displacement in subsequent sections of this chapter.

**Number and Kinds of Instincts.** Freud did not attempt to draw up a list of instincts because he felt that not enough was known about the bodily states upon which the instincts depend. The identification of these organic needs is a job for the physiologist, not the psychologist. Although Freud did not pretend to know how many instincts there are, he did assume that they could all be classified under two general headings, the *life* instincts and the *death* instincts.

The *life* instincts serve the purpose of individual survival and racial propagation. Hunger, thirst, and sex fall in this category. The form of energy by which the *life* instincts perform their work is called *libido*.

The *death* instinct to which Freud paid the greatest attention is that of sex, and in the early years of psychoanalysis almost everything the person did was attributed to this ubiquitous drive (Freud, 1905a). Actually, the *death* instinct is not one instinct but many. That is, there are a number of separate bodily needs that give rise to erotic wishes. Each of these wishes has its source in a different bodily region referred to collectively as *erogenous zones*. An erogenous zone is a part of the skin or mucous membrane that is extremely sensitive to irritation and that when manipulated in a certain way removes the irritation and produces pleasurable feelings. The lips and oral cavity constitute one such erogenous zone, the anal region another, and the sex organs a third. Sucking produces oral pleasure, elimination anal pleasure, and massaging or rubbing genital pleasure. In childhood, the sexual instincts are relatively independent of one another, but when the person reaches puberty, they tend to fuse together and to serve jointly the aim of reproduction.

The *death* instincts, or, as Freud sometimes called them, the destructive instincts, perform their work much less conspicuously than the *life* instincts. For this reason little is known about them, other than that they inevitably
accomplish their mission. Every person does eventually die, a fact that caused Freud to formulate the famous dictum, "the goal of all life is death" (1920a, p. 38). Freud assumed specifically that the person has a wish, usually of course unconscious, to die. He did not attempt to identify the somatic sources of the death instincts, although one may wish to speculate that they reside in the catabolic, or breaking-down, processes of the body. Nor did he assign a name to the energy by which the death instincts carry on their work.

Freud’s assumption of a death wish is based upon the constancy principle as formulated by Fechner. This principle asserts that all living processes tend to return to the stability of the inorganic world. In Beyond the pleasure principle (1920a). Freud made the following argument in favor of the concept of the death wish. Living matter evolved by the action of cosmic forces upon inorganic matter. These changes were highly unstable at first and quickly reverted to their prior inorganic state. Gradually, however, the length of life increased because of evolutionary changes in the world, but these unstable animate forms always eventually regressed to the stability of inanimate matter. With the development of reproductive mechanisms, living things were able to reproduce their own kind and did not have to depend upon being created out of the inorganic world. Yet even with this advance the individual member of a species inevitably obeyed the constancy principle, since this was the principle that governed its existence when it was endowed with life. Life, Freud said, is but a roundabout way to death. Disturbed out of its stable existence, organic matter strives to return to a quiescent state. The death wish in the human being is the psychological representation of the constancy principle.

An important derivative of the death instincts is the aggressive drive. Aggressiveness is self-destruction turned outward against substitute objects. A person fights with other people and is destructive because the death wish is blocked by the forces of the life instincts and by other obstacles in the personality that counteract the death instincts. It took the Great War of 1914-1918 to convince Freud that aggression was as sovereign a motive as sex. (This view that the Great War stimulated Freud’s interest in aggression has been disputed by Stepansky, 1977.)

The life and death instincts and their derivatives may fuse together, neutralize each other, or replace one another. Eating, for example, represents a fusion of hunger and destructiveness that is satisfied by biting, chewing, and swallowing food. Love, a derivative of the sex instinct, can neutralize hate, a derivative of the death instinct. Or love can replace hate, and hate love.

Since the instincts contain all the energy by which the three systems of the personality perform their work, let us turn now to consider the ways in which the id, ego, and superego gain control over and utilize psychic energy.
The dynamics of personality consists of the way in which psychic energy is distributed and used by the id, ego, and superego. Since the amount of energy is a limited quantity, there is competition among the three systems for the energy that is available. One system gains control over the available energy at the expense of the other two systems. As one system becomes stronger, the other two necessarily become weaker, unless new energy is added to the total system.

Originally the id possesses all of the energy and uses it for reflex action and wish-fulfillment by means of the primary process. Both of these activities are in the direct service of the pleasure principle, by which the id operates. The investment of energy in an action or image that will gratify an instinct is called an instinctual object-choice or object-cathexis.

The energy of the id is in a very fluid state, which means that it can easily be shunted from one action or image to another action or image. The displaceable quality of this instinctual energy is due to the id’s inability to form fine discriminations between objects. Objects that are different are treated as though they were the same. The hungry baby, for instance, will take up almost anything that it can hold and put it to its lips.

Since the ego has no source of power of its own, it has to borrow it from the id. The diversion of energy from the id into the processes that make up the ego is accomplished by a mechanism known as identification. This is one of the most important concepts in Freudian psychology, and one of the most difficult to comprehend. It will be recalled from a previous discussion that the id does not distinguish between subjective imagery and objective reality. When it cathexes an image of an object, it is the same as cathecting the object itself. However, since a mental image cannot satisfy a need, the person is forced to differentiate between the world of the mind and the outer world. He or she has to learn the difference between a memory or idea of an object that is not present and a sensory impression or perception of an object that is present. Then, in order to satisfy a need, the person must learn to match what is in his or her mind with its counterpart in the external world by means of the secondary process. This matching of a mental representation with physical reality, of something that is in the mind with something that is in the outer world, is what is meant by identification.

Since the id makes no distinction between any of the contents of the mind, whether they be perceptions, memory images, ideas, or hallucinations, a cathexis may be formed for a realistic perception as readily as for a wish-fulfilling memory image. In this way, energy is diverted from the purely subjective psychological processes of the id into the objective, logical, ideational processes of the ego. In both cases, energy is used for strictly psychological purposes, but in the case of the id no distinction is made between the mental symbol and the physical referent, whereas in the case of the ego this distinction is made. The ego attempts to make the symbol accurately represent the refer-
ent. In other words, identification enables the secondary process to supersede the primary process. Since the secondary process is so much more successful in reducing tensions, more and more ego cathexes are formed. Gradually the more efficient ego obtains a virtual monopoly over the store of psychic energy. This monopoly is only relative, however, because if the ego fails to satisfy the instincts, the id reasserts its power.

Once the ego has trapped enough energy, it can use it for other purposes than that of gratifying the instincts by means of the secondary process. Some of the energy is used to bring the various psychological processes such as perceiving, remembering, judging, discriminating, abstracting, generalizing, and reasoning to a higher level of development. Some of the energy has to be used by the ego to restrain the id from acting impulsively and irrationally. These restraining forces are known as *anticathexes* in distinction to the driving forces or cathexes. If the id becomes too threatening, the ego erects defenses against the id. These defense mechanisms, which will be discussed in a later section, may also be used to cope with the pressures of the superego upon the ego. Energy, of course, is required for the maintenance of these defenses.

Ego energy may also be displaced to form new object-cathexes, so that a whole network of derived interests, attitudes, and preferences is formed within the ego. These ego-cathexes may not directly satisfy the basic needs of the organism, but they are connected by associative links with objects that do. The energy of the hunger drive, for example, may fan out to include such cathexes as an interest in collecting recipes, visiting unusual restaurants, and selling chinaware. This spreading of cathexes into channels that are only remotely connected with the original object of an instinct is made possible by the greater efficiency of the ego in performing its fundamental job of gratifying the instincts. The ego has a surplus of energy to use for other purposes.

Finally, the ego as the executive of the personality organization uses energy to effect an integration among the three systems. The purpose of this integrative function of the ego is to produce an inner harmony within the personality so that the ego's transactions with the environment may be made smoothly and effectively.

The mechanism of identification also accounts for the energizing of the superego system. This, too, is a complex matter and takes place in the following way. Among the first object-cathexes of the baby are those of the parents. These cathexes develop early and become very firmly entrenched because the baby is completely dependent upon its parents or parent-substitutes for the satisfaction of needs. The parents also play the role of disciplinary agents: they teach the child the moral code and the traditional values and ideals of the society in which the child is raised. They do this by rewarding the child when it does the right thing and punishing it when it does the wrong thing. A reward is anything that reduces tension or promises to do so. A piece of candy, a smile, or a kind word may be an effective reward. A punishment is anything
that increases tension. It may be a spanking, a disapproving look, or a denial of some pleasure. Thus, the child learns to identify, that is, to match its behavior with the sanctions and prohibitions laid down by the parents. The child introjects the moral imperatives of its parents by virtue of the original cathexes it has for them as need-satisfying agents. It cathects their ideals, and these become its ego-ideal; it cathects their prohibitions, and these become its conscience. Thus, the superego gains access to the reservoir of energy in the id by means of the child’s identification with the parents.

The work performed by the superego is often, although not always, in direct opposition to the impulses of the id. This is the case because the moral code represents society’s attempt to control and even to inhibit the expression of the primitive drives, especially those of sex and aggression. Being good usually means being obedient and not saying or doing “dirty” things. Being bad means being disobedient, rebellious, and lustful. The virtuous person inhibits his or her impulses; the sinful person indulges them. However, the superego can sometimes be corrupted by the id. This happens, for example, when a person in a fit of moralistic fervor takes aggressive measures against those considered wicked and sinful. The expression of aggression in such instances is cloaked by the mantle of righteous indignation.

Once the energy furnished by the instincts has been channeled into the ego and the superego by the mechanism of identification, a complicated interplay of driving and restraining forces becomes possible. The id, it will be recalled, possesses only driving forces or cathexes whereas the energy of the ego and the superego is used both to forward and to frustrate the aims of the instincts. The ego has to check both the id and the superego if it is to govern the personality wisely; yet it must have enough energy left over to engage in necessary intercourse with the external world. If the id retains control over a large share of the energy, the behavior of the person will tend to be impulsive and primitive in character. On the other hand, if the superego gains control of an undue amount of energy, the functioning of the personality will be dominated by moralistic considerations rather than by realistic ones. The antica-thexes of the conscience may tie up the ego in moral knots and prevent action of any sort, while the cathexes of the ego-ideal may set such high standards for the ego that the person is being continually frustrated and may eventually develop a depressing sense of failure.

Sudden and unpredictable shifts of energy from one system to another and from cathexes to antica-thexes are common, especially during the first two decades of life before the distribution of energy has become more or less stabilized. These shifts of energy keep the personality in a state of dynamic flux. Freud was pessimistic about the chances of psychology ever becoming a very exact science because, as he pointed out, even a very small change in the distribution of energy might tip the scale in favor of one form of behavior rather than its opposite (Freud, 1920b). Who can say whether the person
poised on the window ledge is going to jump or not or whether the batter is going to strike out or hit a winning home run?

In the final analysis, the dynamics of personality consist of the interplay of the driving forces (cathexes) and the restraining forces (anticathexes). All the conflicts within the personality may be reduced to the opposition of these two sets of forces. All prolonged tension is due to the counteraction of a driving force by a restraining force. Whether it be an anticathexis of the ego opposed to a cathexis of the id or an anticathexis of the superego opposed to a cathexis of the ego, the result in terms of tension is the same. As Freud was fond of saying, psychoanalysis is “a dynamic [conception], which traces mental life back to an interplay between forces that favour or inhibit one another” (1910b, p. 213).

Anxiety

The dynamics of personality is to a large extent governed by the necessity for gratifying one’s needs by means of transactions with objects in the external world. The surrounding environment provides the hungry organism with food, the thirsty one with water. In addition to its role as the source of supplies, the external world plays another part in shaping the destiny of personality. The environment contains regions of danger and insecurity; it can threaten as well as satisfy. The environment has the power to produce pain and increase tension as well as to bring pleasure and reduce tension. It disturbs as well as comforts.

The individual’s customary reaction to external threats of pain and destruction with which it is not prepared to cope is to become afraid. The threatened person is ordinarily a fearful person. Overwhelmed by excessive stimulation that the ego is unable to bring under control, the ego becomes flooded with anxiety.

Freud recognized three types of anxiety: reality anxiety, neurotic anxiety, and moral anxiety, or feelings of guilt (1926b). The basic type is reality anxiety, or fear of real dangers in the external world; from it the other two types are derived. Neurotic anxiety is the fear that the instincts will get out of control and cause the person to do something for which he or she will be punished. Neurotic anxiety is not so much a fear of the instincts themselves as it is a fear of the punishment likely to ensue from instinctual gratification. Neurotic anxiety has a basis in reality, because the world as represented by the parents and other authorities does punish the child for impulsive actions. Moral anxiety is fear of the conscience. People with well-developed superegos tend to feel guilty when they do something or even think of doing something that is contrary to the moral code by which they have been raised. They are said to feel conscience stricken. Moral anxiety also has a realistic basis; the person has been punished in the past for violating the moral code and may be punished again.

The function of anxiety is to warn the person of impending danger; it is a signal to the ego that unless appropriate measures are taken the danger may
This concept was introduced in an earlier section to help account for the formation of the ego and superego. In the present context, identification may be defined as the method by which a person takes over the features of another.

Identification and displacement are two methods by which the individual learns to resolve frustrations, conflicts, and anxieties. The process of learning is what is meant by personality development. For a lucid discussion of Freud's theory of learning, see Hillard & Bower (1975).

Personality develops in response to four major sources of tension: (1) physiological growth processes, (2) frustrations, (3) conflicts, and (4) the individual's own personality. As a direct consequence of increasing pressures, the person is forced to learn new methods of reducing tension. This process results in the development of personality.

Identification is a form of learning that makes it possible for the person to take on the characteristics of another person. Identification is a means of resolving conflicts and anxieties. It is a means of learning by which the individual learns to accept the characteristics of another person.

Personality is formed by the end of the fifth year and that subsequent growth was pretty well completed by the end of the seventh year. However, some developments in personality may occur later in life.

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THE DEVELOPMENT OF PERSONALITY

Freud was probably the first psychological theorist to emphasize the development of mental aspects of personality and in particular to stress the decisive role of early years of infancy and childhood in laying down the basic character structure of the person. Indeed, Freud felt that personality was pretty well formed by the end of the fifth year and that subsequent growth was pretty well completed by the end of the seventh year. However, some developments in personality may occur later in life.

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person and makes them a corporate part of his or her own personality. One learns to reduce tension by modeling one's behavior after that of someone else. Freud preferred the term identification to the more familiar imitation. He felt that imitation denotes a kind of superficial and transient copying behavior, and he wanted a word that would convey the idea of a more or less permanent acquisition to personality.

We choose as models those who seem to be more successful in gratifying their needs than we are. The child identifies with its parents because they appear to be omnipotent, at least during the years of early childhood. As children grow older, they find other people to identify with whose accomplishments are more in line with their current wishes. Each period tends to have its own characteristic identification figures. Needless to say, most of this identification takes place unconsciously and not, as it may sound, with conscious intention. This emphasis upon unconscious modeling distinguishes Freud's identification from Bandura's observational learning (see Chapter 14).

It is not necessary for a person to identify with someone else in every respect. One usually selects and incorporates just those features that he or she believes will help achieve a desired goal. There is a good deal of trial and error in the identification process because one is usually not quite sure what it is about another person that accounts for their success. The ultimate test is whether the identification helps to reduce tension; if it does, the quality is taken over; if it does not, it is discarded. One may identify with animals, imaginary characters, institutions, abstract ideas, and inanimate objects as well as with other human beings.

Identification is also a method by which one may regain an object that has been lost. By identifying with a loved person who had died or from whom one has been separated, the lost person becomes reincarnated as an incorporated feature of one's personality. Children who have been rejected by their parents tend to form strong identifications with them in the hope of regaining their love. One may also identify with a person out of fear. The child identifies with the prohibitions of the parents in order to avoid punishment. This kind of identification is the basis for the formation of the superego.

The final personality structure represents an accumulation of numerous identifications made at various periods of the person's life, although the mother and father are probably the most important identification figures in anyone's life.

When an original object-choice of an instinct is rendered inaccessible by external or internal barriers (anticathexes), a new cathexis is formed unless a strong repression occurs. If this new cathexis is also blocked, another displacement takes place, and so on, until an object is found that yields some relief for the pent-up tension. This object is then cathected until it loses its
power to reduce tension, at which time another search for an appropriate goal object is instituted. Throughout the series of displacements that constitute, in such large measure, the development of personality, the source and aim of the instinct remain constant. It is only the object that varies.

A substitute object is rarely if ever as satisfying or tension reducing as the original object, and the more dissimilar the substitute object is from the original one, the less tension is reduced. As a consequence of numerous displacements, a pool of undischarged tension accumulates that acts as a permanent motivating force for behavior. The person is constantly seeking new and better ways of reducing tension. This accounts for the variability and diversity of behavior, as well as for human restlessness. On the other hand, the personality does become more or less stabilized with age due to the compromises that are made between the urging forces of the instincts and the resistances of the ego and superego.

As we have written in another place:

Interests, attachments, and all the other forms of acquired motives endure because they are to some degree frustrating as well as satisfying. They persist because they fail to yield complete satisfaction. . . . Every compromise is at the same time a renunciation. A person gives up something that he really wants but cannot have, and accepts something second or third best that he can have. (Hall, 1954, p. 104)

Freud pointed out that the development of civilization was made possible by the inhibition of primitive object-choices and the diversion of instinctual energy into socially acceptable and culturally creative channels (1930). A displacement that produces a higher cultural achievement is called a sublimation. Freud observed in this connection that Leonardo da Vinci’s interest in painting Madonnas was a sublimated expression of a longing for intimacy with his mother, from whom he had been separated at a tender age (1910a). Since sublimation does not result in complete satisfaction, any more than any displacement does, there is always some residual tension. This tension may discharge itself in the form of nervousness or restlessness, conditions which Freud pointed out were the price that humans paid for their civilized status (1908).

The direction taken by a displacement is determined by two factors: (1) the resemblance of the substitute object to the original one and (2) the sanctions and prohibitions imposed by society. The factor of resemblance is actually the degree to which the two objects are identified in the mind of the person. Leonardo painted Madonnas rather than peasant women or aristocrats because he conceived of his mother as resembling the Madonna more than any other type of woman. Society, acting through the parents and other author-
ity figures, authorizes certain displacements and outlaws others. The child learns that it is permissible to suck a lollipop but not to suck its thumb.

The ability to form substitute object-cathexes is the most powerful mechanism for the development of personality. The complex network of interests, preferences, values, attitudes, and attachments that characterize the personality of the adult human being is made possible by displacement. If psychic energy were not displaceable and distributive, there would be no development of personality. The person would be merely a mechanical robot driven to perform fixed patterns of behavior instinctually.

Under the pressure of excessive anxiety, the ego is sometimes forced to take extreme measures to relieve the pressure. These measures are called defense mechanisms. The principal defenses are repression, projection, reaction formation, fixation, and regression (Anna Freud, 1946). All defense mechanisms have two characteristics in common: (1) they deny, falsify, or distort reality and (2) they operate unconsciously so that the person is not aware of what is taking place.

Repression. This is one of the earliest concepts of psychoanalysis. Before Freud arrived at his final formulation of personality theory in terms of the id, ego, and superego, he divided the mind into three regions: consciousness, preconsciousness, and unconsciousness. The preconscious consisted of psychological material that could become conscious when the need arose. Material in the unconscious, however, was regarded by Freud as being relatively inaccessible to conscious awareness; it was said to be in a state of repression.

When Freud revised his theory of personality, the concept of repression was retained as one of the defense mechanisms of the ego. (Gill, 1963, points out that Freud gave up a topography of the mind in terms of conscious, preconscious, and unconscious for a structural view in terms of id, ego, and superego because repression and what was repressed could not be in the same system. He assigned repression to the ego and what was repressed to the id. See, also, Arlow & Brenner, 1964.) Repression is said to occur when an object-choice that arouses undue alarm is forced out of consciousness by an anticathexis. For example, a disturbing memory may be prevented from becoming conscious or a person may not see something that is in plain sight because the perception of it is repressed. Repression can even interfere with the normal functioning of the body. Someone may become sexually impotent because he is afraid of the sex impulse, or he may develop arthritis as a consequence of repressing feelings of hostility.

Repressions may force their way through the opposing anticathexes or they may find expression in the form of a displacement. If the displacement is to be successful in preventing the reawakening of anxiety, it must be disguised
in some suitable symbolic form. A son who has repressed his hostile feelings toward his father may express these hostile feelings against other symbols of authority.

Repressions once formed are difficult to abolish. The person must reassure herself that the danger no longer exists, but she cannot get such reassurance until the repression is lifted so that she can test reality. It is a vicious circle. That is why adults carry around with them a lot of childish fears; they never get a chance to discover that these fears have no basis in reality. Note the similarity to the behaviorist position that irrational fears persist because they lead the individual to avoid situations in which the fear might be extinguished (see Chapter 12).

**Projection.** Reality anxiety is usually easier for the ego to deal with than either neurotic or moral anxiety. Consequently, if the source of the anxiety can be attributed to the external world rather than to the individual’s own primitive impulses or to the threats of conscience, the person is likely to achieve greater relief for the anxious condition. This mechanism by which neurotic or moral anxiety is converted into an objective fear is called projection. This conversion is easily made because the original source of both neurotic and moral anxiety is fear of punishment from an external agent. In projection, one simply says “She hates me” instead of “I hate her” or “He is persecuting me” instead of “My conscience is bothering me.” Projection often serves a dual purpose. It reduces anxiety by substituting a lesser danger for a greater one, and it enables the projecting person to express his or her impulses under the guise of defending one against one’s enemies.

**Reaction Formation.** This defensive measure involves the replacement in consciousness of an anxiety-producing impulse or feeling by its opposite. For example, hate is replaced by love. The original impulse still exists but is glossed over or masked by one that does not cause anxiety.

The question often arises as to how a reaction formation may be distinguished from a genuine expression of an impulse or feeling. For instance, how can reactive love be differentiated from true love? Usually, a reaction formation is marked by extravagant showiness—the person protests too much—and by compulsiveness. Extreme forms of behavior of any kind usually denote a reaction formation. Sometimes the reaction formation succeeds in satisfying the original impulse that is being defended against, as when a mother smothers her child with affection and attention.

**Fixation and Regression.** In the course of normal development, as we shall see in the next section, the personality passes through a series of rather well-defined stages until it reaches maturity. Each new step that is taken, however, entails a certain amount of frustration and anxiety. If these become too great,
normal growth may be temporarily or permanently halted. In other words, the
person may become fixated on one of the early stages of development because
taking the next step is fraught with anxiety. The overly dependent child exempli-
fies defense by fixation; anxiety prevents it from learning how to become inde-
pendent.
A closely related type of defense is that of regression. In this case, a
person who encounters traumatic experiences retreats to an earlier stage of
development. For example, a child who is frightened by the first day at school
may indulge in infantile behavior, such as weeping, sucking the thumb, hanging
onto the teacher, or hiding in a corner. A young married woman who has
difficulties with her husband may return to the security of her parents’ home
or a man who has lost his job may seek comfort in drink. The path of regression
is usually determined by the earlier fixations of the person. That is, people
tend to regress to a stage upon which they have been previously fixated. If
they were overly dependent as children, they will be likely to become overly
dependent again when their anxiety increases to an unbearable level.

Fixation and regression are ordinarily relative conditions; a person rarely
fixates or regresses completely. Rather the personality tends to include infantili-
isms, that is, immature forms of behavior, and predispositions to display child-
ish conduct when thwarted. Fixations and regressions are responsible for the
unevenness in personality development.

The child passes through a series of dynamically differentiated stages during
the first five years of life, following which for a period of five or six years—the
period of latency—the dynamics become more or less stabilized. With the
advent of adolescence, the dynamics erupt again and then gradually settle
down as the adolescent moves into adulthood. For Freud, the first few years
of life are decisive for the formation of personality.

Each stage of development during the first five years is defined in terms
of the modes of reaction of a particular zone of the body. During the first
stage, which lasts for about a year, the mouth is the principal region of
dynamic activity. The oral stage is followed by the development of cathexes
and anticathexes around the eliminative functions and is called the anal stage.
This lasts during the second year and is succeeded by the phallic stage, in
which the sex organs become the leading erogenous zones. These stages—the
oral, anal, and phallic—are called the pregenital stages. The child then goes
into a prolonged latency period, the so-called quiet years, dynamically speaking.
During this period the impulses tend to be held in a state of repression. The
dynamic resurgence of adolescence reactivates the pregenital impulses. If
these are successfully displaced and sublimated by the ego, the person passes
into the final stage of maturity, the genital stage.
Freud's developmental model is based on the assumption of infantile sexuality. That is, the stages represent a normative sequence of different modes for gratifying sexual instincts, and it is physical maturation that is responsible for the sequence of erogenous zones and corresponding stages. The stages are termed "psychosexual" because it is the sexual urges that drive the acquisition of psychological characteristics. Freud often is misunderstood on this point. When he used the term "sexuality," he was not referring exclusively to genital sexuality; rather, the sexual forces that drive the developmental stages all reflect different types of bodily pleasure. The sites of the bodily pleasure change as physical maturation leads to a normative sequence of erogenous zones, each with a different set of characteristic actions and objects. This dialogue between the physical and the psychological continues in that many of the character traits associated with a particular stage are transformations of physical acts characteristic of that particular stage. For example, the infant who literally attempts to swallow everything during the oral stage may become the gullible adult who believes or figuratively "swallows" what other people say. Or the infant who aggressively bites may become the adult who uses sarcasm or "biting" humor. These examples may seem extreme, but notice that the fixation process itself is very reasonable. Indeed, the notion of a continuation of or a return to established modes of behavior forms the heart of the learning theory approaches to behavior and personality (see Chapters 12, 13, and 14). With this introduction, we now turn to the stages themselves.

The Oral Stage. The principal source of pleasure derived from the mouth is that of eating. Eating involves tactual stimulation of the lips and oral cavity and swallowing or, if the food is unpleasant, spitting out. Later, when the teeth erupt, the mouth is used for biting and chewing. These two modes of oral activity, incorporation of food and biting, are the prototypes for many later character traits that develop. Pleasure derived from oral incorporation may be displaced to other modes of incorporation such as the pleasure gained from acquiring knowledge or possessions. A gullible person, for example, is one who is fixated on the oral incorporative level of personality; such a person will swallow almost anything he or she is told. Biting or oral aggression may be displaced in the form of sarcasm and argumentativeness. By displacements and sublimations of various kinds, as well as by defenses against the primitive oral impulses, these prototypic modes of oral functioning provide the basis for the development of a vast network of interests, attitudes, and character traits.

Furthermore, since the oral stage occurs at a time when the baby is almost completely dependent upon its mother for sustenance, feelings of dependency arise during this period. These feelings of dependency tend to persist throughout life, in spite of later ego developments, and are apt to come to the fore whenever the person feels anxious and insecure. Freud believed that the most extreme symptom of dependency is the desire to return to the womb.
The Anal Stage. After the food has been digested, the residue accumulates in the lower end of the intestinal tract and is reflexly discharged when the pressure upon the anal sphincters reaches a certain level. The expulsion of the feces removes the source of discomfort and produces a feeling of relief. When toilet training is initiated, usually during the second year of life, the child has its first decisive experience with the external regulation of an instinctual impulse. It has to learn to postpone the pleasure that comes from relieving anal tensions. Depending upon the particular method of toilet training used by the mother and her feelings concerning defecation, the consequences of this training may have far-reaching effects upon the formation of specific traits and values. If the mother is very strict and repressive in her methods, the child may hold back its feces and become constipated. If this mode of reaction generalizes to other ways of behaving, the child will develop a retentive character. It will become obstinate and stingy. Or under the duress of repressive measures the child may vent its rage by expelling feces at the most inappropriate times. This is the prototype for all kinds of expulsive traits—cruelty, wanton destructiveness, temper tantrums, and messy disorderliness, to mention only a few. On the other hand, if the mother is the type of person who pleads with her child to have a bowel movement and who praises the child extravagantly when it does, the child will acquire the notion that the whole activity of producing feces is extremely important. This idea may be the basis for creativity and productivity. Innumerable other traits of character are said to have their roots laid down in the anal stage.

The Phallic Stage. During this stage of personality development, sexual and aggressive feelings associated with the functioning of the genital organs come into focus. The pleasures of masturbation and the fantasy life of the child that accompanies autoerotic activity set the stage for the appearance of the Oedipus complex. Freud considered the identification of the Oedipus complex to be one of his greatest discoveries. The Oedipus complex is named for the king of Thebes who killed his father and married his mother.

Briefly defined, the Oedipus complex consists of a sexual cathexis for the parent of the opposite sex and a hostile cathexis for the parent of the same sex. The boy wants to possess his mother and remove his father; the girl wants to possess her father and displace her mother. These feelings express themselves in the child’s fantasies during masturbation and in the alteration of loving and rebellious actions toward the parents. The behavior of the three- to five-year-old child is marked to a large extent by the operation of the Oedipus complex, and although it is modified and suffers repression after the age of five; it remains a vital force in the personality throughout life. Attitudes toward the opposite sex and toward people in authority, for instance, are largely conditioned by the Oedipus complex.
The development of the Oedipus complex differs for males and females. To begin with, both sexes love the mother because she satisfies their needs and resent the father because he is regarded as a rival for the mother’s affections. These feelings persist in the boy but change in the girl. Let us consider first the sequence of events that characterize the development of the male Oedipus complex.

The boy’s incestuous craving for the mother and his growing resentment toward the father bring him into conflict with his parents, especially the father. He imagines that his dominant rival is going to harm him, and his fears may actually be confirmed by threats from a resentful and punitive father. His fears concerning what the father may do to him center around harm to his genital organs because they are the source of his lustful feelings. He is afraid that his jealous father will remove the offending organs. Fear of castration or, as Freud called it, castration anxiety induces a repression of the sexual desire for the mother and hostility toward the father. It also helps to bring about an identification of the boy with his father. By identifying with the father, the boy also gains some vicarious satisfaction for his sexual impulses toward the mother. At the same time, his dangerous erotic feeling for the mother is converted into harmless tender affection for her. Lastly, the repression of the Oedipus complex causes the superego to undergo its final development. In Freud’s words, the superego is the heir of the male Oedipus complex. It is the bulwark against incest and aggression.

The sequence of events in the development and dissolution of the female Oedipus complex is more involved. In the first place, she exchanges her original love object, the mother, for a new object, the father. This occurs because the girl is disappointed to discover that a boy possesses a protruding sex organ, the penis, while she has only a cavity. Several important consequences follow from this traumatic discovery. In the first place, she holds her mother responsible for her castrated condition, thereby weakening the cathexis for the mother. In the second place, she transfers her love to the father because he has the valued organ she aspires to share with him. However, her love for the father and for other men as well is mixed with a feeling of envy because they possess something she lacks. Penis envy is the female counterpart of castration anxiety in the boy, and collectively they are called the castration complex. She imagines that she has lost something valuable, while the boy is afraid he is going to lose it. To some extent, the lack of a penis is compensated for when a woman has a baby, especially if it is a boy baby.

In the girl the castration complex initiates the Oedipus complex by weakening her cathexis for the mother and instituting a cathexis for the father. The boy’s Oedipus complex is repressed or otherwise changed by castration anxiety. In contrast, the girl’s Oedipus complex tends to persist, although it undergoes some modification due to the realistic barriers that prevent her from gratifying her sexual desire for the father. But it does not fall under the strong repression
that the boy's does. These differences in the nature of the Oedipus and castration complexes are the basis for many psychological differences between the sexes.

Freud's proposal of penis envy has been widely assailed, and we will see a number of rebuttals in the following chapters. Chief among the reactions against Freud has been the claim that he confused cultural expectations with biological necessities. After all, Freud wrote that "the anatomical distinction between the sexes] must express itself in psychical consequences" (1933, p. 124). In fairness to Freud, however, we should note that he regarded sex differences as "overdetermined" (that is, as the product of a number of different forces). In the same lecture in which the previous quotation appears, Freud wrote the following:

But we must beware in this of underestimating the influence of social customs, which similarly force women into passive situations. . . . You may take it as an instance of male injustice if I assert that envy and jealousy play an even greater part in the mental life of women than of men. It is not that I think these characteristics are absent in men or that I think they have no other roots in women than envy for the penis; but I am inclined to attribute their greater amount in women to this latter influence. . . . We do not lay claim to more than an average validity for these assertions; nor is it always easy to distinguish what should be ascribed to the influence of the sexual function and what to social breeding. . . . The determinants of women's choice of an object are often made unrecognizable by social conditions. . . . But do not forget that I have only been describing women in so far as their nature is determined by their sexual function. It is true that that influence extends very far; but we do not overlook the fact that an individual woman may be a human being in other respects as well. (1933, pp. 116–135)

Despite these careful qualifiers, it is apparent that Freud's conclusion that the girl has three possible lines of development, namely, sexual inhibition or neurosis, a masculinity complex, or "normal femininity" (i.e., narcissism, vanity, shame or modesty, little sense of justice, weaker social interest, and less capacity for sublimating the instincts), does not, as he himself put it, sound "friendly"!

Freud assumed that every person is inherently bisexual: each sex is attracted to members of the same sex as well as to members of the opposite sex. This is the constitutional basis for homosexuality, although in most people the homosexual impulses remain latent. This condition of bisexuality complicates the Oedipus complex by inducing sexual cathexes for the same-sex parent. Consequently, the boy's feelings for his father and the girl's feelings for her mother are said to be ambivalent rather than univalent in character. The
assumption of bisexuality has been supported by investigations on the endocrine glands that show that both male and female sex hormones are present in each sex.

The emergence and development of the Oedipus and castration complexes are the chief events of the phallic period, and leave a host of deposits in the personality.

**The Genital Stage.** The cathexes of the pregenital periods are narcissistic in character. This means that the individual obtains gratification from the stimulation and manipulation of his or her own body, and other people are cathexed only because they help to provide additional forms of body pleasure to the child. During adolescence, some of this self-love, or narcissism, becomes channeled into genuine object choices. The adolescent begins to love others for altruistic motives and not simply for selfish or narcissistic reasons. Sexual attraction, socialization, group activities, vocational planning, and preparations for marrying and raising a family begin to manifest themselves. By the end of adolescence, these socialized, altruistic cathexes have become fairly well stabilized in the form of habitual displacements, sublimations, and identifications. The person becomes transformed from a pleasure-seeking, narcissistic infant into a reality-oriented, socialized adult. However, it should not be thought that the pregenital impulses are displaced by genital ones. Rather, the cathexes of the oral, anal, and phallic stages become fused and synthesized with the genital impulses. The principal biological function of the genital stage is that of reproduction; the psychological aspects help to achieve this end by providing a certain measure of stability and security.

In spite of the fact that Freud differentiated four stages of personality growth, he did not assume that there were any sharp breaks or abrupt transitions in passing out of one stage into another. The final organization of personality represents contributions from all four stages.

The empirical data upon which Freud based his theories consisted principally of the verbalizations and expressive behavior of patients undergoing psychological treatment. Although Freud was schooled in the precise methods of nineteenth-century science and had established a substantial reputation as a medical investigator before turning his attention to psychology, he did not employ experimental or controlled observational techniques in his investigations of the human mind. Freud was not a part of the movement of experimental psychology that had been initiated by Fechner in 1860 and developed into a science by Wundt during the following two decades. He was familiar with this movement and Fechner's philosophy influenced him, but Freud was not an experimental psychologist. He did not perform controlled psychological experi-
ments, nor did he collect data and analyze them quantitatively as other psychologists of the nineteenth century were doing. One looks in vain for a table or graph in his extensive writings. Nor did Freud ever employ a diagnostic test or any other kind of objective appraisal of personality. His theories germinated as he listened to the facts and fancies verbalized by troubled personalities.

An anecdote from late in Freud's life illustrates his stance with respect to experimental validation of his propositions. In 1934, Saul Rosenzweig sent Freud the results of some experiments that appeared to support the psychoanalytic theory of repression (e.g., Rosenzweig, 1933). Freud replied "politely but a little curtly that while he found such investigation interesting, he saw little value in it 'because the wealth of dependable observations' on which psychoanalytic assertions rest 'makes them independent of experimental verification. Still, it can do no harm'" (Gay, 1988, p. 523n, italics added). Gay adds that Freud did occasionally cite experimental support for his position, but he generally believed that his analytic hours provided "sufficient proof of his ideas." Gay concludes that this position "was at the very least a tactical mistake." Many critics charge that this attitude represents far more than a tactical error; rather, it is antiscientific and precludes admission of Freud's position into the pantheon of scientific theories.

Yet it would be a serious mistake to say that the verbalizations of people in treatment were the only ingredients out of which Freud fashioned his theories. Certainly as important as these raw data was the rigorously critical attitude that Freud brought to the analysis of his patients' free associations. Today we would say that he analyzed his raw material by the method of internal consistency. Inferences made from one part of the material were checked against evidence appearing in other parts, so that the final conclusions drawn from a case were based upon an interlocking network of facts and inferences. Freud proceeded in his work in much the same way as a detective assembling evidence or a lawyer summing up a case to the jury. Everything had to fit together coherently before Freud was satisfied that he had put his finger upon the correct interpretation. It should be remembered, moreover, that the material produced by one case who was seen five hours a week for as long as two or three years was of immense proportions and that Freud had ample opportunity to check and recheck his hunches scores of times before deciding upon the final interpretation. By contrast, the subject in the typical psychological experiment performed under controlled conditions is observed or tested for only one or two hours on the average. Certainly two of Freud's most important contributions to research strategy were the intensive study of the single case and the use of the method of internal consistency for testing hypothesis.

Again and again Freud was forced to revise his theories because new discoveries could not be accounted for adequately by his current theories. Freud was reluctant to abandon a systematic position once it had been formulated, but the history of the psychoanalytic theory of personality from its
inception in the 1890s down to the late 1920s demonstrates quite conclusively that Freud's views were determined eventually by the weight of the evidence as he saw it. Although his close associates may have had some influence in shaping his ideas, it seems to be reasonably clear that the ultimate test of the validity of his theories was largely that of Freud's own self-criticism and his willingness to be guided by new evidence. The storm of indignant attacks upon psychoanalysis that began as soon as Freud had enunciated his theory of the sexual etiology of hysteria and continued for the rest of his life did not influence his thinking. There were few times in life when he replied to his critics. Nor did the disaffection of some of his closest associates cause Freud to alter his theories. Freud seems to have been endowed with an abundance of intellectual autonomy, which is without doubt one of the prerequisites for greatness.

Freud's views on the way in which the scientist works to develop a science are succinctly set forth in one of his rare pronouncements on this topic. He writes:

We have often heard it maintained that sciences should be built up on clear and sharply defined basic concepts. In actual fact no science, not even the most exact, begins with such definitions. The true beginning of scientific activity consists rather in describing phenomena and then in proceeding to group, classify and correlate them. Even at the stage of description it is not possible to avoid applying certain abstract ideas to the material in hand, ideas derived from somewhere or other but certainly not from the new observations alone. Such ideas—which will later become the basic concepts of the science—are still more indispensable as the material is further worked over. They must at first necessarily possess some degree of indefiniteness; there can be no question of any clear delimitation of their content. So long as they remain in this condition, we come to an understanding about their meaning by making repeated references to the material of observation from which they appear to have been derived, but upon which, in fact, they have been imposed. Thus, strictly speaking, they are in the nature of conventions—although everything depends on their not being arbitrarily chosen but determined by their having significant relations to the empirical material, relations that we seem to sense before we can clearly recognize and demonstrate them. It is only after more thorough investigation of the field of observation that we are able to formulate its basic scientific concepts with increased precision, and progressively so to modify them that they become serviceable and consistent over a wide area. Then, indeed, the time may have come to confine them in definitions. The advance of knowledge, however, does not tolerate any rigidity even in definitions. Physics furnishes an
excellent illustration of the way in which even 'basic concepts' that have been established in the form of definitions are constantly being altered in their content. (1915, p. 117)

Freud thus preferred the more open, informal type of inductive theory building that stays reasonably close to the empirical supports upon which it rests, rather than the more formal deductive type of theory that starts with sharply defined concepts and carefully phrased postulates and corollaries from which testable hypotheses are derived and subsequently tested. Moreover, as this quotation shows, Freud was fully aware of the importance of the "prepared mind" of the scientist in enabling him or her to make maximum use of empirical data. These "abstract ideas" might come from various sources; in Freud's case, from wide reading in the classics and other literature, from his hobby of archeology, from his observations as the father of six children, from everyday experiences of all kinds, and most of all, perhaps, from his lifelong habit of self-analysis.

There is some debate as to whether Freud was an advocate of reductionism and biological determinism. Sulloway (1979) has argued that Freud's theory was a continuation of Charles Darwin's revolutionary work on evolution and natural selection. Sulloway called Freud a "crypto-biologist" whose psychoanalytic theories were rooted in biological assumptions and approaches. From this perspective, Freud's work was predicated on evolution, and Freud himself is best understood through the phrase that became the title of Sulloway's book: "Biologist of the mind." As Sulloway builds the case, much of this influence was exerted through Freud's association with Wilhelm Fliess and Fliess's sexual biology. Indeed, Sulloway argued that psychoanalysis was in large measure a transformation of Fliessian ideas. Sulloway's scholarship is impressive, but his intellectual reconstruction of Freud has been persuasively challenged by Robinson (1993).

Parisi (1987, 1988; see also Silverstein, 1985, 1988, 1989) provides another challenge to the conception of Freud as a reductionist and biological determinist. Parisi argued that Freud failed in his attempt, most notably in the Project for a scientific psychology, to construct a theory of the mind based on natural science. But Freud was "richly wrong," and his failure helps us to understand the "conceptual constraints" on theorizing about human behavior that Freud came to recognize. Parisi writes:

Contemporary neuroscience tends to assume that explanations of psychological life will have to be consistent with neurophysiology if they are to have merit. Freud was concluding just the opposite: If we are to have a natural science of psychology, it will have to be consistent with experience. . . . He knew what natural science should be . . . but he
was also acutely aware of the nature of the phenomena of interest to him. ... Freud reached a conclusion that there can be no hope of tracing these phenomena back or down to biological roots. ... psychological phenomena are irreducible to biological phenomena. (1987, p. 237)

Freud was arguing that "ideas are causal" and "symptoms reduce to ideas" (Parisi, 1987, p. 238). In similar fashion, according to Parisi, Freud rejected Darwinian theory as he understood it, because he did not believe that biology provides the primary level of explanation; rather, neither biology nor psychology is primary. This is a confusing argument to follow. In essence, Parisi concluded that Freud resisted the temptation to reduce his theory of mind to neurology or to natural selection because such reduction would distort the very phenomenon of mental life itself. Parisi believes that we would profit by following Freud's lead.

Let us turn now to a consideration of some of the special data-collecting techniques employed by Freud. They were used, of course, in the therapeutic situation because this is where Freud gathered his data.

After a brief tryout of the method of hypnosis (1887–1889), which was then very much in vogue, especially in France, Freud learned about a new method that had been used successfully by his friend and colleague Dr. Joseph Breuer in the treatment of a case of hysteria. This method, which Breuer called catharsis or the "talking cure," consisted of the patient relating the details of the first appearance of each of the symptoms, following which the symptoms disappeared. Out of this method, Freud gradually evolved his own unique free-association method. Ernest Jones has called this development "one of the two great deeds of Freud's scientific life," the other being Freud's self-analysis.

In essence, the free-association method requires the patient to say everything that comes into consciousness, no matter how ridiculous or inappropriate it may sound. Unlike the cathartic method, the free-association method does not stop with the origin of symptoms. It allows, indeed it demands, that patients talk about everything and anything that occurs to them without restraint and without any attempt to produce a logical, organized, meaningful discourse. The role of the therapist is, to a great extent, a passive one. The therapist sits and listens, prods occasionally by asking questions when the verbal flow of the patient dries up, but does not interrupt when the patient is talking. In order to reduce the influence of external distractions to a minimum, the patient ordinarily reclines on a couch in a quiet room.

Freud observed that when these conditions prevail, the patient eventually begins to talk about memories of early childhood experiences. These memories provided Freud with his first real insight into the formation of the personality.
structure and its subsequent development. This method of reconstructing the past from current verbalizations may be contrasted with the developmental method of observing the growth of personality from infancy to adulthood.

Perhaps Freud's most original insight about the undisciplined wanderings of his patients' verbalizations was that each statement is associated in some meaningful, dynamic manner with the preceding statement, so that a continuous chain of associations exists from first to last. Everything that the patient says is related, without exception, to what has previously been said. There may be numerous circumlocutions and verbal blockages, but eventually the history of the person's mind and its present organization will be divulged to the listener by following the chain of associations through the verbal maze.

The analysis of dreams is not a separate method from that of free association; it is a natural consequence of the instruction to patients that they talk about everything that comes to their minds. Freud's early patients spontaneously recalled their dreams and then proceeded to give free associations to them. Freud soon realized that these reported dreams and the accompanying free associations were especially rich sources of information about the dynamics of human personality. As a result of this insight, which he tested on his own dreams, Freud formulated the famous theory that the dream is an expression of the most primitive workings and contents of the human mind (1900). The primitive process that creates the dream Freud called the primary process. As we have seen, the primary process attempts to fulfill a wish or discharge a tension by inducing an image of the desired goal. Because the defenses are not as vigilant during sleep, it is easier to negotiate a compromise expression of an unconscious wish. That compromise takes the form of a dream. Dreams thus serve two functions. First, they serve as the "guardian of sleep" for the dreamer by disguising wishes whose traumatic content otherwise would force him or her to wake up. Second, they offer the analyst a "royal road to the unconscious." The mission for the analyst is to reverse the dream work and symbol formation processes that transformed the underlying "latent content" into the superficial "manifest content" the dreamer experiences. Symbol interpretation is the better known of these two tools, perhaps because of the sexual nature of many of the common symbols. For example, Freud wrote:

*All elongated objects, such as sticks, tree-trunks and umbrellas . . . may stand for the male organ . . . Boxes, cases, chests, cupboards and ovens represent the uterus, and also hollow objects, ships, and vessels of all kinds. Rooms in dreams are usually women . . . In men's dreams a necktie often appears as a symbol for the penis . . . A quite recent symbol of the male organ in dreams deserves mention: the airship, whose use in this sense is justified by its connection with flying as well as sometimes by its shape.* (1900, pp. 354–357)
Freud, however, made the relative importance of these two techniques quite clear:

*I should like to utter an express warning against over-estimating the importance of symbols in dream-interpretation, against restricting the work of translating dreams merely to translating symbols and against abandoning the technique of making use of the dreamer's associations. The two techniques of dream-interpretation must be complementary to one another; but both in practice and in theory the first place continues to be held by . . . the comments made by the dreamer.* (1900, pp. 359–360)

By having his patients free-associate to their dreams, Freud was able to penetrate into the most inaccessible regions of the human mind and to discover the bedrock of personality.

The vast amount of raw material from which Freud fashioned his theory of personality will never be known. The few case histories that Freud chose to publish represent only an infinitesimal fraction of the cases he treated. Professional ethics partially restrained Freud from presenting his cases to the world since there was always the danger that the identity of his patients might be guessed by a curious public.

Aside from the case histories appearing in *Studies in hysteria* (1895) that he wrote in collaboration with Breuer before psychoanalytic theory had taken definite shape in Freud's mind, he published only six accounts of cases. One of these, the so-called Schreber case (1911), was not a patient of Freud's. Freud based his analysis upon an autobiographical account of a case of paranoia written by Judge Daniel Schreber. Another case study concerned a phobia in a five-year-old boy, Little Hans (1909a), which was treated by the boy's father, himself a physician, under Freud's guidance and instructions. In the other four cases, Freud was the therapist. These are referred to as "Dora" (1905b), the "Rat Man" (1909b), the "Wolf Man" (1918), and a case of female homosexuality (1920b). Each of these cases was presented to bring out the salient features of one or more of Freud's theoretical concepts.

Dora was published, Freud says, in order to show how the analysis of dreams enables one to ferret out the hidden and repressed parts of the human mind and to demonstrate that hysterical symptoms are motivated by the sexual impulse. Following a fairly lengthy account of the background factors and the current clinical picture, Freud presents a detailed analysis of two of Dora's dreams. Much of the material consists of a verbatim account of Dora's free associations and Freud's interpretations, and it gives a remarkably lucid picture of the exact manner in which dreams are interpreted. In this case history, as in the others, we see how Freud wove the patterned fabric of personality out
of the tangled verbal threads of a suffering person, and we obtain glimpses
of Freud's unusual talent for seeing relationships between widely disparate
utterances. Operating on the assumption that everything that the person says or
does is meaningful and fits into the total picture of the personality organiza-
tion, Freud was a vigilant observer; the most commonplace statement or act was
scrutinized for a deeper meaning.

Freud did not regard his talent for observation as being in any way unusual,
as the following quotation indicates:

When I set myself the task of bringing to light what human beings keep
hidden within them, not by the compelling power of hypnosis, but by
observing what they say and what they show, I thought the task was a
harder one than it really is. He that has eyes to see and ears to hear
may convince himself that no mortal can keep a secret. If the lips are
silent, he chatters with his finger tips; betrayal oozes out of him at every
pore. And thus the task of making conscious the most hidden recesses
of the mind is one which it is quite possible to accomplish. (1905b,
pp. 77-78)

Freud's remarkable ability to draw inferences of great significance from com-
monplace behavior is seen to best advantage in what is probably the most
popular of all of his writings, The psychopathology of everyday life (1901).
This book is replete with examples of the dynamic import of simple slips of
the tongue, errors of memory, accidents, and mistakes of various kinds.

Freud's theory of infantile sexuality had been formulated on the basis of
adult memories. The case of Little Hans afforded Freud the first opportunity
to verify the theory using observations made on a young child. Hans was afraid
that a horse would bite him should he venture out in the street. From the
careful notes kept by the boy's father, many of which are presented verbatim
in the published account, Freud was able to show that this phobia was an
expression of the two most important sexual complexes of early childhood:
the Oedipus complex and the castration complex. The case of Little Hans
exemplifies and corroborates the theory of infantile sexuality set forth by Freud
in 1905. (See Brown, 1965, for a persuasive reinterpretation of the Little Hans
case from a conditioning point of view.)

In the case of the Rat Man, who suffered from the revolting obsession that
his girl friend and his father would each be punished by having a potful of
ravenous rodents fastened to their buttocks, Freud pieced together the involved
dynamics and thought connections of an obsessional neurotic. Although the
presentation is only fragmentary, this case clearly illustrates how Freud went
about resolving the apparent contradictions, distortions, and absurdities in
the disconnected ramblings of a sick personality and made them into a logically
coherent pattern. In reporting this case, Freud tells us that it is based upon
notes made on the evening of the day of the treatment and not upon notes made during the analytic session. Freud was opposed to any note taking by the therapist during the treatment period because he felt that the withdrawal of the therapist’s attention would interfere with the progress of therapy. He believed in any event that the therapist would remember the important material and forget the trivial details.

Freud’s analysis of the Schreber case was based upon Schreber’s own account of his paranoia. Freud justified his use of this autobiographical book on the grounds that paranoia is a type of disorder in which the written case history is as satisfactory as personal acquaintance with the case. The characteristic symptom of paranoia is the tortuous delusional system that the patient constructs. Schreber’s delusions consisted of thinking that he was the Redeemer and that he was being transformed into a woman. In an intricate analysis of these two delusions, Freud showed that they were related and that the motive power for both of them as well as for the other aspects of the case was that of latent homosexuality. In this case study, Freud set forth his famous hypothesis of the causal relationship between homosexuality and paranoia. Freud’s penchant for deriving a generalization of far-reaching power from a mass of particular facts is beautifully portrayed in the Schreber case.

The Wolf Man is an account of an infantile neurosis that was brought to the surface during the analysis of a young man and was shown to be related dynamically to the present condition of the patient. Freud observed that the analysis of an experience that took place some fifteen years earlier has its advantages as well as its disadvantages when compared with the analysis of an event shortly after it occurs. The principal disadvantage is that of the unreliability of memory for early experience. On the other hand, if one tries to analyze very young children, there is the drawback that they cannot express themselves verbally. The Wolf Man is the adult counterpart of Little Hans, and both approaches, the reconstructive and the genetic, are shown to be valuable sources of empirical evidence for the theories of psychoanalysis. The principal feature of this case history is a lengthy analysis of a dream of wolves that the patient remembered from his early childhood, and which was interpreted as being caused by the child’s reaction to the primal scene, Freud’s term for the child’s observation or fantasy of seeing his parents engage in sexual intercourse. (For a discussion of this case see Gardner, 1971.)

The last case reported by Freud was one that he had to break off because the resistance of the patient to giving up her homosexuality was so strong that no progress could be made. Nevertheless, as the published case history shows, Freud was able to arrive at a complete understanding of the origin and development of homosexuality. Homosexuality in both sexes is due to two primary factors, an inherent bisexuality in all living things and a reversal of the Oedipus complex. Instead of loving the father and identifying with the mother, this woman identified with the father and cathexed the mother. In the case of male
homosexuality, there would be an identification with the mother and a love for the father. This case also contains some of Freud's views on suicide, since the reason for the woman's coming to Freud in the first place was an attempt at self-destruction.

It is impossible to say with any assurance that these particular case histories that Freud chose to make public were the actual empirical sources for the theories that they exemplified, or whether they were merely convenient and clear-cut examples of theoretical formulations that had already taken shape in Freud's mind. It really does not make much difference whether the Schreber case, for example, was the case that revealed to Freud the dynamics of paranoia, or whether he had made the fundamental discovery on the basis of prior cases and merely applied them to this particular case. In any event, the type of material that Freud collected, the kind of techniques he employed, and the way in which he thought are revealed in these six case studies. Anyone who wishes to get close to the raw material with which Freud worked should read them.

One should not confuse these case histories with the application of psychoanalytic theory for the better understanding of literature and the arts or for the purposes of social criticism. Freud did not learn about sublimation from his study of the life of Leonardo da Vinci and he did not discover the Oedipus complex by reading Sophocles, Shakespeare, or Dostoevsky. Nor did he fathom the basic irrationality of human thinking by observing human religious or political behavior. The interpretation of a literary work or the analysis of a social institution using the insights of psychoanalytic theory may have helped to confirm the usefulness of the insights and even to validate their authenticity and universality, but the literary and artistic productions and the social institutions themselves did not constitute any part of Freud's empirical data.

Freud's Self-analysis

The material dredged up from his own unconscious constituted an important source of empirical data for Freud. As related by Ernest Jones (1953), Freud began his own self-analysis in the summer of 1897 with the analysis of one of his dreams. From this searching self-scrutiny, Freud confirmed to his own satisfaction the theory of dreams and the theory of infantile sexuality. He found in his own personality those conflicts and contradictions and irrationalities that he had observed in his patients, and this experience perhaps more than any other convinced him of the essential correctness of his views. In fact, Freud was reluctant to accept the validity of any hypothesis until he had tested it out on himself. Freud continued his self-analysis throughout his life, reserving the last half hour of each day for this activity.
There is no question that Freud’s psychoanalytic theory has had enormous intellectual value and heuristic impact. It is by no means clear, however, that the theory exists in a form that is amenable to prediction and experimental test. Conflict, defense, sexuality, aggression, and “the psychopathology of everyday life” are themes that seem relevant to all our lives. But can this sense of relevance be validated by any experimental corroboration? Are forces and counterforces that by definition exist outside of consciousness subject to measurement, and are motives and relationships that exist in a state of motivated oblivion subject to the rule of disconfirmability? In short, to what extent is the Freudian theory testable?

Grunbaum (1984, 1986, 1993) argued that some of Freud’s hypotheses are, in fact, falsifiable but that clinical data are not valid as scientific evidence in tests of these hypotheses. As a consequence, little evidence exists in support of psychoanalytic hypotheses. Westen (1990), however, notes that Grunbaum “considerably underestimates” the experimental evidence in support of psychoanalytic propositions (see Robinson, 1993, and Sachs, 1989, for extensive rebuttals of Grunbaum). Let us turn to some of the experimental evidence.

Attempts to subject hypotheses derived from psychoanalytic theory to laboratory testing in fact have been under way for many years. We already have referred to early work by Rosenzweig, for example. The early research has been surveyed by Sears (1943, 1944), Hilgard (1952), and Blum (1953). These reviews, however, are primarily of historical value because much of the early research was done using an inappropriate methodology and an insufficient understanding of psychoanalytic theory (Horwitz, 1963). Kline (1972) concluded that “far too much that is distinctively Freudian has been verified for the rejection of the whole psychoanalytic theory to be possible” (p. 350). Hans Eysenck, an implacable foe of psychoanalysis, in collaboration with Glenn Wilson, reexamined the data on which Kline based his conclusion and asserted, “there is no evidence at all for psychoanalytic theory” (1974, p. 385). Fisher and Greenberg (1977), in contrast, believe that the evidence, generally speaking, favors Freud. An annual review entitled Psychoanalysis and contemporary science edited by Holt and Peterfreund has been appearing since 1972.

Rather than attempting to review all the experimental tests of psychoanalytic propositions that have been made in recent years, we shall instead devote our attention to the single research program that has received the most attention.

The late Lloyd Silverman (e.g., 1966, 1976, 1982, 1983; Silverman, Lachman, & Milich, 1982; Weinberger & Silverman, 1987) developed a research program to test hypotheses derived from the general Freudian notion that abnormal or deviant behavior can be increased by stirring up, or reduced by diminishing, conflicts over unconscious sexual and aggressive wishes. The difficulty in such
research, of course, is developing a method for accessing the conflictual material at an unconscious level. As we shall see, Silverman developed a method for this purpose that he termed subliminal psychodynamic activation. Before we turn to the research itself, some groundwork is in order.

Silverman (1976) begins by drawing attention to the distinction between clinical and metapsychological propositions within psychoanalysis. "Clinical propositions" refer to statements based on empirical data such as the behavior of patients during the analytic hour. Clinical propositions can be either dynamic, referring to the motivation underlying behavior, or genetic, referring to the origins of the behavior in early experiences. As an example of a dynamic proposition, Silverman provided the psychoanalytic proposition that many depressions involve an unconscious, conflictual, hostile wish toward someone who has disappointed the depressed person, where the depression results from defensively turning this hostility against the self. Similarly, a genetic proposition is that people who have experienced the loss of a significant other are prone to respond to subsequent disappointment with depression. Note that clinical propositions are based exclusively on the observed covariance of behaviors. "Metapsychological propositions," in contrast, "go beyond the empirical data, either by relating wishes to 'instincts' or 'instinctual drives' or by attempting to specify in 'energy language' the way in which motives affect behavior" (p. 622). Silverman argued that clinical propositions represent the core of psychoanalysis but that most critiques of psychoanalytic theory focus on metapsychological propositions. Silverman's research program was designed to bring those "proper investigatory controls" characteristic of the experimental method to bear on central clinical propositions within psychoanalytic theory.

The method of subliminal stimulation involves showing a person a picture or printed phrase so briefly that he or she is unable to recognize what it is. This brief exposure (0.004 seconds) is done by an instrument called a tachistoscope. It has been clearly demonstrated in a number of investigations that although a person is not aware of what has been presented tachistoscopically, nevertheless the material shown may affect feelings and behavior in demonstrable ways.

As an example of the methodology, we will describe experiments on depressed people. According to psychoanalytic theory, depression is produced by turning unconscious aggressive feelings toward others inward against one's self. If this hypothesis is correct, a depressed person should feel even more depressed when unconscious aggressive wishes are activated. To stimulate such wishes, depressed individuals were shown an aggressive picture, for instance, a snarling man holding a dagger and a verbal message, for instance, CANNIBAL EATS PERSON. The stimuli were each exposed to the subject, it will be recalled, for only 0.004 of a second. Prior to and after the presentation the individual made self-ratings of feelings. The same subjects, in a different ses-
sion, were shown subliminally a neutral picture, for example, a person reading a newspaper and a verbal message, for example, PEOPLE ARE WALKING, and they were asked to make self-ratings before and after the presentation. Silverman (1976) writes: “The subliminal presentation of content designed to stimulate aggressive wishes led to an intensification of depressive feelings that were not in evidence after the subliminal presentation of neutral content” (p. 627).

In order to show that the effect of the material was specific to the aggressive content, as the psychoanalytic theory of depression demands, and could not be produced by a different type of emotional material, the Silverman group performed the following experiment. Depressed patients were shown subliminally an aggressive picture on one occasion and a picture of a person defecating on another. The latter picture is supposed to stimulate conflictual anal wishes, which according to Freudian theory are linked with stuttering. The depressives became more depressed following the presentation of the aggressive picture but not following the presentation of the anal picture. The opposite effect was shown by a group of stutterers. They stuttered more after being shown the anal picture subliminally but not after the aggressive picture.

Silverman also demonstrated that abnormal symptoms could be reduced by diminishing conflictual wishes. For these experiments, schizophrenic patients were tested. They were shown tachistoscopically the printed message MOMMY AND I ARE ONE. Their abnormal symptoms were reduced by this subliminal message and not by other control messages. Why does the MOMMY message have a beneficial effect? For three reasons, Silverman says. First, the oneness with mother wards off unconscious hostile feelings toward her. Second, the fantasy of oneness implies an uninterrupted supply of nurturance (mothering) from the mother. And third, the fantasy diminishes separation anxiety. By contrast, when schizophrenics were shown messages that contained hostility toward the mother or fears of losing her, their abnormal symptoms increased.

The reader may wonder what would happen if the messages that were designed to activate unconscious wishes were shown under normal conditions, that is, where the subject could clearly recognize and understand the message. The answer is that consciously perceived messages had no effect on the symptoms of the patients. Apparently, unconscious wishes can only be stirred up by something of which the person is not aware.

Subliminal psychodynamic effects also have been demonstrated in non-pathological samples. Geisler (1986) exposed female undergraduates to stimuli designed to intensify oedipal conflict (“Loving Daddy is wrong”), to reduce oedipal conflict (“Loving Daddy is OK”), or to be neutral (“People are walking”). She found that the conflict intensification stimuli did affect memory for subsequently presented neutral (as opposed to sexual) material. This effect only existed for those subjects who were prone to oedipal conflict and the use of repression (see Dauber, 1984, for a similar study on depressed college women). In a study with male undergraduates, Silverman, Ross, Adler, and Lustig (1978)
presented stimuli designed to intensify oedipal conflict ("Beating Dad is wrong"), to reduce oedipal conflict ("Beating Dad is OK"), or to be neutral ("People are walking"). The subjects' dart-throwing scores were measured before and after tachistoscopic exposure to the stimuli. As predicted, the two experimental stimuli had strong and opposite effects. The "wrong" stimulus led to a decrease in dart throwing scores, but the "OK" stimulus led to an increase in scores. The effect was the same whether the poststimulus scores were compared with the prestimulus scores in the same condition or with scores obtained following presentation of the neutral stimulus.

Subsequent work by Silverman and his colleagues (e.g., Silverman & Weinberger, 1985) focused on the potency of the "Mommy and I are one" stimulus for producing therapeutic improvement in a number of contexts. Indeed, Silverman suggested that this symbiotic stimulus serves as a "ubiquitous therapeutic agent" (e.g., Silverman, 1978).

Silverman incorporated a number of experimental controls in this research program. For example, studies frequently were replicated, and they were conducted in a double-blind manner (that is, neither the subject nor the experimenter knew which condition a given subject was in). Presentation order of control and experimental stimuli was counterbalanced, and care was taken to check that subjects could not accurately report the contents of the stimuli to which they were exposed. Despite these controls, Balay and Shevrin (1988) raised a number of objections. For example, they reviewed psychophysical and measurement issues raised by previous reviewers. Furthermore, they suggested that actual replication of the findings is rare in the Silverman research program, because researchers employ different measures or outcome measures in different studies. In addition, they pointed out that the change reported in many of the studies was a statistical artifact. That is, pathology was not actually reduced for subjects exposed to experimental stimuli such as "Mommy and I are one"; rather, subjects exposed to neutral stimuli such as "People are walking" increased in pathology. This produces the illusion of support for the predicted effect of the experimental stimulus, when in fact what is observed is a unpredicted and counterintuitive negative effect of the neutral stimulus. (Note that this was not the case in the Silverman et al. (1978) dart-throwing experiment, where the effects for the "wrong" and "OK" stimuli were in the predicted direction in all three reported studies.) Finally, Balay and Shevrin questioned the interpretation of Silverman's findings: What in fact do the subliminal messages do? How do they activate the unconscious residue of childhood conflicts? In short, Balay and Shevrin were concerned by the "lack of a firm theoretical and empirical base" for Silverman's research program (1988, p. 173; see Weinberger (1989) for a reply and Balay and Shevrin (1989) for a rebuttal; see also Holender (1986) for general critique of unconscious processing of information).
In this as in most attempts to provide experimental support for psychoanalysis, however, matters are far from clear. Based on a meta-analysis of sixty-four studies, Hardaway (1990, p. 190) found "a moderate and reliable treatment effect for the stimulus MOMMY AND I ARE ONE that generalizes across laboratories and subject populations. Criticisms stating that there are a dearth of well-designed studies in this literature are clearly the result of incomplete and biased sampling." Despite this controversy, Silverman’s subliminal psychodynamic activation methodology provides the most convincing experimental support to date for Freud’s theory of psychoanalysis.

The experimental study of repression has a long history within psychology (e.g., D’Zurilla, 1965; Rosenzweig & Mason, 1934; Zeller, 1950). Such work continues to be done, but in recent years much of it focuses on levels of awareness and cognitive processes in general, rather than on Freudian propositions about motivated defense (Kihlstrom, 1990; Westen, 1990).

The cognitive research began in the late 1940s with the "New Look" in perception (see Bruner, 1973; Dixon, 1971), which investigated the impact of motives, defenses, and expectations on perceptual processes and outcomes. This work remained largely unintegrated with the rest of psychology, despite the efforts of Erdelyi (1974) and others, until Shevrin and Dickman (1980) advanced the argument that the unconscious is a "necessary assumption" for virtually all psychological theory and research. Subsequent work on the unconscious, while clearly consistent with the Freudian tradition, evolved within cognitive psychology's focus on selective processing of information, and the area of research has come to be known as the cognitive unconscious. As Kihlstrom (1990, p. 447) puts it, "research on subliminal perception, motivated forgetting, and the like offers little support for the Freudian conception of nonconscious mental life because the propositions that have been tested are rarely unique to Freudian theory. . . . for example, that unconscious contents are sexual and aggressive in nature, and that unconscious processes are primitive and irrational." In this cognitive research, the unconscious is described in terms of subtle emotional states, "procedural knowledge" about how actions are performed, routine behavior that occurs without engaging our attention, and the mutual influence of mental states and objects, not all of which need to be completely represented in consciousness in order to exert an influence.

A set of articles in the June 1992 issue of American Psychologist provides a good summary of this new wave of research on the unconscious (see Loftus and Klinger, 1992, for an introduction; see also Epstein, 1994, and the December 1994 special issue of the Journal of Personality devoted to "psychodynamics and social cognition"). The focus for these articles was not whether the unconscious exists, but how "smart" (i.e., complex and flexible) or "dumb" the
unconscious is. Bruner (1992) described how the original New Look entailed a "constructivist view of perception." Its message was that perception was not neutral but rather was affected by other concurrent mental processes. The focus was not on the unconscious or on Freud but simply on how some objects became "more phenomenologically salient" than others. The New Lookers subsequently split into those interested in cognition and those interested in ego defenses and psychodynamic processes. Bruner concludes that the unconscious is "not very" smart and that preconscious perceptual processing occurs only to the extent that is necessary.

Erdelyi was the driving force behind the New Look 2 that emerged in the 1970s. The goal of this second wave was to forge links between Freud and the emergent cognitive psychology. In contrast to this cognitive thrust, Erdelyi (1992) argued that unconscious phenomena are not simple or dumb. Despite laboratory demonstrations that unconscious perception is "limited in semantic scope, it does not follow that unconscious memories, . . . are not amply complex and influential. The pathogenic memories and maladapted habits that psychoanalysis deals with involve not stimulus flashes or unattended inputs but highly complex declarative and procedural memory structures that are inaccessible to the subject's consciousness" (p. 786). Thus, the question of experimental constraints on the complexity of unconscious processes and contents that can be manipulated continues to limit the acceptance of laboratory research.

Greenwald provoked this exchange with his suggestion that a "third New Look is well under way" (1992, p. 766). He concluded that there is little doubt people occasionally perceive things without conscious awareness but that these processes are not very sophisticated. In contrast to the elaborate defenses and transformations hypothesized by Freud, Greenwald's cognitive unconscious is "not particularly smart." Greenwald summarized evidence for cognition without attention and verbally unreported cognition (see the influential paper by Nisbett and Wilson, 1977, on this last point). Greenwald embeds these processes within a neural network (or connectionist or parallel distributed processing) model of cognition.

Kihlstrom (Kihlstrom, Barnhardt, & Tataryn, 1992) provided an apt summary for this exchange and for the distinction between research on the cognitive unconscious and Freudian theory on the dynamic unconscious:

the psychological unconscious documented by latter-day scientific psychology is quite different from what Sigmund Freud and his psychoanalytic colleagues had in mind in fin-de-siecle Vienna. Their unconscious was hot and wet; it seethed with lust and anger; it was hallucinatory, primitive, and irrational. The unconscious of contemporary psychology is kinder and gentler than that and more reality bound and rational, even if it is not entirely cold and dry. (p. 789; italics added)
Thus, the Freudian therapeutic hour and the experimental laboratory remain separated by their distinctive conceptual and procedural constraints.

No other psychological theory has been subjected to such searching and often such bitter criticism as has psychoanalysis. From every side and on every conceivable score, Freud and his theory have been attacked, reviled, ridiculed, and slandered. The only comparable case in modern science, in which both the theory and the theorist have been so ardently vilified, is that of Charles Darwin, whose evolutionary doctrine shocked Victorian England. Freud's chief offenses consisted of ascribing lustful and destructive wishes to the baby, attributing incestuous and perverted urges to all human beings, and explaining human behavior in terms of sexual motivation. "Decent" people were infuriated by Freud's view of the individual and called him a libertine and a pervert.

Freud also has been criticized on the moral grounds of intellectual cowardice. Freud's original position during the 1890s was that hysteria resulted from the repressed memory of childhood sexual abuse. On April 21, 1896, he delivered a lecture to this effect to the Society for Psychiatry and Neurology in Vienna. On September 21, 1897, however, Freud wrote to his confidante Wilhelm Fliess that he no longer believed in his own "seduction theory." He now believed that his patients' reports of seduction were products of their own fantasied desires for sexual contacts. This was a watershed moment in the development of Freud's theories, because it shifted the basis for symptoms from the actions of adults in the objective world to the intrapsychic sexual wishes of children. Freud's theory of infantile sexuality followed directly from this transformation.

In The assault on truth, Masson (1984) charged that Freud's original position was in fact accurate, that Freud himself knew at the time it was accurate, and that Freud's renunciation of it was a cowardly act bred by his inability to deal with the public scorn it generated. The twofold consequences were that Freud's theory had a fallacious foundation and subsequent analysts were deceived into ignoring the reality and dire consequences of prevalent childhood sexual abuse. In addition, of course, Masson is charging that Freud was a liar and a coward. These are provocative charges, to say the least, and Freud has been staunchly defended against them (e.g., Robinson, 1993). What is most important to recognize, however, is that the intellectual merits of Freud's ideas are independent of their origins and of Freud's personal history. Intellectual history is fascinating, but the central issue remains the power of the theory.

It is on this score, the intellectual integrity of the model, that Frederick Crews advances the harshest and most recent attacks on Freud. Crews concludes that "there is literally nothing to be said, scientifically or therapeutically,
to the advantage of the entire Freudian system or any of its component dogmas" (1996, p. 63). This 1996 article provides an introduction to Crews’s “verdict” that Freud has conjured up “a tangle of pseudoexplanatory quasi-entities” (p. 64), that the probing of free associations provides “an amusing but expensive parlor game” (p. 66), and that the entire enterprise is best regarded as a pseudoscience (see Begley, 1994, for one perspective on an earlier series of commentaries by Crews).

From a different perspective, Freudian theory has been criticized as being too closely allied with the mechanistic and deterministic outlook of nineteenth-century science; as a consequence, it is not sufficiently humanistic. The theory is regarded by many today as painting too bleak a picture of human nature. Feminists such as de Beauvoir (1953), Friedan (1963), Greer (1971), and Millett (1970) have vigorously attacked Freud’s speculations about the psychology of women, particularly the concept of penis envy, although one prominent figure in the women’s movement (Mitchell, 1975) has come to Freud’s defense (see Robinson, 1987, for an evaluation of Freud’s feminist critics and feminist defenders).

It is not our intention to review the criticism that has been leveled at psychoanalysis. Much of it was scarcely more than the sound and fury of overwrought people. A lot of the criticism has been outdated by subsequent developments in Freud’s thinking (see the discussion in Chapter 5 of recent developments in psychoanalysis). And a sizable portion of the criticism, it can be seen now, was based upon misinterpretations and distortions of psychoanalysis. Moreover, to review the criticisms of psychoanalysis in an adequate manner would require a book at least as large as the present one. Instead, we shall discuss several types of criticisms that have been leveled repeatedly at psychoanalysis and are still widely discussed.

One type of criticism asserts that there are grave shortcomings in the empirical procedures by which Freud validated his hypotheses. It is pointed out that Freud made his observations under uncontrolled conditions. Freud acknowledged that he did not keep a verbatim record of what he and the patient said and did during the treatment hour but worked from notes made several hours later. It is impossible to say how faithfully these notes reflected the events as they actually occurred. Judging from experiments on the reliability of testimony, it is not unlikely that distortions and omissions of various kinds crept into the record. Freud’s assumption that the significant material would be remembered and the trivial incidents forgotten has never been proved and seems improbable.

Critics of Freud’s methods have also objected to his accepting at face value what a patient said without attempting to corroborate it by some form of external evidence. They believed he should have secured evidence from relatives and acquaintances, documents, test data, and medical information. However, Freud maintained that what was important for understanding human
behavior was a thorough knowledge of the unconscious that could only be
obtained from free association and dream analysis.

Given then what was surely an incomplete record and more than likely an
imperfect one, Freud proceeded to draw inferences and reach conclusions by
a line of reasoning that was rarely made explicit. For the most part what we
find in Freud’s writings is the end result of his thinking—the conclusions
without the original data upon which they were based, without an account
of his methods of analysis, and without any systematic presentation, either
qualitative or quantitative, of his empirical findings. The reader is asked to take
on faith the validity of his inductive and deductive operations. Consequently, it
is practically impossible to repeat any of Freud’s investigations with any assur-
ance that one is proceeding in accordance with the original design. This may
help to explain why other investigators have reached quite different conclu-
sions, and why there are so many interpretations of ostensibly the same phe-

nomenon.

Freud eschewed any quantifying of his empirical data, which makes it
impossible to weigh the statistical significance and reliability of his observa-
tions. In how many cases, for example, did he find an association between
paranoia and homosexuality, between hysteria and fixation on the oral stage,
between a wish and a phobia, between the primal scene and adult instability?
How many cases of a particular type did he study and from what classes and
backgrounds did these cases come? What measures and criteria were used
for assigning a case to a particular clinical category? Did Freud ever check
his interpretations against those of another competent psychoanalyst to estab-
lish the reliability of his judgment? These and numerous other questions of a
similar nature trouble the quantitatively oriented psychologist.

Freud’s disinclination to follow the conventions of full scientific reporting
of his data leaves the door open for many doubts regarding the scientific status
of psychoanalysis (Hook, 1960). Did Freud read into his cases what he wanted
to find there? Were his inferences guided more by his biases than by the
material at hand? Did he select only that evidence that was in agreement with
his hypotheses and disregard negative instances? Were the free associations
of his patients really free or were they telling Freud what he wanted to hear?
Did Freud generate an elaborate theory of personality that was alleged to hold
for all people based on inferences drawn from the verbal utterances of a
relatively small number of atypical patients? How much solid evidence did
Freud really have to support his grandiloquent speculations? What safeguards
did he employ against the insidious influence of bias? Questions of this kind
have cast doubts upon the validity of psychoanalytic theory.

Lawrence Kubie, a prominent psychoanalyst, has summarized the limita-
tions of psychoanalysis as a basic science in the following way:

*In general, they [the limitations] can be summarized by saying that the
basic design of the process of analysis has essential scientific validity,*
but that the difficulties of recording and reproducing primary observations, the consequent difficulty in deriving the basic conceptual structure, the difficulties in examining with equal ease the circular relationship from unconscious to conscious and from conscious to unconscious, the difficulties in appraising quantitatively the multiplicity of variables, and finally the difficulty of estimating those things which increase and those things which decrease the precision of its hypotheses and the validity of its predictions are among the basic scientific problems which remain to be solved. (1953, pp. 143–144)

On the other hand, Paul Meehl provides an eloquent statement which concludes that “when adequate tests become available to us, a sizable portion of psychoanalytic theory will escape refutation” (1978, p. 831).

Another type of criticism attacks the theory itself and says in effect that the theory is “bad” because many parts of it do not have and cannot be made to have empirical consequences. For example, it is impossible to derive any empirical propositions from the postulation of a death wish. This being so, the death wish “remains shrouded in metaphysical darkness” and has no meaning for science. Although one may use the death wish to “explain” certain phenomena, such as suicide or accidents, such after-the-fact explanations mean very little. It is like betting on a horse after the race has been run. A good theory, on the other hand, is one that enables its user to predict in advance what is going to happen. Some people may prefer to bring together and organize a mass of apparently unrelated data under the single heading of the death wish, but preferences of this sort merely indicate the interests of the systematizer and not the “truth” of the heading. Used in this way, the death wish is scarcely more than a slogan.

Freudian theory is markedly deficient in providing a set of relational rules by which one can arrive at any precise expectations of what will happen if certain events take place. What exactly is the nature of the relationship between traumatic experiences, guilt feelings, repression, symbol formation, and dreaming? What connects the formation of the superego with the Oedipus complex? These and a thousand other questions have still to be answered regarding the tangled web of concepts and assumptions that Freud conjured up.

The theory stands silent on the knotty problem of how the cathexes and anticathexes are to be measured quantitatively. In fact, there is no specification of how one is to go about estimating, even in the roughest terms, differences in quantity. How intense does an experience have to be before it is traumatic? How weak must the ego be before it can be overridden by an instinctual impulse? In what ways do the various quantities interact with one another to produce a given result? And yet everything depends in the final analysis upon just such specifications. Lacking them, no laws can be derived.
If one concedes that psychoanalytic theory is guilty of at least two serious faults, first that it is a "bad" theory and second that it has not been substantiated by scientifically respectable procedures (and also mindful of the fact that many other criticisms might have been cited), the question then arises as to why psychoanalytic theory is taken seriously by anybody, and why it was not relegated to oblivion long ago. How are we to account for its influential status in the world today?

The fact of the matter is that all theories of behavior are pretty poor theories and all of them leave much to be desired in the way of scientific proof. Psychology has a long way to go before it can be called an exact science. Consequently, the psychologist must select the theory he or she intends to follow for reasons other than those of formal adequacy and factual evidence.

What does psychoanalytic theory have to offer? Some people like the picturesque language that Freud uses to project his ideas. They are attracted by the skillful way in which he employs literary and mythological allusions to put across fairly abstruse notions and his talent for turning a phase or creating a figure of speech to illuminate a difficult point for the reader. His writing has an exciting literary quality that is rare among scientists. The style is matched by the excitement of the ideas. Many people find Freud's concepts fascinating and sensational. Of course, sex is an alluring topic and has a sensation value even when it is discussed in scientific works. Aggression and destructiveness are almost as absorbing as sex. (Indeed, the soap operas, talk shows, and prime-time programming on television provide stark testimony to the pervasive presence of sexual and aggressive themes in our society!) It is only natural, then, that people are attracted by Freud's writings.

But a fine literary style and an exciting subject matter are not the main reasons for the great esteem in which Freud is held. Rather it is because his ideas are challenging, because his conception of the individual is both broad and deep, and because his theory has relevance for our times. Freud may not have been a rigorous scientist or a first-rate theoretician, but he was a patient, meticulous, penetrating observer and a tenacious, disciplined, courageous, original thinker. Over and above all of the other virtues of his theory stands this one: It tries to envisage full-bodied individuals living partly in a world of reality and partly in a world of make-believe, beset by conflicts and inner contradictions, yet capable of rational thought and action, moved by forces of which they have little knowledge and by aspirations that are beyond their reach, by turn confused and clearheaded, frustrated and satisfied, hopeful and despairing, selfish and altruistic—in short, a complex human being. For many people, this picture of the individual has an essential validity.
Carl Jung’s Analytic Theory

INTRODUCTION AND CONTEXT

PERSONAL HISTORY

THE STRUCTURE OF PERSONALITY
   The Ego
   The Personal Unconscious
   The Collective Unconscious
   The Self
   The Attitudes
   The Functions
   Interactions Among the Systems of Personality

THE DYNAMICS OF PERSONALITY
   Psychic Energy
   The Principle of Equivalence
   The Principle of Entropy
   The Use of Energy

THE DEVELOPMENT OF PERSONALITY
   Causality Versus Teleology

Synchronicity
Heredity
Stages of Development
Progression and Regression
The Individuation Process
The Transcendent Function
Sublimation and Repression
Symbolization

CHARACTERISTIC RESEARCH AND RESEARCH METHODS

Experimental Studies of Complexes
Case Studies
Comparative Studies of Mythology, Religion, and the Occult Sciences
Dreams

CURRENT RESEARCH

Jung’s Typology
The Myers–Briggs Type Indicator

CURRENT STATUS AND EVALUATION
Carl Jung was a young psychiatrist in Zurich when he read Freud's *Interpretation of dreams* soon after it was published in 1900. Greatly impressed by Freud's ideas, which he used and verified in his own practice, Jung sent Freud copies of his writings that, in general, upheld the Freudian viewpoint. In 1906 a regular correspondence began between the two men. When Jung paid his first visit to Freud in Vienna the following year, they talked continuously for thirteen hours! Freud decided that Jung was to be his successor, "his crown prince" as he wrote to Jung. When the International Psychoanalytic Association was founded in 1910, Jung became its first president, a position he held until 1914. In 1909, Freud and Jung traveled together to Clark University in Worcester, Massachusetts, both having been invited to deliver a series of lectures at the celebration of the twentieth year of the founding of the university. Three years later, however, the personal relationship between Freud and Jung began to cool. Finally, in early 1913, they terminated their personal correspondence and a few months later their business correspondence. In April 1914, Jung resigned his presidency of the association, and in August 1914, he withdrew as a member. The break was then complete. Freud and Jung never saw one another again.

A few quotations from the 359 letters that passed between Freud and Jung during the years 1906–1913 reveal the dynamics of the fascinating relationship between these two strong-willed men (all quotations are from McGuire, 1974). On April 7, 1907, after their first meeting, Freud wrote "that you have inspired me with confidence for the future, that I now realize that I am as replaceable as everyone else and that I could hope for no one better than yourself, as I have come to know you, to continue and complete my work" (p. 27). Later in this same early letter, however, Freud referred to the differences with respect to sexuality that would contribute substantially to their eventual split: "I appreciate your motives in trying to sweeten the sour apple, but I do not think you will be successful. Even if we call the ucs. 'psychoid,' it will still be the ucs., and even if we do not call the driving force in the broadened conception of sexuality 'libido,' it will still be libido. . . . We are being asked neither more nor less than to abjure our belief in the sexual drive. The only answer is to profess it openly" (p. 28).

Five years later, when Jung returned from a lecture series in New York City, he wrote to Freud, "I found that my version of [psychoanalysis] won over many people who until now had been put off by the problem of sexuality in neurosis" (November 11, 1912; p. 515). Freud replied, "I greet you on your return from America, no longer as affectionately as on the last occasion in Nuremberg—you have successfully broken me of that habit. . . . You have reduced a good deal of resistance with your modifications, but I shouldn't advise you to enter this in the credit column because, as you know, the farther you remove yourself from what is new in [psychoanalysis], the more certain you will be of applause and the less resistance you will meet" (p. 324).
By now the end was near. On December 18, 1912, Jung wrote:

May I say a few words to you in earnest? . . . I am objective enough to see through your little trick. . . . You see, my dear professor, so long as you hand out this stuff I don’t give a damn for my symptomatic actions; they shrink to nothing in comparison with the formidable beam in my brother Freud’s eye. I am not in the least neurotic. . . . You know, of course, how far a patient gets with self-analysis: not out of his neurosis—just like you. If ever you should rid yourself entirely of your complexes and stop playing the father to your sons and instead of aiming continually at their weak spots took a good look at your own for a change, then I will mend my ways. . . . No doubt you will be outraged by this peculiar token of friendship, but it may do you good all the same. With best regards [!]}. (pp. 534–535)

On January 3, 1913 Freud replied, “none of us need feel ashamed of his own bit of neurosis. But one who while behaving abnormally keeps shouting that he is normal gives ground for the suspicion that he lacks insight into his illness. Accordingly, I propose that we abandon our personal relations entirely. I shall lose nothing by it, for my only emotional tie with you has long been a thin thread—the lingering effect of past disappointments . . . take your full freedom and spare me your supposed ‘tokens of friendship’” (p. 539). As Jung replied three days later, “The rest is silence.”

There have been many accounts of the relationship between Freud and Jung, including those of the two participants (Freud, 1914, 1925; Jung, 1961). Freud’s biographer, Ernest Jones (1955), and others (Weigert, 1942; Dry, 1961; Kerr, 1993). The articles published by Jung while he was still influenced by Freud and his subsequent criticisms of Freudian psychoanalysis have been brought together in Volume 4 of the Collected works. Two other articles on Freud are included in Volume 15.

Although the causes for the rupture in the once intimate relationship were complex and “overdetermined,” involving as they did both personal and intellectual incompatibilities, one important reason was Jung’s rejection of Freud’s pansexualism: “The immediate reason was that Freud . . . identified his method with his sex theory, which I deemed to be inadmissible” (personal communication from Jung, 1954). Jung then proceeded to forge his own theory of psychoanalysis and his own method of psychotherapy, which became known as analytical psychology. The lines of this approach had been laid down before Jung met Freud, and he worked on it consistently during the period of his association with Freud (Jung, 1913).

PERSONAL HISTORY

Before discussing the salient and distinctive characteristics of Jung’s viewpoint, let us briefly review some aspects of his life. Carl Gustav Jung was born
in Kesswil, a town on Lake Constance in the Canton of Thurgau, Switzerland, July 26, 1875, and he grew up in Basel. His father was a pastor in the Swiss Reformed Church. Jung entered the University of Basel with the intention of becoming a classical philologist and if possible an archeologist, but a dream is supposed to have aroused his interest in the study of the natural sciences and thus incidentally in medicine. After obtaining his medical degree from the University of Basel he became an assistant in the Burghölzli Mental Hospital, Zurich, and the Psychiatric Clinic of Zurich and thus embarked upon a career in psychiatry. He assisted and later collaborated with Eugen Bleuler, the eminent psychiatrist who developed the concept of schizophrenia, and studied briefly with Pierre Janet, Charcot’s pupil and successor in Paris. In 1909 he gave up his work at the Burghölzli and in 1913 his instructorship in psychiatry at the University of Zurich in order to devote himself full time to private practice, training, research, traveling, and writing. For many years he conducted a seminar in English for English-speaking students, and following his retirement from active teaching a training institute named for him was started in Zurich. In 1944 a chair of medical psychology was founded especially for Jung at the University of Basel, but poor health required his resigning the chair after a year. He died June 6, 1961, in Zurich at the age of 85. No full-length biography of Jung comparable to Ernest Jones’s biography of Freud has been published yet. An autobiography, *Memories, dreams, reflections* (1961), was published in the year of Jung’s death. It was in part directly written by Jung and in part recorded and edited by his confidential secretary, Aniela Jaffé, supplemented by material from talks given by Jung. *Memories, dreams, reflections* is primarily an inner or spiritual autobiography, although it also contains a great deal of information about the external events in Jung’s life. The tone of the book is set by the first sentence: “My life is a story of self-realization of the unconscious.” Biographical material for Jung can be found in Frieda Fordham (1953), Bennet (1961), Dry (1961), Jaffé (1971, 1979), D. S. Wehr (1987), G. Wehr (1971), von Franz (1975), Hannah (1976), Stern (1976), and van der Post (1976). None of these books, however, can be regarded as a definitive biography.

For sixty years, Carl Jung devoted himself with great energy and with a singularity of purpose to analyzing the far-flung and deep-lying processes of human personality. His writings are voluminous and the extent of his influence incalculable. He is known not only to psychologists and psychiatrists but also to educated people in all walks of life. Many honors were bestowed upon him, among them honorary degrees from Harvard University and Oxford University. He often lectured in the United States and has many followers and admirers in this country. Virtually the entire body of Jung’s writings is now available in a twenty-volume English language edition (Jung, 1953–1978). In addition to the Freud/Jung letters previously mentioned, two volumes of Jung’s letters have been published (Jung, 1973b, 1975). There is also a volume containing interviews and encounters with Jung (McGuire, 1977).
Although Jung’s theory of personality is usually identified as a psychoanalytic theory because of the emphasis that it places upon unconscious processes, it differs in some notable respects from Freud’s theory of personality. Perhaps the most prominent and distinctive feature of Jung’s view of humans is that it combines teleology with causality. Human behavior is conditioned not only by individual and racial history (causality) but also by aims and aspirations (teleology). Both the past as actuality and the future as potentiality guide one’s present behavior. Jung’s view of personality is prospective in the sense that it looks ahead to the person’s future line of development and retrospective in the sense that it takes account of the past. To paraphrase Jung, “the person lives by aims as well as by causes.” This insistence upon the role of destiny or purpose in human development sets Jung clearly apart from Freud. For Freud, there is only the endless repetition of instinctual themes until death intervenes. For Jung, there is constant and often creative development, the search for wholeness and completion, and the yearning for rebirth.

Jung’s theory is also distinguished from all other approaches to personality by the strong emphasis that it places upon the racial and phylogenetic foundations of personality. Jung sees the individual personality as the product and container of its ancestral history. Modern humans have been shaped and molded into their present form by the cumulative experiences of past generations extending far back into the dim and unknown origins of humans. The foundations of personality are archaic, primitive, innate, unconscious, and probably universal. Freud stresses the infantile origins of personality whereas Jung emphasizes the racial origins of personality. Humans are born with many predispositions that have been bequeathed to them by their ancestors; these predispositions guide their conduct and determine in part what they will become conscious of and respond to in their own world of experience. In other words, there is a racially preformed and collective personality that reaches out selectively into the world of experience and is modified and elaborated by the experiences that it receives. An individual’s personality is a resultant of inner forces acting upon and being acted upon by outer forces.

This great respect for a person’s racial past and the bearing that it has upon people today meant that Jung, more than any other psychologist, probed into human history to learn what he could of the racial origins and evolution of personality. He studied mythology, religion, ancient symbols and rituals, the customs and beliefs of primitive people, as well as dreams, visions, the symptoms of neurotics, and the hallucinations and delusions of psychotics, in his search for the roots and developments of human personality. His learning and erudition, both as to breadth of knowledge and depth of understanding, are probably unsurpassed among present-day psychologists.

Dry (1961) has identified some of the important intellectual developments of the nineteenth century that presumably influenced Jung. First, there were the philosophers, particularly Schopenhauer, von Hartmann, and Nietzsche,
with their conceptions of the unconscious, of polarity working toward unity, and the substitution of will or intuition for reasoning in comprehending reality. Then there was

the newly developed German and French psychiatry . . .; the scientific discoveries of other fields, especially biology; the widespread acceptance of evolutionary theory . . .; the application of evolutionary ideas to man, including the study of his social organization and religion, and the controversy between the proponents of psychic unity and cultural diffusion in exploring similarities [among different societies]; the imagination-stirring finds of archeology; and the great literary, historical and theological traditions of Germany, with a strong tincture of Romanticism. (pp. 19–20)

Dry also feels that the neutrality and stability of Switzerland favored a life of thought and solitude.

We will now present the principal features of Jung's theory of personality. Although theoretical formulations are found throughout his voluminous writings, Volumes 7, 8, and 9, Part 1 of the Collected works contain the most systematic statements of his position.

THE STRUCTURE OF PERSONALITY

The total personality, or psyche, as it is called by Jung, consists of a number of differentiated but interacting systems. The principal ones are the ego, the personal unconscious and its complexes, and the collective unconscious and its archetypes, the persona, the anima and animus, and the shadow. In addition to these interdependent systems there are the attitudes of introversion and extraversion and the functions of thinking, feeling, sensing, and intuiting. Finally, there is the self, which is the center of the whole personality.

The Ego

The ego is the conscious mind. It is made up of conscious perceptions, memories, thoughts, and feelings. The ego is responsible for one's feeling of identity and continuity, and from the viewpoint of the individual person it is regarded as being at the center of consciousness.

The Personal Unconscious

The personal unconscious is a region adjoining the ego. It consists of experiences that were once conscious but that have been repressed, suppressed, forgotten, or ignored and of experiences that were too weak in the first place to make a conscious impression upon the person. The contents of the personal unconscious, like those of Freud's preconscious material, are accessible to
consciousness, and there is a great deal of two-way traffic between the personal unconscious and the ego.

**Complexes.** A complex is an organized group or constellation of feelings, thoughts, perceptions, and memories that exist in the personal unconscious. It has a nucleus that acts as a kind of magnet attracting to it or "constellating" various experiences (Jung, 1934).

Consider, for example, the mother complex (Jung, 1954a). The nucleus is derived in part from racial experiences with mothers and in part from the child's experiences with its mother. Ideas, feelings, and memories relating to the mother are attracted to the nucleus and form a complex. The stronger the force emanating from the nucleus, the more experiences it will pull to itself. Thus, someone whose personality is dominated by their mother is said to have a strong mother complex. Their thoughts, feelings, and actions will be guided by the conception of the mother, what she says and what she feels will mean a great deal to the person, and her image will be uppermost in his mind. A complex may behave like an autonomous personality that has a mental life and a motor of its own. It may seize control of the personality and utilize the psyche for its own ends, as Tolstoy is said to have been dominated by the idea of simplification and Napoleon by the lust for power.

The nucleus and many of the associated elements are unconscious at any particular time, but any of the associations can and often do become conscious. The concept of a collective, or *transpersonal*, unconscious is one of the most original and controversial features of Jung's personality theory. It is the most powerful and influential system of the psyche and in pathological cases overshadows the ego and the personal unconscious (Jung, 1936, 1943, 1945).

The collective unconscious is the storehouse of latent memory traces inherited from one's ancestral past, a past that includes not only the racial history of humans as a separate species but also their prehuman or animal ancestry as well. The collective unconscious is the psychic residue of human evolutionary development, a residue that accumulates as a consequence of repeated experiences over many generations. It is almost entirely detached from anything personal in the life of an individual and it is seemingly universal. All human beings have more or less the same collective unconscious. Jung attributes the universality of the collective unconscious to the similarity of the structure of the brain in all races of humans, and this similarity in turn is due to a common evolution.

Racial memories or representations are not inherited as such; rather we inherit the possibility of reviving experiences of past generations. They are predispositions that set us to react to the world in a selective fashion. These predispositions are projected on the world. For example, since human beings
have always had mothers, every infant is born with the predisposition to perceive and react to a mother. The individually acquired knowledge of the mother is a fulfillment of an inherited potentiality that has been built into the human brain by the past experiences of the race. Just as humans are born with the capacity for seeing the world in three dimensions and develop this capacity through experience and training, so humans are born with many predispositions for thinking, feeling, and perceiving according to definite patterns and contents that become actualized through individualized experiences. Humans are predisposed to be afraid of the dark or of snakes because primitive humans encountered many dangers in the dark and were victims of poisonous snakes. These latent fears may never develop in modern humans unless they are strengthened by specific experiences, but nonetheless the tendency is there and makes one more susceptible to such experiences. Some ideas are easily formed, such as the idea of a Supreme Being, because the disposition has been firmly imprinted in the brain and needs very little reinforcement from individual experience to make it emerge into consciousness and influence behavior. These latent or potential memories depend upon inherent structures and pathways that have been engraved on the brain as a result of the cumulative experiences of mankind. To deny the inheritance of these primordial memories, Jung asserts, is to deny the evolution and inheritance of the brain.

The collective unconscious is the inherited, racial foundation of the whole structure of personality. Upon it are erected the ego, the personal unconscious, and all other individual acquisitions. What a person learns as a result of experiences is substantially influenced by the collective unconscious, which exercises a guiding or selective influence over the behavior of the person from the very beginning of life: "The form of the world into which he is born is already inborn in him as a virtual image" (Jung, 1945, p. 188). This virtual image becomes a concrete perception or idea by identifying itself with objects in the world that correspond to the image. One's experiences of the world are shaped to a large extent by the collective unconscious, although not completely so, for otherwise there could be no variation and development.

The two unconscious regions of the mind, the personal and the collective, can be of immense service to humans: "It [the unconscious] holds possibilities which are locked away from the conscious mind, for it has at its disposal all subliminal contents, all those things which have been forgotten or overlooked, as well as the wisdom and experience of uncounted centuries, which are laid down in its archetypal organs" (Jung, 1943, p. 114). On the other hand, if the wisdom of the unconscious is ignored by the ego, the unconscious may disrupt the conscious rational processes by seizing hold of them and twisting them into distorted forms. Symptoms, phobias, delusions, and other irrationalities stem from neglected unconscious processes.

Archetypes. The structural components of the collective unconscious are called by various names: archetypes, dominants, primordial images, imagoes.
mythological images, and behavior patterns (Jung, 1943). An archetype is a universal thought form (idea) that contains a large element of emotion. This thought form creates images or visions that correspond in normal waking life to some aspect of the conscious situation. For example, the archetype of the mother produces an image of a mother figure that is then identified with the actual mother. In other words, the baby inherits a preformed conception of a generic mother that determines in part how the baby will perceive its mother. The baby's perception is also influenced by the nature of the mother and by the infant's experiences with her. Thus, the baby's experience is the joint product of an inner predisposition to perceive the world in a certain manner and the actual nature of that world. The two determinants usually fit together compatibly because the archetype itself is a product of racial experiences with the world, and these experiences are much the same as those that any individual living in any age and in any part of the world will have. That is to say, the nature of mothers—what they do—has remained pretty much the same throughout the history of the race, so that the mother archetype the baby inherits is congruent with the actual mother with whom the baby interacts.

How does an archetype originate? It is a permanent deposit in the mind of an experience that has been constantly repeated for many generations. For instance, countless generations have seen the sun make its daily excursion from one horizon to the other. The repetition of this impressive experience eventually became fixed in the collective unconscious as an archetype of the sun-god, the powerful, dominating, light-giving, heavenly body that humans deified and worshipped. Certain conceptions and images of a supreme deity are offshoots of the sun archetype.

In a similar manner, humans have been exposed throughout their existence to innumerable instances of great natural forces: earthquakes, waterfalls, floods, hurricanes, lightning, forest fires, and so forth. Out of these experiences there has developed an archetype of energy, a predisposition to perceive and be fascinated by power and a desire to create and control power. The child's delight in firecrackers, the young person's preoccupation with fast cars, and the adult's obsessive interest in releasing the hidden energies of atoms have their roots in the archetype of energy. Humans are driven by this archetype to seek new sources of energies. Our present age of energy represents the ascendance of the energy archetype. That is, archetypes function as highly charged autonomous centers of energy that tend to produce in each generation the repetition and elaboration of these same experiences. Berger (1977) has suggested that archetypes are the human equivalents of feature detectors that have been discovered in lower animals.

Archetypes are not necessarily isolated from one another in the collective unconscious. They interpenetrate and interfuse with one another. Thus, the archetype of the hero and the archetype of the wise old man may blend together to produce the conception of the "philosopher king," a person who is responded
to and revered because he is both a hero leader and a wise seer. Sometimes, as seemed to be the case with Hitler, there is a fusion of the demon and hero archetypes so that one gets a satanic leader.

As we have already seen, the nucleus of a complex may be an archetype that draws experiences to it. The archetype can then penetrate into consciousness by way of these associated experiences. Myths, dreams, visions, rituals, neurotic and psychotic symptoms, and works of art contain a great deal of archetypal material and constitute the best source of knowledge regarding archetypes. Jung and his associates have done a prodigious amount of work on archetypal representations in religions, myths, and dreams.

Jung’s concept of archetypes is not foreign to psychology. We previously mentioned connections with the behavior genetic and evolutionary approaches introduced in Chapter 8. In addition, consider the concept of “preparedness.” According to this position, the associations formed during learning are not necessarily arbitrary; rather, animals are predisposed to associate certain consequences with certain classes of stimuli. For example, Garcia and Koelling (1966) found that rats were prepared to associate illness with taste cues but to associate pain with light and sound cues. Such connections make sense in the rat’s natural environment, and they thus provide an evolutionary advantage. Seligman (1971) has offered a preparedness theory of phobias, according to which humans are predisposed to quickly learn fear reactions to stimulus objects that were dangerous to our ancestors. Such preprogramming would carry an evolutionary survival value, and it is conceptually quite similar to Jung’s explanation of archetypes.

There are presumed to be many archetypes in the collective unconscious. Some of the ones that have been identified are archetypes of birth, rebirth, death, power, magic, unity, the hero, the child, God, the demon, the old wise man, the earth mother, and the animal.

Although all archetypes may be thought of as autonomous dynamic systems that can become relatively independent of the rest of the personality, some archetypes have evolved so far as to warrant their being treated as separate systems within the personality. These are the persona, the anima and animus, and the shadow.

**The Persona.** The persona is a mask adopted by the person in response to the demands of social convention and tradition and to his or her own inner archetypal needs (Jung, 1945). It is the role assigned to one by society, the part that society expects one to play in life. The purpose of the mask is to make a definite impression upon others and it often, although not necessarily, conceals the real nature of the person. The persona is the public personality, those aspects that one displays to the world or that public opinion fastens on the individual as contrasted with the private personality that exists behind the social facade.
If the ego identifies with the persona, as it frequently does, the individual becomes more conscious of the part that he is playing than he is of his genuine feelings ("inflation of the persona"). He becomes alienated from himself and his whole personality takes on a flat, or two-dimensional, quality. He becomes a mere semblance of a human, a reflection of society instead of an autonomous human being.

The nucleus from which the persona develops is an archetype. This archetype, like all archetypes, originates out of the experiences of the race. In this case, the experiences consist of social interactions in which the assumption of a social role has served a useful purpose to humans throughout their history as social animals. (The persona resembles Freud’s superego in some respects.)

The Anima and the Animus. It is fairly well recognized and accepted that a human is essentially a bisexual animal. On a physiological level, the male secretes both male and female sex hormones, as does the female. On the psychological level, masculine and feminine characteristics are found in both sexes. Homosexuality is just one of the conditions, but perhaps the most striking one, that has given rise to the conception of human bisexuality.

Jung ascribed the feminine side of man’s personality and the masculine side of woman’s personality to archetypes. The feminine archetype in man is called the anima, the masculine archetype in woman is called the animus (Jung 1945, 1954b). These archetypes, although they may be conditioned by the sex chromosomes and the sex glands, are the products of the racial experiences of man with woman and woman with man. In other words, by living with woman throughout the ages, man has become feminized; by living with man, woman has become masculinized.

Not only do these archetypes cause each sex to manifest characteristics of the other sex, but they also act as collective images that motivate each sex to respond to and understand members of the other sex. Man apprehends the nature of woman by virtue of his anima, and woman apprehends the nature of man by virtue of her animus. But the anima and animus may also lead to misunderstanding and discord if the archetypal image is projected without regard for the real character of the partner. That is, if a man tries to identify his idealized image of woman with an actual woman and does not take into account sufficiently the discrepancies between the ideal and the real, he may suffer bitter disappointment when he realizes that the two are not identical. There has to be a compromise between the demands of the collective unconscious and the actualities of the external world for the person to be reasonably well adjusted.

The Shadow. The shadow archetype consists of the animal instincts that humans inherited in their evolution from lower forms of life (Jung 1948a). Consequently, the shadow typifies the animal side of human nature. As an
archetype the shadow is responsible for our conception of original sin; when it is projected outward, it becomes the devil or an enemy.

The shadow archetype is also responsible for the appearance in consciousness and behavior of unpleasant and socially reprehensible thoughts, feelings, and actions. These may either be hidden from public view by the persona or repressed into the personal unconscious. Thus the shadow-side of personality, which owes its origin to an archetype, permeates the private aspects of the ego and a large part of the contents of the personal unconscious as well.

The shadow, with its vital and passionate animal instincts, gives a full-bodied, or three-dimensional, quality to the personality. It helps to round out the whole person. (The reader will have noted a resemblance between the shadow and Freud’s concept of the id.)

The Self

In his earlier writings Jung considered the self to be equivalent to the psyche or total personality. However, when he began to explore the racial foundations of personality and discovered the archetypes, he found one that represented human striving for unity (Wilhelm & Jung, 1931). This archetype expresses itself through various symbols, the chief one being the mandala, or magic circle (Jung, 1955a). In his book Psychology and alchemy (1944), Jung develops a psychology of totality based upon the mandala symbol. The main concept of this psychology of total unity is the self.

The self is the midpoint of personality, around which all of the other systems are constellated. It holds these systems together and provides the personality with unity, equilibrium, and stability:

If we picture the conscious mind with the ego as its centre, as being opposed to the unconscious, and if we now add to our mental picture the process of assimilating the unconscious, we can think of this assimilation as a kind of approximation of conscious and unconscious, where the centre of the total personality no longer coincides with the ego, but with a point midway between the conscious and unconscious. This would be the point of a new equilibrium, a new centering of the total personality, a virtual centre which, on account of its focal position between conscious and unconscious, ensures for the personality a new and more solid foundation. (Jung, 1945, p. 219)

The self is life’s goal, a goal that people constantly strive for but rarely reach. Like all archetypes, it motivates human behavior and causes one to search for wholeness, especially through the avenues provided by religion. True religious experiences are about as close to self-hood as most humans will ever come, and the figures of Christ and Buddha are as highly differentiated expressions of the self archetype as one will find in the modern world. It is
not surprising to learn that Jung discovered the self in his studies and observations of the religions of the Orient, in which the striving for unity and oneness with the world through various ritualistic practices such as Yoga is further advanced than in western religions.

Before a self can emerge, it is necessary for the various components of the personality to become fully developed and individuated. For this reason, the archetype of the self does not become evident until the person has reached middle age. At this time, he or she begins to make a serious effort to change the center of personality from the conscious ego to one that is midway between consciousness and unconsciousness. This midway region is the province of the self.

The concept of the self is probably Jung's most important psychological discovery and represents the culmination of his intensive studies of archetypes.

What controls ego functioning? Jung's postulation of attitudes and functions allowed him to account for the ego's characteristic orientation and processes. He distinguished two major attitudes or orientations of personality, the attitude of extraversion and the attitude of introversion. The extraverted attitude orients the person toward the external, objective world; the introverted attitude orients the person toward the inner, subjective world (1921). Notice that Jung is not using these terms as they are used in the vernacular; that is, they refer to an inward or an outward orientation, not to low or high levels of sociability.

These two opposing attitudes are both present in the personality, but ordinarily one of them is dominant and conscious while the other is subordinate and unconscious. If the ego is predominantly extraverted in its relation to the world, the personal unconscious will be introverted.

Interestingly, it was Jung's attempt to account for Freud's and Adler's differing explanations for neurotic symptoms that led him to the distinction between introversion and extraversion (Jung, 1917). Freud focused on the neurotic's relationships with external people and objects. Adler, as we shall see in Chapter 4, was concerned with the individual's subjective sense of inferiority and his or her subsequent attempts to compensate for it. Jung used the term extraversion to refer to Freud's characteristic external orientation and introversion for Adler's inward orientation. Jung himself was very much an introvert, a reality that undoubtedly contributed to his problems with Freud.

In addition to the differences in outlook summarized by the attitudes, Jung introduced two pairs of functions to account for differences in the strategies people employ to acquire and process information (we now would term such tendencies cognitive styles). There are four fundamental psychological functions: thinking, feeling, sensing, and intuiting. Thinking is ideational and intel-
lectual. By thinking, humans try to comprehend the nature of the world and themselves. Feeling is the evaluation function; it is the value of things, whether positive or negative, with reference to the subject. The feeling function gives humans their subjective experiences of pleasure and pain, of anger, fear, sorrow, joy, and love. Sensing is the perceptual or reality function. It yields concrete facts or representations of the world. Intuition is perception by way of unconscious processes and subliminal contents. The intuitive person goes beyond facts, feelings, and ideas in his or her search for the essence of reality.

The nature of the four functions may be clarified by the following example. Suppose that a person is standing on the rim of the Grand Canyon of the Colorado River. If the feeling function predominates, she will experience a sense of awe, grandeur, and breath-taking beauty. If she is controlled by the sensation function, she will see the canyon merely as it is or as a photograph might represent it. If the thinking function controls her ego, she will try to understand the canyon in terms of geological principles and theory. Finally, if the intuitive function prevails, the spectator will tend to see the Grand Canyon as a mystery of nature possessing deep significance whose meaning is partially revealed or felt as a mystical experience.

That there are exactly four psychological functions, no more and no fewer, "I arrived at," Jung wrote, "on purely empirical grounds":

*But as the following consideration will show, these four together produce a kind of totality. Sensation establishes what is actually present, thinking enables us to recognize its meaning, feeling tells us its value, and intuition points to possibilities as to whence it came and whither it is going in a given situation. In this way we can orient ourselves with respect to the immediate world as completely as when we locate a place geographically by latitude and longitude. (1931b, pp. 540–541)*

Thinking and feeling are called rational functions because they make use of reason, judgment, abstraction, and generalization. They enable humans to look for lawfulness in the universe. Sensation and intuition are considered to be irrational functions because they are based on the perception of the concrete, particular, and accidental.

Although a person has all four functions, they are not necessarily equally well developed. Usually one of the four functions is more highly differentiated than the other three and plays a predominant role in consciousness. This is called the *superior* function. The least differentiated of the four functions is called the *inferior* function. It is repressed and unconscious and expresses itself in dreams and fantasies. The inferior function is always the other member of the pair containing the superior function. If thinking is superior, for example, feeling must be inferior. The more a given function dominates conscious functioning, the more the inferior function is submerged in the unconscious. In
essence, Jung is designating a function as superior when it is the most developed of the four. The basis for such superiority was unclear to Jung, although he suggested that people may have an inborn tendency for a particular attitude or function to be well developed. Whatever their origins, parents in particular should respect these tendencies and not try to change children into something they are not.

The fact that each person's conscious functioning tends to be guided by one of the two attitudes plus one of the four functions sets the stage for a taxonomy of eight types. Introversion or extraversion as a dominant attitude can combine with thinking, feeling, sensation, or intuition as a superior function, thereby producing an introverted thinking type, an extraverted sensing type, and so on. Jung fully recognized that there can be degrees of superiority, depending on the extent to which a particular attitude or function dominates consciousness, but he believed that the pure types were useful as examples. For example, he further clarified his differences from Freud by suggesting that Freud was an extraverted thinking type, while he himself was an introverted intuiting type.

Jung (1921) spent much of his time in *Psychological types* describing the eight possible types. Let us consider two of the eight as illustrations (see Hall & Nordby, 1973). The extraverted thinking type is the prototypic scientist who is preoccupied with understanding natural phenomena and explaining them through general principles, natural laws, and formulas. Such people repress their feeling sides, so they may appear distant, cold, unattached, and superior. The introverted feeling type is more commonly found among women than men. Such people keep their feelings hidden and often are described as distant, inscrutable, or melancholy. They often seem to have mysterious powers or charisma. They have intense feelings that may erupt in emotional outbursts. The aphorism "still waters run deep" applies to such people.

Personality functioning is made even more complex by the fact that one member of the function pair that does not contain the superior and inferior functions serves as an auxiliary to the superior function (see pp. 405–407 in Jung, 1921). For example, if thinking or feeling is superior, then sensation or intuition must be the auxiliary. This arrangement makes sense, given that the irrational functions govern perception or acquisition of information while the rational functions control judgment or processing of information. The ego needs a strategy for both perceiving and judging the world, so both a rational and an irrational function must influence its conscious functioning. The decisive influence for the orientation of consciousness comes from the superior function, with the auxiliary serving a complementary, not an antagonistic, role. These combinations permit Jung to provide more specific descriptions, as when he distinguishes between the "practical" thinking that occurs when sensation is the auxiliary and the "speculative" thinking that arises when intuition is the auxiliary.
Let us summarize the full descriptive power of Jung's combination of attitudes and functions. Introversion or extraversion will tend to dominate the ego. As that domination increases, the degree of submersion of the other attitude in the unconscious also increases. The superior function will govern the orientation of consciousness, with the other member of that function pair buried in the unconscious as the inferior. From the remaining function pair, one will serve as auxiliary to the superior function and the other as auxiliary to the inferior. If, for example, a man is an introverted thinking type, with sensation as his auxiliary, then feeling must be his inferior function, with intuition as its auxiliary. There are two possibilities for the dominant attitude, four possibilities for the superior function, and two possibilities for the auxiliary to the superior function (because the auxiliary must come from the function pair that did not contain the superior function). As a consequence, sixteen types or orientations may exist. Jung recognized that gradations commonly occur, but these pure types provide a potentially very useful framework for conceptualizing individual differences.

If the four functions are placed equidistant from each other on the circumference of a circle, the center of the circle represents the synthesis of the four fully differentiated functions. In such a synthesis there are no superior or inferior functions and no auxiliaries. They are all of equal strength in the personality. Such a synthesis can only occur when the self has become fully actualized. Since complete actualization of the self is impossible, the synthesis of the four functions represents an ideal goal toward which the personality strives.

The various systems and the attitudes and functions that go to make up the total personality interact with each other in three different ways. One system may compensate for the weakness of another system, one system may oppose another system, or two or more systems may unite to form a synthesis.

Compensation may be illustrated by the interaction of the contrasting attitudes of extraversion and introversion. If extraversion is the dominant or superior attitude of the conscious ego, then the unconscious will compensate by developing the repressed attitude of introversion. This means that if the extraverted attitude is frustrated in some way, the unconscious inferior attitude of introversion will seize hold of the personality and exert itself. A period of intense extraverted behavior is ordinarily followed by a period of introverted behavior. Dreams are also compensatory so that the dreams of a predominantly extraverted person will have an introverted quality, and conversely, the dreams of an introvert will tend to be extraverted.

Compensation also occurs between functions. A person who stresses thinking or feeling in the conscious mind will be an intuitive or sensation type unconsciously. Likewise, the ego and the anima in a man and the ego and the
animus in a woman bear a compensatory relationship to each other. The normal male ego is masculine while the anima is feminine, and the normal female ego is feminine while the animus is masculine. In general, all of the contents of the conscious mind are compensated for by the contents of the unconscious mind. The principle of compensation provides for a kind of equilibrium or balance between contrasting elements that prevents the psyche from becoming neurotically unbalanced.

Virtually all personality theorists assume that the personality contains polar tendencies that may come into conflict with one another. Jung is no exception. He believed that a psychological theory of personality must be founded on the principle of opposition or conflict because the tensions created by conflicting elements are the very essence of life itself. Without tension there would be no energy and consequently no personality.

Opposition exists everywhere in the personality: between the ego and the shadow, between the ego and the personal unconscious, between the persona and the anima or animus, between the persona and the personal unconscious, between the collective unconscious and the ego, and between the collective unconscious and the persona. Introversion opposes extraversion, thinking opposes feeling, and sensation opposes intuition. The ego is like a shuttlecock that is batted back and forth between the outer demands of society and the inner demands of the collective unconscious. As a result of this struggle, a persona, or mask, develops. The persona then finds itself under attack from other archetypes in the collective unconscious. The woman in man, that is, the anima, invades the male’s masculine nature and the animus chips away at the femininity of woman. The contest between the rational and irrational forces of the psyche never ceases. Conflict is a ubiquitous fact of life.

Must personality always be a house divided against itself? Jung believed not. Polar elements not only oppose one another, they also attract or seek one another. The situation is analogous to a husband and wife who quarrel with each other yet are held together by the very differences that provoke the disagreements. The union of opposites is accomplished by what Jung called the transcendent function (see below). The operation of this function results in the synthesis of contrary systems to form a balanced, integrated personality. The center of this integrated personality is the self.

**An Example of Interaction Among the Systems of Personality.** To illustrate the kinds of interactions that take place within the psyche, let us consider the relations between the anima and the other systems of personality. Jung said, “the whole nature of man presupposes woman . . . his system is tuned in to woman from the start . . .” (Jung, 1945, p. 188). The male infant, equipped with his archetype of woman, is instinctively attracted to the first woman he experiences, who is usually his mother. The establishing of a close relationship is nurtured, in turn, by the mother. However, as the child grows older, these
maternal bonds become restrictive and frustrating, if not actually dangerous to the child, so that the mother complex that has been formed in the ego is repressed into the personal unconscious.

At the same time that this development is taking place, feminine traits and attitudes that have been implanted in the ego by the anima are also repressed because they are alien to the role that society expects him to play as a male. In other words, his inborn femininity is repressed by a counterforce emanating from the persona and other archetypes.

As a result of these two acts of repression, the child’s feelings for his mother and his femininity are driven from the ego into the personal unconscious. Thus, man’s perception of women and his feelings and behavior toward them are directed by the combined forces of the personal and the collective unconscious.

The integrative task imposed upon the ego as a consequence of these vicissitudes of the mother archetype and the feminine archetype (the anima) is to find a woman who resembles the mother imago and who also fulfills the needs of his anima. If he chooses a woman who differs from either or both of these unconscious models, he is headed for trouble, because his conscious positive feelings for her will be disturbed by unconscious negative feelings. They will make him dissatisfied with her, and he will blame her for various fancied faults and shortcomings without becoming aware of the real reasons for his discontent. If the transcendent function is operating smoothly, it will unite all of his contradictory impulses and cause him to select a mate with whom he can be happy.

All of the important decisions in life require that due consideration be given unconscious as well as conscious factors if they are to be successful. Jung said that a great deal of maladjustment and unhappiness is due to a one-sided development of personality that ignores important facets of human nature. These neglected facets create personality disturbances and irrational conduct.

For Jung, the personality is an exceedingly complex structure. Not only are there numerous components—the number of possible archetypes and complexes, for example, is legion—but the interactions between these components are intricate and involved. No other personality theorist has evolved such a rich and complex description of the structure of personality.

Jung conceived of the personality, or psyche, as being a partially closed energy system. It is said to be incompletely closed because energy from outside sources must be added to the system, for example, by eating. Energy also is subtracted from the system, for example, by performing muscular work. It is also possible for environmental stimuli to produce changes in the distribution of energy within the system. This happens, for instance, when a sudden change
in the external world reorients our attention and perception. The fact that the
personality dynamics are subject to influences and modifications from external
sources means that the personality cannot achieve a state of perfect stabiliza-
tion, as it might be if it were a completely closed system. It can only become
relatively stabilized.

The energy by which the work of the personality is performed is called psychic
energy (Jung, 1948b). Psychic energy is a manifestation of life energy that is
the energy of the organism as a biological system. Psychic energy originates
in the same manner as does all vital energy, namely, from the metabolic
processes of the body. Jung’s term for life energy is libido, but he also uses
libido interchangeably with psychic energy. Jung did not take a positive stand
on the relation of psychic energy to physical energy, but he believed that some
kind of reciprocal action between the two probably exists.

Psychic energy is a hypothetical construct; it is not a concrete substance
or phenomenon. Consequently, it cannot be measured or sensed. Psychic en-
ergy finds concrete expression in the form of actual or potential forces. Wishing,
will, feeling, attending, and striving are examples of actual forces in the
personality; dispositions, aptitudes, tendencies, inclinations, and attitudes are
examples of potential forces.

**Psychic Values.** The amount of psychic energy invested in an element of the
personality is called the value of that element. Value is a measure of intensity.
When we speak of placing a high value upon a particular idea or feeling, we
mean that the idea or feeling exerts a considerable force in instigating and
directing behavior. A person who values truth will expend a great deal of
energy on the search for it. One who places great value upon power will be
highly motivated to obtain power. Conversely, if something is of trivial value,
it will have little energy attached to it.

The absolute value of an idea or feeling cannot be determined, but its
relative value can be. One simple, although not necessarily accurate, way of
determining relative values is to ask a person whether he or she prefers one
thing more than another. The order of the preferences can be taken as a rough
measure of the relative strengths of their values. Or an experimental situation
can be devised to test whether an individual will work harder for one incentive
than for another. Observing someone closely for a period of time to see what
he or she does yields quite a fair picture of their relative values. If a person
spends more time reading than playing cards, then it can be assumed that
reading is more highly valued than card playing.

**The Constellating Power of a Complex.** Such observations and tests, useful
though they may be for the determination of conscious values, do not shed
much light upon the unconscious values. These have to be determined by
evaluating the "constellating power of the nuclear element of a complex." The
constellating power of a complex consists of the number of groups of items
that are brought into association by the nuclear element of the complex. Thus,
if one has a strong patriotic complex, it means that the nucleus, love of
one's country, will produce constellations of experiences around it. One such
constellation may consist of important events in the history of one's nation,
while another may be a positive feeling toward national leaders and heroes.
A very patriotic person is predisposed to fit any new experience into one of
the constellations associated with patriotism.

Jung discusses three methods for assessing the constellating power of a
nuclear element: (1) direct observation plus analytical deductions, (2) complex
indicators, and (3) the intensity of emotional expression.

Through observation and inference one can arrive at an estimate of the
number of associations that are attached to a nuclear element. A person who
has a strong mother complex will tend to introduce his mother or something
associated with his mother into every conversation whether it is appropriate
or not. He will prefer stories and movies in which mothers play a prominent
role, and he will make a great deal out of Mother's Day and other occasions
on which he can honor his mother. He will tend to imitate his mother by
adopting her preferences and interests and will be attracted to her friends
and associates. And he will prefer older women to women his own age.

A complex does not always manifest itself publicly. It may appear in dreams
or in some obscure form so that it is necessary to employ circumstantial
evidence to discover the underlying significance of the experience. This is what
is meant by analytical deduction.

A complex indicator is any disturbance of behavior that indicates the
presence of a complex. It may be a slip of the tongue, for instance, when a
man says "mother" when he intended to say "wife." It may be an unusual
blockage of memory as happens when a person cannot remember the name
of a friend because the name resembles that of his mother or something
associated with his mother. Complex indicators also appear in the word associ-
ation test.

Jung discovered the existence of complexes in 1903 by experiments using
the word association test (Jung, 1973a). This test, now widely employed in
the evaluation of personality, consists of a standard list of words that are read
one at a time to the person being tested. The subject is instructed to reply
with the first word that enters his or her mind. If a person takes an unusually
long time to reply to a particular word, this indicates that the word is connected
in some manner with a complex. Repetition of the stimulus word and an inability
to respond at all are also complex indicators.

The intensity of one's emotional reaction to a situation is another measure
of the strength of a complex. If the heart beats faster, the breathing becomes
deeper, and the blood drains from the face, these are pretty good indications that a strong complex has been tapped. By combining physiological measures such as the pulse, respiration, and electrical changes in the conductivity of the skin with the word association test, it is possible to make a fairly accurate determination of the strength of a person's complexes.

Jung based his view of psychodynamics upon two fundamental principles: the principle of equivalence and that of entropy (Jung, 1948b). The principle of equivalence states that if energy is expended in bringing about a certain condition, the amount expended will appear elsewhere in the system. Students of physics will recognize this principle as the first law of thermodynamics, or the principle of the conservation of energy. As applied to psychic functioning by Jung, the principle states that if a particular value weakens or disappears, the sum of energy represented by the value will not be lost from the psyche but will reappear in a new value. The lowering of one value inevitably means the raising of another value. For example, as the child's valuation of its family decreases, its interest in other people and things will increase. A person who loses his or her interest in a hobby will usually find that another one has taken its place. If a value is repressed, its energy can be used to create dreams or fantasies. It is possible, of course, for the energy lost from one value to be distributed among several other values.

In terms of the functioning of the total personality, the principle of equivalence states that if energy is removed from one system, for example, the ego, it will appear in some other system, perhaps the persona. Or if more and more values are expressed into the shadow-side of personality, it will grow strong at the expense of other personality structures. Likewise, the deenergizing of the conscious ego is accompanied by the energizing of the unconscious. Energy is continuously flowing from one system of personality into other systems. These redistributions of energy constitute the dynamics of personality.

Of course, the principle of the conservation of energy cannot apply in any strict manner to a system like the psyche that is only partially closed. Energy is added to or subtracted from the psyche, and the rate at which it is added or subtracted can and probably does vary considerably. Consequently, the rise or fall of a value may be due not only to a transfer of energy from one part of the system to another. It may depend also upon the addition of energy from sources external to the psyche or the subtraction of energy when muscular work is performed. One is invigorated mentally as well as physically after eating a meal or taking a rest, and one becomes mentally and physically tired after a period of work or exercise. It is these exchanges of energy between the psyche and the organism or the external world as well as the redistribution of energy within the psyche itself that are of great interest to Jung and to all dynamic psychologists.
The principle of entropy, or the second law of thermodynamics, states, in effect, that when two bodies of different temperatures are placed in contact with one another heat will pass from the hotter to the colder body. As another example, water always flows from a higher level to a lower level when a channel is available. The operation of the principle of entropy results in an equilibrium of forces. The warmer object loses thermal energy to the colder one until the two objects have the same temperature. At that point, the energy exchange stops, and the two objects are said to be in thermal balance.

The principle of entropy as adapted by Jung to describe personality dynamics states that the distribution of energy in the psyche seeks an equilibrium or balance. Thus, to take the simplest case, if two values (energy intensities) are of unequal strength, energy will tend to pass from the stronger value into the weaker value until a balance is reached. However, since the psyche is not a closed system, energy may be added to or subtracted from either of the opposing values and upset the equilibrium. Although a permanent balance of forces in the personality can never be established, this is the ideal state toward which the distribution of energy always strives. This ideal state in which the total energy is evenly distributed throughout the various fully developed systems is the self. When Jung asserted that self-realization is the goal of psychic development, he meant, among other things, that the dynamics of personality move toward a perfect equilibrium of forces.

The directed flow of energy from a center of high potential to one of low potential is a fundamental principle governing the distribution of energy among the systems of personality. The operation of this principle means that a weak system attempts to improve its status at the expense of a strong system. This process creates tension in the personality. If the conscious ego, for example, is greatly overvalued relative to the unconscious, a great deal of tension will be generated in the personality by the attempt on the part of the energy to move from the conscious system into the unconscious. Likewise, the energy of the superior attitude, whether it be extraversion or introversion, tends to move in the direction of the inferior attitude. An overdeveloped extravert is under pressure to develop the introverted part of his or her nature. It is a general rule in Jungian psychology that any one-sided development of personality creates conflict, tension, and strain, and an even development of all the constituents of personality produces harmony, relaxation, and contentment.

The production of energy requires differences in potential between the various components of a system. As a consequence, no energy would be produced in a state of perfect balance. A system runs down and stops when all parts of it are in even balance, or perfect entropy, as it is called. Therefore, it is impossible for a living organism to reach complete entropy. This situation represents a fascinating irony. Just as Freud’s "death instinct" referred to the person’s desire to return to an inorganic state, so also does Jung’s stated goal
of movement toward selfhood entail progress toward an ultimate running down of the personality.

The total psychic energy available to the personality is used for two general purposes. Some of it is expended in performing work that is necessary for the maintenance of life and for the propagation of the species. These are the inborn, instinctive functions, as exemplified by hunger and sex. They operate according to natural biological laws. Any energy in excess of that needed by the instincts may be employed in cultural and spiritual activities. According to Jung, these activities constitute the more highly developed purposes of life. As the person becomes more efficient in satisfying his or her biological needs, more energy becomes available for the pursuit of cultural interests. Moreover, as the aging body makes fewer demands on energy, more energy is available for psychic activities.

The most salient feature of Jung's theory of personality, aside from the conception of the collective unconscious with its archetypes, is the emphasis that he placed upon the forward-going character of personality development. Jung believed that humans are constantly progressing or attempting to progress from a less complete stage of development to a more complete one. He also believed that humankind as a species is constantly evolving more differentiated forms of existence.

What is the goal of development? Toward what end are humans and humankind striving? The ultimate developmental goal toward which people strive is summed up by the term self-realization. Self-realization means the fullest, most complete differentiation and harmonious blending of all aspects of a human's total personality. It means that the psyche has evolved a new center, the self, that takes the place of the old center, the ego. All of evolution, as it manifests itself in psychic development, from the first primitive organisms to the appearance of humans, is a parade of progress. Progress did not stop with the creation of humans; just as humans represent an advance over all other species of animals, so do civilized humans represent an improvement over primitive humans. Even civilized humans still have far to go before they will reach the end of the evolutionary journey. It was the future of humans that Jung found so interesting and challenging and about which he had so much to say in his extensive writings.

The idea of a goal that guides and directs human destiny is essentially a teleological or finalistic explanation. The teleological viewpoint explains the
present in terms of the future. According to this viewpoint, human personality is comprehended in terms of where it is going, not where it has been. On the other hand, the present may be explained by the past. This is the viewpoint of causality, which holds that present events are the consequences or effects of antecedent conditions or causes. One looks into a person's past in order to account for his or her present behavior.

Jung maintained that both standpoints are necessary in psychology if a complete understanding of personality is sought. The present is not only determined by the past (causality), but it is also determined by the future (teleology). In their quest for understanding psychologists have to be Janus-faced. With one face they look into a person's past; with the other they look into the person's future. The two views when combined yield a complete picture of the person.

Jung admitted that causality and teleology are merely arbitrary modes of thinking employed by the scientist for ordering and understanding natural phenomena. Causality and teleology are not themselves found in nature. Jung pointed out that a purely causal attitude is likely to produce resignation and despair in humans since from the standpoint of causality they are prisoners of their past. They cannot undo what has already been done. The finalistic attitude, on the other hand, gives humans a feeling of hope and something to live for (cf. Frankl, 1959, who endorsed Nietzsche's phrase "He who has a why to live can bear almost any how").

Synchronicity

Late in his life, Jung (1952a) proposed a principle that was neither causality nor teleology. He called it the principle of synchronicity. This principle applies to events that occur together in time but that are not the cause of one another, for example, when a thought corresponds with an objective event. Nearly everyone has experienced such coincidences. One is thinking of a person and the person appears or one dreams about the illness or death of a friend or relative and later hears that the event took place at the exact time of the dream. Jung pointed to the vast literature on mental telepathy, clairvoyance, and other types of paranormal phenomena as evidence for the principle of synchronicity. He believed that many of these experiences cannot be explained as chance coincidences; instead they suggest that there is another kind of order in the universe in addition to that described by causality. Synchronistic phenomena are attributed to the nature of archetypes. An archetype is said to be psychoid in character; that is, it is both psychological and physical. Consequently, an archetype can bring into consciousness a mental image of a physical event even though there is no direct perception of the physical event. The archetype does not cause both events; rather it possesses a quality that permits synchronicity to occur. The principle of synchronicity would appear to be an improvement upon the notion that a thought causes the materialization
of the thing thought about. [There is a fine essay on synchronicity in Anella Jaffé’s *From the life and work of C. G. Jung* (1971). See also Progoff (1973).]

Heredity is assigned an important role in Jungian psychology. In the first place, it is responsible for the biological instincts that serve the purposes of self-preservation and reproduction. The instincts constitute the animal side of human nature. They are the links with an animal past. An instinct is an inner impulsion to act in a certain manner when a particular tissue condition arises. Hunger, for example, evokes food-seeking activities and eating. Jung’s views on instincts are no different from those held by modern biology (Jung 1929, 1948c).

However, Jung deviated sharply from the position of modern biology when he asserted that there is, in addition to an inheritance of biological instincts, an inheritance of ancestral “experiences.” These experiences, or to speak with greater accuracy, the potentiality of having the same order of experiences as one’s ancestors, are inherited in the form of archetypes. As we have already seen, an archetype is a racial memory, that has become a part of human heredity by being frequently and universally repeated over many generations. By accepting the notion of cultural inheritance Jung aligned himself with Lamarck’s doctrine of acquired characters, a doctrine whose validity has been questioned by most contemporary geneticists. As Hall and Nordby (1973) point out, however, archetypes do not require explanation in terms of a Lamarckian process of inheriting acquired characteristics. For example, early humans who, because of some genetic mutation, possessed a predisposition to fear snakes or the dark might well have had a survival advantage. This could in turn have provided a reproductive advantage and led ultimately to a species characteristic. In similar fashion, other contents of the collective unconscious might have evolved through the process of natural selection.

Jung did not specify in detail, as Freud did, the stages through which the personality passes from infancy to adulthood. He did, however, describe four general developmental stages. We will not present the last stage, Old Age, because Jung regarded it as a period of relative unimportance, when the old person gradually sinks into the unconscious.

**Childhood.** The child’s life is determined by instinctual activities necessary for survival. Behavior during childhood also is governed by parental demands. The emotional problems experienced by young children generally reflect “disturbing influences in the home” (1928, p. 54). In sharp contrast to Freud, Jung did not emphasize the determining power of childhood for subsequent behavior.
**Young Adulthood.** Puberty serves as the "psychic birth" for the personality. Not only does sexuality emerge, but the child becomes differentiated from his or her parents. The adolescent must learn to confront the world and to prepare for life. Extraversion is the primary attitude, and consciousness dominates mental life as the young person pursues the tasks of finding a mate and finding a vocation (cf. the discussion in Chapter 4 of Adler's three life tasks, plus the discussion in Chapter 5 of Erikson's basic crises of identity vs. role confusion and intimacy vs. isolation). The adolescent must grapple with issues of sexuality as well as power or insecurity.

**Middle Age.** By their late thirties, most people have dealt with the issues of young adulthood by marrying and establishing themselves in a vocation. At this point, a very different concern emerges, the need for meaning. People need to find a purpose for their lives and a reason for their existence. In Jung's terminology, they change from an extraverted to an introverted attitude, and they move toward self-realization. This is the time for a "middle-aged crisis." Youthful interests and pursuits lose their value and are replaced by new interests that are more cultural and less biological. The middle-aged person becomes more introverted and less impulsive. Wisdom and sagacity take the place of physical and mental vigor. The person's values are sublimated in social, religious, civic, and philosophical symbols. He or she becomes more spiritual. This transition is the most decisive event in a person's life. It is also one of the most hazardous because if anything goes amiss during the transference of energy, the personality may become permanently crippled. This happens, for example, when the cultural and spiritual values of middle age do not utilize all of the energy formerly invested in instinctual aims. In that case, the excess energy is free to upset the equilibrium of the psyche.

Jung had a great deal of success treating middle-aged people whose energies had failed to find satisfying outlets (Jung, 1931a). In part, this may be due to the fact that Jung went through a "fallow period" of his own from 1913 to 1917, the years around his fortieth birthday. This was the period following his split from Freud. By Jung's own account, he withdrew from his university teaching and immersed himself in his personal and collective unconscious during these years. Some scholars (e.g., Jaffé, 1971; van der Post, 1975) have suggested that this "stormy period" was a self-controlled voyage of exploration (cf. Freud's self-analysis). Others (e.g., Ellenberger, 1970; Stern, 1976) have argued that Jung was not in complete control during this period and was on the verge of experiencing a psychotic break. Whatever the reality was, Jung clearly emerged from this period with powerful ideas about the nature and functioning of the unconscious.

The need for meaning was an important concept for Jung, and it provides another contrast with Freud. Freud (1927) had argued that belief in God was an illusion, that is, a belief prompted by wish-fulfillment, with an infantile
prototype and the defensive function of rendering our “helplessness tolerable.” Jung had a very different position, based on utility rather than proof. Jung wrote:

Because we cannot discover God’s throne in the sky with a radio telescope . . . people assume that such ideas are “not true”. . . . Modern man may assert that he can dispense with them, and he may bolster his opinion by insisting that there is no scientific evidence of their truth. But . . . why should we bother about evidence? Even if we did not know by reason our need for salt in our food, we should nonetheless profit from its use . . . . Why, then, should we deprive ourselves of views that would prove helpful in crises and would give a meaning to our existence? . . . Man positively needs general ideas and convictions that will give a meaning to his life and enable him to find a place for himself in the universe. (1964, pp. 87–88)

Development may follow either a progressive, forward movement or a regressive, backward movement. By progression, Jung meant that the conscious ego is adjusting satisfactorily both to the demands of the external environment and to the needs of the unconscious. In normal progression, opposing forces are united in a coordinated and harmonious flow of psychical processes.

When the forward-going movement is interrupted by a frustrating circumstance, the libido is thereby prevented from being invested in extraverted or environment-oriented values. As a consequence, the libido makes a regression into the unconscious and invests itself in introverted values. That is, objective ego values are transformed into subjective values. Regression is the antithesis of progression.

However, Jung believed that a regressive displacement of energy does not necessarily have a permanently bad effect upon adjustment. In fact, it may help the ego find a way around the obstacle and move forward again. This is possible because the unconscious, both personal and collective, contains the knowledge and wisdom of the individual and racial past that have either been repressed or ignored. By performing a regression, the ego may discover useful knowledge in the unconscious that will enable the person to overcome the frustration. Humans should pay particular attention to their dreams because they are revelations of unconscious material. In Jungian psychology, a dream is regarded as a signpost that points the way forward to the development of potential resources.

The interaction of progression and regression in development may be exemplified by the following schematic example. A young man who has detached himself from dependence upon his parents meets an insurmountable barrier. He looks to his parents for advice and encouragement. He may not actually
return to his parents in a physical sense, but rather his libido may make a regression into the unconscious and reactivate the parental images that are located there. These parental images may then provide him with the knowledge and encouragement that he needs to overcome the frustration.

That personality has a tendency to develop in the direction of a stable unity is a central feature of Jung’s psychology. Development is an unfolding of the original undifferentiated wholeness with which humans are born. The ultimate goal of this unfolding is the realization of selfhood.

In order to realize this aim, it is necessary for the various systems of personality to become completely differentiated and fully developed. If any part of the personality is neglected, the neglected and less well-developed systems will act as centers of resistance that will try to capture energy from more fully developed systems. If too many resistances develop, the person will become neurotic. This may happen when the archetypes are not allowed to express themselves through the medium of the conscious ego or when the wrappings of the persona become so thick that they smother the rest of the personality. A man who does not provide some satisfying outlet for his feminine impulses or a woman who stifles her masculine inclinations is storing up trouble because the anima or animus under these conditions will tend to find indirect and irrational ways of expressing themselves. To have a healthy, integrated personality, every system must be permitted to reach the fullest degree of differentiation, development, and expression. The process by which this is achieved is called the individuation process (Jung, 1939, 1950).

When diversity has been achieved by the operation of the individuation process, the differentiated systems are then integrated by the transcendent function (Jung, 1916b).

This function is endowed with the capacity to unite all of the opposing trends of the several systems and to work toward the ideal goal of perfect wholeness (selfhood). The aim of the transcendent function is the revelation of the essential person and “the realization, in all of its aspects, of the personality originally hidden away in the embryonic germplasm; the production and unfolding of the original, potential wholeness” (Jung, 1943, p. 108). Other forces in the personality, notably repression, may oppose the operation of the transcendent function. Yet, in spite of any opposition, the forward, unifying propulsion of development will take place, if not at a conscious level, then at an unconscious one. The unconscious expression of a desire for wholeness is found in dreams, myths, and other symbolic representations. One such symbol that is always cropping up in myths, dreams, architecture, religion, and the arts is the mandala symbol. Mandala is a Sanskrit word meaning circle. Jung
made exhaustive studies of the mandala because it is the perfect emblem of complete unity and wholeness in Eastern and Western religions.

Psychic energy is displaceable. This means that it can be transferred from one process in a particular system to another process in the same or different system. This transference is made according to the basic dynamic principles of equivalence and entropy. If the displacement is governed by the individuation process and the transcendent function, it is called sublimation. Sublimation describes the displacement of energy from the more primitive, instinctive, and less differentiated processes to higher cultural, spiritual, and more differentiated processes. For example, when energy is withdrawn from the sex drive and invested in religious values, the energy is said to have been sublimated. Its form has been changed in the sense that a new type of work is being performed; in this case, religious work replaces sexual work.

When the discharge of energy either through instinctual or sublimated channels is blocked, it is said to be repressed. Repressed energy cannot just disappear; it has to go somewhere according to the principle of the conservation of energy. Consequently, it takes up its residence in the unconscious. By adding energy to unconscious material, the unconscious may become more highly charged than the conscious ego. When this happens, energy from the unconscious will tend to flow into the ego, according to the principle of entropy, and disrupt the rational processes. In other words, highly energized unconscious processes will try to break through the repression. If they succeed, the person will behave in an irrational and impulsive fashion.

Sublimation and repression are exactly opposite in character. Sublimation is progressive; repression is regressive. Sublimation causes the psyche to move forward; repression causes it to move backward. Sublimation serves rationality; repression produces irrationality. Sublimation is integrative; repression is disintegrative. Because repression is regressive, however, it may enable individuals to find the answers to their problems in their unconscious and thus move forward again.

A symbol in Jungian psychology has two major functions. On the one hand, it represents an attempt to satisfy an instinctual impulse that has been frustrated; on the other hand, it is an embodiment of archetypal material. The development of the dance as an art form is an example of an attempt to satisfy symbolically a frustrated impulse such as the sex drive. A symbolic representation of an instinctual activity can never be entirely satisfying, however, because it does not attain the real object and discharge all of the libido. Dancing does not take the place completely of more direct forms of sexual expression; consequently, more adequate symbolizations of thwarted instincts are constantly
being sought. Jung believed that the discovery of better symbols—symbols that discharge more energy and reduce more tension, enables civilization to advance to higher and higher cultural levels.

However, a symbol also plays the role of a resistance to an impulse. As long as energy is being drained off by a symbol, it cannot be used for impulsive discharge. When one is dancing, for example, one is not engaging in a direct sexual activity. From this standpoint a symbol is the same as a sublimation. Both involve displacements of libido.

The capacity of a symbol to represent future lines of personality development, especially the striving for wholeness, plays a highly significant role in Jungian psychology. It represents a distinctive and original contribution to the theory of symbolism. Jung returned again and again to a discussion of symbolism in his writings and made it the subject of some of his most important books. The essence of Jung’s theory of symbolism is found in this quotation: “The symbol is not a sign that veils something everybody knows. Such is not its significance: on the contrary, it represents an attempt to elucidate, by means of analogy, something that still belongs entirely to the domain of the unknown or something that is yet to be” (Jung, 1916a, p. 287).

Symbols are representations of the psyche. They not only express the stored-up racial and individually acquired wisdom of mankind, but they can also represent levels of development that are far ahead of humanity’s present status. A person’s destiny, the highest evolution of his or her psyche, is marked out by symbols. The knowledge contained in a symbol is not directly known to humans; they must decipher the symbol to discover its important message.

The two aspects of a symbol, one retrospective and guided by the instincts, the other prospective and guided by the ultimate goals of humankind, are two sides of the same coin. A symbol may be analyzed from either side. The retrospective type of analysis exposes the instinctual basis of a symbol; the prospective type reveals the yearnings of humankind for completion, rebirth, harmony, purification, and the like. The former is a causal, reductive type of analysis, the latter a teleological, finalistic type of analysis. Both are necessary for a complete elucidation of the symbol. Jung believed that the prospective character of a symbol has been neglected in favor of the view that a symbol is solely a product of frustrated impulses.

The psychic intensity of a symbol is always greater than the value of the cause that produced the symbol. By this is meant that there is both a driving force and an attracting force behind the creation of a symbol. The push is provided by instinctual energy, the pull by transcendental goals. Neither one alone suffices to create a symbol. Consequently, the psychic intensity of a symbol is the combined product of causal and finalistic determiners and is therefore greater than the causal factor alone.
Jung was both a scholar and a scientist. He found his facts everywhere: in ancient myths and modern fairy tales; in primitive life and modern civilization; in the religions of the Eastern and Western worlds; in alchemy, astrology, mental telepathy, and clairvoyance; in the dreams and visions of normal people; in anthropology, history, literature, and the arts; and in clinical and experimental research. In scores of articles and books, he set forth the empirical data upon which his theories are based. Jung insisted that he was more interested in discovering facts than in formulating theories: "I have no system, I talk of facts" (personal communication to the authors, 1954).

Since it is completely impossible to review the vast amount of empirical material that Jung brought together in his numerous writings, we will have to resign ourselves to the presentation of a minute portion of Jung's characteristic research.

Jung's first studies to attract the attention of psychologists made use of the word association test in conjunction with physiological measures of emotion (Jung, 1973a). In the word association test, a standard list of words is read to the subject one at a time and the person is instructed to respond with the first word that comes to mind. The time taken to respond to each word is measured by a stop watch. In Jung's experiments, changes in breathing were measured by a pneumograph strapped to the chest of the subject and changes in the electrical conductivity of the skin by a psychogalvanometer attached to the palm of the hand. These two measures give additional evidence of emotional reactions that may appear to specific words in the list since it is well known that breathing and skin resistance are affected by emotion.

Jung utilized these measures to uncover complexes in patients. A long period of delay in responding to the stimulus word plus respiratory and skin resistance changes indicates that a complex has been touched off by the word. For example, if a person's breathing becomes irregular, his or her resistance to an electric current decreases because of sweating of the palms and the response to the word mother is unusually delayed, these factors suggest the presence of a mother complex. If other words related to "mother" are reacted to in a similar manner, it substantiates the existence of such a complex. Other indications that a stimulus word was associated with a complex included repetition or mishearing of the word, bodily movements, rhyming responses, stammering, made-up responses, or inability to respond. In many respects, Jung's word association test was the first example of a formal clinical test. It incorporated many of the characteristics of current "projective" tests, such as a standard set of stimulus materials to which the subject responds as she or he sees fit, normative responses to the words for different types of subjects, and an inquiry period in which the subject discussed those stimulus words that had produced unusual responses.
As noted in the preceding chapter, Freud published six long case studies. In each of these studies, Freud attempted to characterize the dynamics of a specific pathological condition, for example, Dora and hysteria, Schreber and paranoia. With the exception of a few short case studies published prior to his break with Freud, Jung did not write any case studies comparable to those of Freud. In *Symbols of transformation* (1952b), Jung analyzed the fantasies of a young American woman whom he knew only through an article by the Swiss psychologist, Theodore Flournoy. This is in no sense a case study; nor is the analysis of a long dream series in *Psychology and alchemy* (1944) or the analysis of a series of paintings made by a patient in *A study in the process of individuation* (1950). In these cases, Jung used the comparative method employing history, myth, religion, and etymology to show the archetypal basis of dreams and fantasies. Following his rupture with Freud, the comparative method provided Jung with his basic data and the principal support for his concepts. The reader may not be able to assimilate such arcane volumes as *Psychology and alchemy* (1944), *Alchemical studies* (1942–1957), *Aion* (1951), and *Mysterium coniunctionis* (1955b). The reader will find, however, an easily digestible example of Jung’s comparative methodology in *Flying saucers: a modern myth of things seen in the sky* (1958), which Jung wrote late in his life.

Since the evidence for archetypes is difficult to secure from contemporary sources alone, Jung devoted a great deal of attention to researches in mythology, religion, alchemy, and astrology. His investigations took him into areas that few psychologists have explored, and he acquired a vast amount of knowledge of such abstruse and complex subjects as Hindu religion, Taoism, Yoga, Confucianism, the Christian mass, astrology, psychical research, primitive mentality, and alchemy.

One of the most impressive examples of Jung’s attempt to document the existence of racial archetypes is found in *Psychology and alchemy* (1944). Jung believed that the rich symbolism of alchemy expresses many, if not all, of the archetypes of humans. In *Psychology and alchemy* he examines an extensive dream series collected from a patient (not one of Jung’s) against the intricate tapestry of alchemical symbolism and concludes that the same basic features appear in both. It is a *tour de force* of symbolical analysis that has to be read in its entirety in order to be appreciated. The few examples that we will present are merely to give the reader some idea of Jung’s method.

The clinical material consists of over a thousand dreams and visions obtained from a young man. The interpretation of a selection of these dreams and visions occupies the first half of the book. The rest of the book is taken up with a scholarly account of alchemy and its relation to religious symbolism.
In one dream a number of people are walking to the left around a square. The dreamer is not in the center but stands at one side. They say that a gibbon is to be reconstructed (p. 119). The square is a symbol of the work of the alchemist that consisted of breaking down the original chaotic unity of the primal material into four elements preparatory to their being recombined into a higher and more perfect unity. Perfect unity is represented by a circle, or mandala, that appears in this dream as walking around a square. The gibbon or ape stands for the mysterious transforming substance of alchemy, a substance that transforms base material into gold. This dream signifies, therefore, that the patient must displace his conscious ego from the center of his personality in order to permit the repressed primitive urges to be transformed. The patient can only achieve inner harmony by integrating all of the elements of his personality just as the alchemist could only reach his goal (which he never did) by the proper mixing of basic elements. In another dream, a glass filled with a gelatinous mass stands on a table before the dreamer (p. 168). The glass corresponds to the alchemical apparatus used for distillation and the contents to the amorphous substance that the alchemist hopes to turn into the lapis or philosopher's stone. The alchemical symbols in this dream indicate that the dreamer is trying or hoping to transform himself into something better.

When the dreamer dreams of water, it represents the regenerative power of the alchemist's aquavitæ; when he dreams of finding a blue flower, the flower stands for the birthplace of the filius philosophorum (the hermaphroditic figure of alchemy); and when he dreams of throwing gold coins on the ground, he is expressing his scorn for the alchemist's ideal. When the patient draws a wheel, Jung sees a connection between it and the alchemist's wheel, which stood for the circulating process within the chemical retort by which the transformation of material was supposed to take place. In a similar vein, Jung interprets a diamond that appears in the patient's dream as the coveted lapis and an egg as the chaotic prima material with which the alchemist began his labors.

Throughout all the dreams of the series, as Jung demonstrates, there are strong parallels between the symbols employed by the dreamer to represent his problems and his goals and the symbols devised by medieval alchemists to represent their endeavors. The striking feature of the dream series is the more or less exact portrayal in them of the material aspects of alchemy. Jung is able to point to exact duplications of objects in the dreams and in the illustrations found in old alchemical texts. He concludes from this that the personality dynamics of the medieval alchemist as projected into his chemical investigations and those of the patient are precisely the same. This exact correspondence of the images proves the existence of universal archetypes. Moreover, Jung, who carried on anthropological investigations in Africa and other parts of the world, found the same archetypes expressed in the myths of primitive races. They are also expressed in religion and art, both modern
and primitive: "The forms which the experience takes in each individual may be infinite in their variations, but, like the alchemical symbols, they are all variants of certain central types, and these occur universally" (Jung, 1944, p. 463).

Dreams

Jung, like Freud, paid a great deal of attention to dreams. He considered them to be prospective as well as retrospective in content and compensable for aspects of the dreamer's personality that have been neglected in waking life. For example, a man who neglects his anima will have dreams in which anima figures appear. Jung also differentiated between "big" dreams, in which there is much archetypal imagery, and "little" dreams, whose contents are more closely related to the dreamer's conscious preoccupations.

The Method of Amplification. This method was devised by Jung to explicate certain elements in dreams that are thought to be of rich symbolic significance. It contrasts with the method of free association. In free associating, the person ordinarily gives a linear series of verbal responses to a dream element. The dream element is merely the starting point for the subsequent associations, and the associations may and usually do move away from the element. In the method of amplification, the dreamer is required to stand by the element and to give multiple associations to it. The responses he or she makes form a constellation around a particular dream element and constitute the many-faceted meanings of it for the dreamer. Jung assumed that a true symbol is one that has many faces and that it is never completely knowable. Analysts can also assist in amplifying the element by contributing what they know about it. They may consult ancient writings, mythology, fairy tales, religious texts, ethnology, and etymological dictionaries to extend the meanings of the symbolic element. There are many examples of amplification in Jung's writings, for example the fish (1951) and the tree (1954c).

The Dream Series Method. Freud, it will be recalled, analyzed dreams one at a time by having the patient free-associate to each successive component of the dream. Then, by using the dream material and the free associations, Freud arrived at an interpretation of the meaning of the dream. Jung, while not disavowing this approach, developed another method for interpreting dreams. In place of a single dream, Jung utilized a series of dreams obtained from a person:

They [the dreams] form a coherent series in the course of which the meaning gradually unfolds more or less of its own accord. The series is the context which the dreamer himself supplies. It is as if not one text but many lay before us, throwing light from all sides on the unknown terms, so that a reading of all the texts is sufficient to elucidate the difficult
passages in each individual one. Of course, the interpretation of each individual passage is bound to be largely conjecture, but the series as a whole gives us all the clues we need to correct any possible errors in the preceding passages. (1944, p. 12)

In psychology, this is called the method of internal consistency and is widely employed with qualitative material like dreams, stories, and fantasies. The use that Jung made of it is displayed to advantage in his book *Psychology and alchemy* (1944) in which an extremely long dream series is analyzed.

The Method of Active Imagination. In this method, the subject is required to concentrate his or her attention on an impressive but unintelligible dream image or on a spontaneous visual image and observe what happens to the image. The critical faculties must be suspended and the happenings observed and noted with absolute objectivity. When these conditions are faithfully observed, the image will usually undergo a series of changes that bring to light a mass of unconscious material. The following example is taken from Jung and Kerényi's *Essays on a science of mythology* (1949):

_I saw a white bird with outstretched wings. It alighted on the figure of a woman, clad in blue, who sat there like an antique statue. The bird perched on her hand, and in it she had a grain of wheat. The bird took it in its beak and flew into the sky again._ (p. 229)

Jung pointed out that drawing, painting, and modeling can be used for representing the flow of images. In the foregoing example, the person painted a picture to accompany the verbal description. In the picture, the woman was portrayed as having large breasts, which suggested to Jung that the vision represented a mother figure. (A fascinating series of twenty-four pictures drawn by a woman during her analysis is reproduced in Jung, 1950.)

The fantasies produced by active imagination usually have better form than do nocturnal dreams because they are received by a waking consciousness rather than a sleeping one.

Jung's theory has not stimulated a great deal of empirical research, in large measure because of the difficulty of quantifying many of his constructs. In two areas, however, a noteworthy body of research has accumulated.

Jung's intention was not to develop a formal typology for distinguishing among individuals. He was more concerned with describing cognitive processes or
potentialities that everyone possesses and needs to develop. Nonetheless, his discussion of the attitudes and functions has provided the impetus for some intriguing research on individual differences, notably by Helson and by Carlson.

Helson (1973) attended to dynamics and structure. She discussed the relationship between the ego and the unconscious as revealed for women authors of fantasy characterized by heroic (i.e., an emphasis on achievement, assertiveness, and purposeful aggression) and tender (i.e., an emphasis on relationships and tender feelings) modes of writing. Helson concluded that women authors of fantasy tend toward introversion, intuition, and feeling, and she inferred that the heroic and tender modes represent the "voice" of the functions of intuition and feeling, respectively" (p. 510). Helson (1978) measured the content concerns, needs, and roles expressed in seventy-nine articles by critics of children's books. A subsequent cluster analysis revealed four groupings of critics representing elucidation, appreciation, challenging, and upholding of standards. A fourfold classification of the articles produced by high or low values on the first two of these clusters corresponded to Jung's four functions. Articles that were high on elucidation and low on appreciation corresponded to Jungian thinking, while low-high articles reflected a feeling orientation. Similarly, low-low articles suggested sensation, and high-high articles revealed an intuition approach to criticism. Further work by Helson (1982) described four "information-processing styles" parallel to Jung's four functions. She went on to provide a general description of the influence of type differences in literary criticism, arguing that the comments of critics are guided by their dominant and auxiliary functions. She also was attuned to the expansion of consciousness that Jung said occurs during individuation, and she used the critic T. A. Richards as an example of someone who attended in turn to thinking, sensation, intuition, then feeling during the course of his critical career. Helson concluded by laying out further suggestions for "profitable explorations with the chart of Jung's elegant theory" (p. 416).

Carlson and Levy (1973) used the Myers-Briggs Type Indicator (MBTI; see next section) to classify subjects into the basic Jungian types. They then confirmed a number of predictions based on Jung's descriptions of the characteristics of those types. For example, introverted thinking types were significantly better at short-term memory for emotionally neutral digits, but extraverted feeling types were significantly more accurate in recognition memory of affectively toned facial expressions and names. Similarly, extraverted intuitive types were overrepresented among social service volunteers, compared with a matched sample of nonvolunteers.

Subsequent work by Carlson (1980) examined type differences in memory for significant personal experiences, again using the MBTI to categorize subjects. In one study, subjects were asked to describe their most vivid experience of each of seven affects. When judges familiar with type theory were asked to predict whether sets of memories came from introverted thinking or extraverted
feeling types, correct assignment to type category was made for 13 of the 15 subjects. In addition, extraverts contributed significantly more "social" memories, and introverts significantly more "individual" memories, for the target emotions of joy, excitement, and shame. Similarly, feeling types gave significantly more emotionally vivid memories than thinking types on these same three emotions. Carlson also found that intuitive types were significantly more likely than sensing types to generate inferential (as opposed to concrete) interpersonal constructs on George Kelly's (see Chapter 10) REP test. Similarly, intuitives made more participative comments in initiating a hypothetical relationship, but sensing types offered more concrete self-descriptions. Carlson concluded that her results support "two basic assumptions of Jungian type theory—the social connectedness of extraverts . . . and the 'emotional' quality of feeling judgment" (p. 807). Overall, the results "gave unambiguous support for hypotheses drawn from Jungian type theory" (p. 809).

As we have noted elsewhere, Jung described the attitudes and functions not as the basis for a typology but as potentialities that exist in everyone in varying degrees. These potentialities all must be developed in the process of moving toward self-realization. The model does suggest a typology, however, and several attempts have been made to develop paper and pencil tests to scale people according to this typology (Keirsey & Bates, 1978; Wheelwright, Wheelwright, & Buehler, 1964).

The most influential of the tests derived from Jung's theory has been the Myers–Briggs Type Indicator (MBTI; Myers & McCaulley, 1985; Myers & Myers, 1980). The MBTI identifies 16 types based on Jung's distinctions between extraversion—introversion (E–I), thinking–feeling (T–F), and sensation–intuition (S–N), plus Isabel Myers's distinction between judging and perceiving (J–P). The J–P distinction measures whether an individual's orientation toward the outside world comes from the rational (judging) or the irrational (perceiving) function pair. Extraverts have a dominant external orientation, so in extraverts the J–P score indicates which function pair contains the dominant function. A person who receives an ESTJ classification on the MBTI, for example, would have thinking (T) for a dominant function, because that person prefers thinking from the rational function pair, and the J indicates that the rational or judging function pair is dominant. Introverts have a dominant internal orientation, so in introverts the J–P score indicates the auxiliary function. A person who receives an ISTJ classification, for example, would have sensation (S) for a dominant function, because that person prefers sensation from the irrational function pair, and the J indicates that the rational or judging function pair contains the auxiliary rather than the dominant function. In addition, the J–P preference indexes a constellation of preferred attitudes and behaviors, just as the I–E, T–F, and S–N preferences do. The MBTI Manual provides the
following estimates for the frequency of particular preferences in the United States: About 75% of the population prefer E and S. About 55–60% prefer J. About 60% of males prefer T, and about 65% of females prefer F.

Table 3.1 contains the MBTI summaries of the sixteen possible types. In general, I’s are characterized by a depth of concentration and a preference for the inner world of ideas; E’s are characterized by breadth of interests and are more at home in the outer world of people and things. The S’s rely on facts while N’s are able to grasp possibilities and relationships. The T’s emphasize logic and impersonal analysis, but F’s provide warmth and sympathy and base their judgments on personal values. Finally, J’s tend to be organized, and P’s tend to be adaptable and spontaneous.

The type theory underlying the MBTI follows Jung in believing that people are born with a predisposition for a particular type. As a consequence, they tend to develop their preferred and auxiliary functions and to leave the nonpreferred functions undifferentiated during the first part of their lives. In middle life, they can begin to gain greater command over the other two functions, and these less developed processes eventually can enter consciousness in the service of the dominant processes. The emphasis in MBTI research and application, however, continues to be on the type as measured.

The MBTI Manual and related publications contain a wealth of information regarding application of typology information in counseling, education, and work settings. J. G. Carlson (1985), Carlyn (1977), Murray (1990), and Thompson and Borrello (1986) provide evidence of the reliability and validity of the MBTI [see also the exchange between J. G. Carlson (1989a, 1989b) and Healy (1989a, 1989b)]. The question remains, however, whether the MBTI provides a bridge for experimental tests of Jungian concepts.

A growing number of researchers have demonstrated that MBTI scales do have utility in experimental settings. Carlson’s research, discussed earlier, certainly falls in this category. Hicks (1985) used MBTI scores in an investigation of the “fundamental attribution error.” This error refers to a common cognitive bias for observers to conclude that essay writers actually believe what they wrote, even when the observers know that the writers were instructed to support that particular view. Hicks predicted that intuitives, with their ability to imagine themselves in hypothetical situations, and thinking types, who are best at objective impersonal analysis, should be most resistant to this fundamental attribution error. This prediction was supported by the finding that intuitive thinking types were least likely of all types to make the mistake of assuming that test writers believed what they wrote when there was evidence to the contrary. Similarly, Ward and Loftus (1985) found in an eyewitness testimony task that introverted intuitive types had better recall than extraverted sensing types when testing questions were consistent with what subjects actually had seen. When a misleading question referred to a stop sign that had not been present, however, introverted intuitive types made significantly more
<table>
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<th></th>
<th>Sensing types</th>
<th>Intuitive types</th>
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<tbody>
<tr>
<td>ISTJ</td>
<td>Serious, quiet, earn success by concentration and thoroughness. Practical, orderly, matter-of-fact, logical, realistic, and dependable. See to it that everything is well organized. Take responsibility. Make up their own minds as to what should be accomplished and work toward it steadily, regardless of protests or distractions.</td>
<td>INFJ</td>
</tr>
<tr>
<td>ISFJ</td>
<td>Quiet, friendly, responsible, and conscientious. Work devotedly to meet their obligations. Lend stability to any project or group. Thorough, painstaking accurate. Their interests are usually not technical. Can be patient with necessary details. Loyal, considerate, perceptive, concerned with how other people feel.</td>
<td>INTJ</td>
</tr>
<tr>
<td>ISTP</td>
<td>Good onlookers—quiet, reserved, observing and analyzing life with detached curiosity and unexpected flashes of original humor. Usually interested in cause and effect, how and why mechanical things work, and in organizing facts using logical principles.</td>
<td>ISFP</td>
</tr>
<tr>
<td>ESFP</td>
<td>Good at on-the-spot problem solving. Do not worry, enjoy whatever comes along. Tend to like mechanical things and sports, with friends on the side. Adaptable, tolerant, generally conservative in values. Dislike long explanation. Are best with real things that can be worked, handled, taken apart, or put together.</td>
<td>ENFP</td>
</tr>
<tr>
<td>ENTP</td>
<td>Quick, ingenious, good at many things. Stimulating company, alert and outspoken. May argue for fun on either side of a question. Resourceful in solving new and challenging problems, but may neglect routine assignments. Apt to turn to one new interest after another. Skilful in finding logical reasons for what they want.</td>
<td>ENFJ</td>
</tr>
<tr>
<td>ESTJ</td>
<td>Practical, realistic, matter-of-fact, with a natural head for business or mechanics. Not interested in subjects they see no use for but can apply themselves when necessary. Like to organize and run activities. May make good administrators, especially if they remember to consider others’ feelings and points of view.</td>
<td>ENTP</td>
</tr>
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Source: Reprinted with permission from Myers and McCaulley, 1985.
errors in recall than extraverted sensing types. In general, introverted and intuitive types, either alone or in combination, were more likely to accept both consistent and misleading information. This led to greater accuracy in the first case and poorer accuracy in the second.

Other research indicates that MBTI scales scored as continuous variables rather than either—or typologies have predictive utility. For example, Cann and Donderi (1986) found that intuition scores correlated with the proportion of dreams categorized as archetypal \((r = .37)\) and introversion scores correlated with the frequency of everyday dreams recalled \((r = .39)\). Taken as a whole, then, the MBTI has promise as a measure of Jungian preferences and as a stimulus for experimental work.

**CURRENT STATUS AND EVALUATION**

Jungian psychology has a number of devoted admirers and proponents throughout the world. Many of these are practicing psychoanalysts who use Jung's method of psychotherapy and who have accepted his fundamental postulates regarding personality. Some are theoreticians who have elaborated Jung's ideas. Among these are Gerhard Adler (1948), Michael Fordham (1947), Esther Harding (1947), Erich Neumann (1954, 1955), Herbert Read (1945), Jolande Jacobi (1959), and Frances Wickes (1950). Jung also had powerful lay supporters, for example, Paul Mellon of the Pittsburgh Mellons, who served as president of the Bollingen Foundation (named for Jung's country residence on Lake Zurich). The Bollingen Foundation sponsors the publication of Jungian books through the Princeton University Press. The most ambitious project of the Bollingen Foundation to date is the translation and publication of Jung's collected works in English under the editorial supervision of Read, Fordham, and Adler. Finally, centers of influence for the dissemination of Jung's ideas are to be found in the Jungian Institutes, which have been established in a number of cities.

Jung's influence outside the fields of psychiatry and psychology has been considerable. Historian Arnold Toynbee acknowledges that he is indebted to Jung for opening up "a new dimension in the realm of life." Writer Philip Wylie is a great admirer of Jung, as are author and critic Lewis Mumford and anthropologist Paul Radin. Hermann Hesse also admired Jung (Serrano, 1966). Perhaps Jung's greatest impact has been upon modern religious thought (Progoff, 1953). Jung was invited to give the Terry lectures at Yale University on *Psychology and religion* (1938). Jung was severely criticized for supporting Nazism (Feldman, 1945), although he and his followers vigorously denied the charges and claimed that Jung was misrepresented (Harms, 1946; *Saturday Review*, 1949; Jaffe, 1971; Cohen, 1975).

Jung has been attacked by psychoanalysts of the Freudian school, beginning with Freud himself. Ernest Jones (1959) opined that after Jung's "great
studies in association and dementia praecox, he had descended into a pseudo-
philosophy out of which he has never emerged" (p. 165). Glover (1950), an
English psychoanalyst, made what is probably the most comprehensive assault
upon analytical psychology. He ridiculed the concept of archetypes as being
metaphysical and incapable of proof. He believed that archetypes can be fully
accounted for in terms of experience and that it is absurd to postulate racial
inheritance. Glover said that Jung has no developmental concepts by which
to explain the growth of the mind. Glover’s principal criticism, however, and
one that he reiterated a number of times, was that Jung’s psychology is a
retreat back to an outmoded psychology of consciousness. He accused Jung
of tearing down the Freudian concept of the unconscious and erecting a con-
scious ego in its place. Glover did not pretend to be impartial or detached in
his evaluation of Jungian psychology. (For another comparison of the views
of Freud & Jung, see Gray, 1949; also Dry, 1961.) Selesnick (1963) argued
that Jung, during his association with Freud, influenced Freud’s thinking in a
number of significant ways.

What influence has Jung’s theory of personality had upon the development
of scientific psychology? Very little that one can directly perceive, except for
the word association test and the concepts of introversion and extraversion.
The word association test was not original with Jung. Galton is usually credited
with the invention of the test, and it was introduced into experimental psychol-
ogy by Wundt. Consequently, when Jung lectured on the word association
method at Clark University in 1909 it did not sound strange and alien to the
psychologists in his audience. Moreover, Jung’s studies on word association
employed a quantitative, experimental methodology that was bound to win
favor with psychologists who prided themselves on being scientific. The use
of the word association test is discussed in a number of surveys of clinical
psychology and projective techniques (Bell, 1948; Levy, 1952; Rotter, 1951;
Anastasi, 1988).

It is less easy to account for psychology’s interest in Jung’s typology. A
number of tests of introversion–extraversion have been constructed, and there
is much psychological literature on the subject. Eysenck (see Chapter 9) identi-
fied introversion–extraversion as one of the three primary dimensions of per-
sonality, the other two being neuroticism and psychoticism. Other studies of
Jung’s typology have been done by Gorlow, Simonson, and Krauss (1966) and
Ball (1967). As discussed previously, tests that assess the four psychological
functions of thinking, feeling, sensing, and intuiting in conjunction with the
attitudes of introversion and extraversion have been constructed by Gray and
Wheelwright (1964) and Myers and Briggs (1962).

Analytical psychology has not been subjected to the searching criticism
accorded Freudian psychoanalysis by psychologists. Nor has it found a substan-
tial place in the standard histories of psychology. Boring, in his History of
experimental psychology, devoted six pages to Freud and four lines to Jung.
Peters, in his revision and abridgment of Brett's *History of psychology*, after giving a rather full discussion of Freud, devoted a page each to Adler and Jung. He found Jung's later work to be so mysterious as to be almost undiscussable. Although some exceptions exist (Watson & Evans, 1991, devote 20 pages to Jung), the more typical portrayal continues to be that by Leachey (1992), who has a full chapter on Freud but mentions Jung only in passing.

Why has psychology ignored Jung's analytical psychology when the world at large accords him so much respect and honor? One major reason is that Jung's psychology is based upon clinical findings and historical and mythical sources rather than upon experimental investigations. It has appealed to the toughminded experimentalist no more than Freudianism. In fact, Jung has had far less appeal than Freud because there is so much discussion of occultism, mysticism, and religion in Jung's writings that it apparently repels many psychologists. [This criticism infuriated Jung. He insisted that his interest in the occult sciences of alchemy and astrology and in religion does not imply, in any sense, an acceptance of these beliefs. They are studied and appear in his writings because they provide evidence for his theory. Whether God exists or not is not for Jung to say; that most people believe in God is as true as a fact as that water runs downhill: "God is an obvious psychic and non-physical fact, i.e., a fact that can be established psychically but not physically" (1952c, p. 464).] Moreover, he accepts such out-of-fashion ideas as acquired characteristics and teleology. Jung's style of presenting his ideas has been found baffling, obscure, confusing, and disorganized by many psychologists. (Suggestions for reading Jung will be found in Hall and Nordby's *A primer of Jungian psychology*, 1973.) As a consequence, Jung's theories seem to have stimulated very little interest among psychologists and even less research. The fact that Jung is thought of as a psychoanalyst has also contributed to the neglect of his system by psychology. When one thinks of psychoanalysis, one usually thinks of Freud and only secondarily of Jung and Adler. Freud's Olympian stature in psychoanalysis diverts attention away from other luminaries in the field.

Although Jung has not had much direct influence upon psychology, it may be that some recent developments in psychology owe more to Jung than is realized. Indirect influences are hard to evaluate because ideas that come into circulation either may be due to the influence of one person or may arise more or less spontaneously in the minds of a number of people at about the same time due to the prevailing intellectual climate. It cannot be denied that many of Jung's ideas are now in common circulation, whether he is responsible or not. Take, for example, the conception of self-realization. It or similar concepts are found in the writings of Goldstein, Rogers, Allport, and Maslow, to name only those psychologists whose views are presented in this book. In no instance do we find Jung being credited with developing the conception. This in itself does not mean that Jung has had no influence, whether directly or indirectly, upon these men. They may have borrowed from Jung unconsciously or borrowed
from others who were influenced by Jung. Or consider the idea of development as proceeding from a global to a differentiated to an integrated state, which one finds in both Jung and Murphy (1947). Did Jung influence Murphy (the opposite is not tenable since Jung’s views were enunciated before Murphy’s) or did Jung influence someone else who did influence Murphy, or is there no connection between the two men other than their being contemporary figures living in Western civilization? There is no evidence one way or the other. Is the optimism that characterizes many recent views, for example, those of Rogers and Allport, a reflection of Jung’s optimism or a reflection of the times? Has Jung’s emphasis upon goal-directed behavior set the stage for other purposive theories, or is purpose as a theoretical concept fashionable right now because nineteenth-century science was so mechanistic? These are hard questions to answer.

What Jungian theory needs to make it more acceptable to scientifically minded psychologists is for hypotheses derived from the theory to be tested experimentally. We have in mind not the clinical type of study (Adler, 1949; Fordham, 1949; Hawkey, 1947; Kirsch, 1949) or type studies (for example, Eysenck, Gray & Wheelwright, and Myers–Briggs) but a more experimental approach, as found in the work of Bash (1952), Melhado (1964), Meier (1965), and Dallek (1973). When more studies of this type are done, the status of Jung’s theories among psychologists will tend to improve because psychologists favor theories that generate testable hypotheses and instigate research. It will take a good deal of ingenuity to formulate empirical propositions from the welter of Jungian theory.

When all is said and done, Jung’s theory of personality as developed in his prolific writings and as applied to a wide range of human phenomena stands as a remarkable achievement. The originality and audacity of Jung’s thinking have few parallels in recent scientific history, and no other person aside from Freud has opened more conceptual windows into what Jung would choose to call “the soul of man.”
Social Psychological Theories: Adler, Fromm, Horney, and Sullivan

INTRODUCTION AND CONTEXT

ALFRED ADLER
FICTIONAL FINALISM
STRIVING FOR SUPERIORITY
INFERIORITY FEELINGS AND COMPENSATION
SOCIAL INTEREST
STYLE OF LIFE
THE CREATIVE SELF
NEUROSIS

CHARACTERISTIC RESEARCH AND RESEARCH METHODS
Order of Birth and Personality
Early Memories
Childhood Experiences

CURRENT RESEARCH
Social Interest

ERICH FROMM

KAREN HORNEY
HORNEY AND FREUD
BASIC ANXIETY
THE NEUROTIC NEEDS
THREE SOLUTIONS
ALIENATION

HARRY STACK SULLIVAN

THE STRUCTURE OF PERSONALITY
Dynamisms
Personifications
Cognitive Processes

THE DYNAMICS OF PERSONALITY
Tension
Energy Transformations
The psychoanalytic theories of personality formulated by Freud and Jung were nurtured by the same positivistic climate that shaped the course of nineteenth-century physics and biology. An individual was regarded primarily as a complex energy system that maintains itself by means of transactions with the external world. The ultimate purposes of these transactions are individual survival, propagation of the species, and an ongoing evolutionary development. The various psychological processes that constitute the personality serve these ends. According to the evolutionary doctrine, some personalities are better fitted than others to perform these tasks. Consequently, the concept of variation and the distinction between adjustment and maladjustment conditioned the thinking of the early psychoanalysts. Even academic psychology was swept into the orbit of Darwinism and became preoccupied with the measurement of individual differences in abilities and with the adaptive or functional value of psychological processes.

At the same time, other intellectual trends that were at variance with a purely biophysical conception of humans were beginning to take shape. During the later years of the nineteenth century, sociology and anthropology began to emerge as independent disciplines, and their rapid growth during the present century has been phenomenal. While sociologists studied humans living in a state of advanced civilization and found them to be products of class and caste, institutions, and folkways, anthropologists ventured into remote areas of the world where they found evidence that human beings are almost infinitely malleable. According to these new social sciences, an individual is chiefly a product of the society in which he or she lives. One’s personality is shaped more by social circumstances than by biological factors.

Gradually, these burgeoning social and cultural doctrines began to seep into psychology and psychoanalysis and to erode the nativistic and physicalistic foundations of the sciences. A number of followers of Freud who became dissatisfied with what they considered to be his myopia regarding the social conditioners of personality withdrew their allegiance from classical psychoanalysis and began to refashion psychoanalytic theory along lines dictated by the new orientation developed by the social sciences. Among those who provided psychoanalytic theory with the twentieth-century look of social psychology are the four people whose ideas form the content of the present chapter:
Alfred Adler, Karen Horney, Erich Fromm, and Harry Stack Sullivan. Of these four, Alfred Adler may be regarded as the ancestral figure of the "new social psychological look" because as early as 1911 he broke with Freud over the issue of sexuality. Adler proceeded to develop a theory in which social interest and a striving for superiority became two of the most substantial conceptual pillars. No less an authority than Fromm acknowledged that Adler was the first psychoanalyst to emphasize the fundamental social nature of humans. Later, Horney and Fromm took up the cudgels against the strong instinctivist orientation of psychoanalysis and insisted upon the relevance of social psychological variables for personality theory. Finally, Harry Stack Sullivan, in his theory of interpersonal relations, consolidated the position of a personality theory grounded in social processes. Although each of the theories has its own distinctive assumptions and concepts, there are numerous parallels among them that have been pointed out by various writers (H. L. & R. R. Ansbacher, 1956; James, 1947; Ruth Munro, 1955).

We will emphasize Adler, Horney, and Sullivan in this chapter, based on the clarity of their constructs and their subsequent influence on the field. Of the four theorists, Sullivan was the most independent of prevailing psychoanalytic doctrines. Although he earlier used the Freudian framework, in his later work he developed a theoretical system that deviated markedly from the Freudian one. He was profoundly influenced by anthropology and social psychology. Both Horney and Fromm, on the other hand, kept well within the province of psychoanalysis in their thinking. Adler, although a separatist from the Freudian school, continued to show the impact of his early association with Freud throughout his life. Horney and Fromm are usually referred to as revisionists or neo-Freudians, although Fromm objected to these labels. Neither of them engaged in developing a new theory of personality; rather they regarded themselves as renovators and elaborators of an old theory. Sullivan was much more of an innovator. He was a highly original thinker who attracted a large group of devoted disciples and developed what is sometimes called a new school of psychiatry.

**ALFRED ADLER**

Alfred Adler was born in Vienna in 1870 of a middle-class family and died in Aberdeen, Scotland, in 1937 while on a lecture tour. He received a medical degree in 1895 from the University of Vienna. At first he specialized in ophthalmology and then, after a period of practice in general medicine, he became a psychiatrist. He was one of the charter members of the Vienna Psychoanalytic Society and later its president. However, Adler soon began to develop ideas that were at variance with those of Freud and others in the Vienna Society, and when these differences became acute, he was asked to present his views to the society. This he did in 1911. As a consequence of the vehement criticism and denunciation of Adler's position by other members of the society, Adler resigned as president and a few months later terminated his connection with

He then formed his own group, which came to be known as Individual Psychology and attracted followers throughout the world. During World War I, Adler served as a physician in the Austrian army. After the war he became interested in child guidance and established the first guidance clinics in connection with the Viennese school system. He also inspired the establishment of an experimental school in Vienna that applied his theories of education (Furtmüller, 1964).

In 1935 Adler settled in the United States, where he continued his practice as a psychiatrist and served as Professor of Medical Psychology at the Long Island College of Medicine. Adler was a prolific writer and an indefatigable lecturer. He published a hundred books and articles during his lifetime. The practice and theory of individual psychology (1927) is probably the best introduction to Adler's theory of personality. Shorter digests of Adler's views appear in the Psychologies of 1930 (1930) and in the International Journal of Individual Psychology (1935). Heinz and Rowena Ansbacher (1956, 1964) have edited and annotated two volumes containing an extensive selection from Adler's writings. These two volumes are the best source of information about Adler's Individual Psychology. The 1964 volume contains a biographical essay by Carl Furtmüller. Heinz Ansbacher (1977) provides a chapter on Individual Psychology, and Henri Ellenberger (1970b) provides an extensive discussion of Adler's life and thought. In addition, four book-length biographies of Adler have been published (Bottome, 1939; Hoffman, 1994; Orgler, 1963; Sperber, 1974).

Adler's personal history provides a clear example of the striving to overcome inferiority, which became the central theme in his theory. As a boy, he was weak, clumsy, unattractive, and initially a poor student. He was run over by carriages on several occasions, and he developed rickets and pneumonia. The latter disease led a physician to tell Adler's father, "Your boy is lost," an event to which Adler traced his decision to become a physician (Orgler, 1963, p. 16). Adler recognized that his own success in compensating for these deficiencies served as a model for his theory of personality. This is reflected in his statement "Those who are familiar with my life work will clearly see the accord existing between the facts of my childhood and the views I expressed" (Bottome, 1939, p. 9).

In sharp contrast to Freud's major assumption that human behavior is motivated by inborn instincts and Jung's principal axiom that human conduct is governed by inborn archetypes, Adler assumed that humans are motivated primarily by social urges. Humans are, according to Adler, inherently social beings. They relate themselves to other people, engage in cooperative social activities, place social welfare above selfish interest, and acquire a style of life that is predominantly social in orientation. Adler did not say that humans become socialized merely by being exposed to social processes. Social interest
is inborn, but the specific types of relationships with people and social institutions that develop are determined by the nature of the society into which a person is born. In one sense, then, Adler is just as biological in his viewpoint as are Freud and Jung. All three assume that a person has an inherent nature that shapes his or her personality. Freud emphasized sex, Jung emphasized primordial thought patterns, and Adler stressed social interest. This emphasis upon the social determinants of behavior that had been overlooked or minimized by Freud and Jung is probably Adler's greatest contribution to psychological theory. It turned the attention of psychologists to the importance of social variables and helped to develop the field of social psychology at a time when social psychology needed encouragement and support, especially from the ranks of psychoanalysis.

It is difficult to overemphasize this distinction between Adler and Freud. Adler wrote that "the decisive basic difference between psychoanalysis and individual psychology . . . is that Freud starts with the assumption that by nature man only wants to satisfy his drives—the pleasure principle—and must, therefore, from the viewpoint of culture be regarded as completely bad. . . . [In contrast, Adler believed] the indestructible destiny of the human species is social interest" (Ansbacher & Ansbacher, 1964, pp. 210–211). For his part, Freud recognized and rejected this movement toward cultural determinants of personality. In a vintage passage aimed at Adler and Jung, Freud (1914, p. 62) wrote, "The truth is that these people have picked out a few cultural overtones from the symphony of life and have once more failed to hear the mighty and primordial melody of the instincts."

Adler's second major contribution to personality theory is his concept of the creative self. Unlike Freud's ego, which consists of a group of psychological processes serving the ends of inborn instincts, Adler's self is a highly personalized, subjective system that interprets and makes meaningful the experiences of the organism. Moreover, it searches for experiences that will aid in fulfilling the person's unique style of life; if these experiences are not to be found in the world, the self tries to create them. This concept of a creative self was new to psychoanalytic theory. It helped to compensate for the extreme "objectivism" of classical psychoanalysis, which relied almost entirely upon biological needs and external stimuli to account for the dynamics of personality. As we shall see in other chapters, the concept of the self has played a major role in recent formulations regarding personality. Adler's contribution to this new trend of recognizing the self as an important cause of behavior is very significant.

A third feature of Adler's psychology that sets it apart from classical psychoanalysis is its emphasis upon the uniqueness of personality. Adler considered each person to be a unique configuration of motives, traits, interests, and values; every act performed by the person bears the stamp of his or her
own distinctive style of life. In this respect, Adler belongs to the tradition of William James and William Stern.

Adler’s theory of the person minimized the sexual instinct that in Freud’s early theorizing had played an almost exclusive role in the dynamics of behavior. To this Freudian monologue on sex, Adler added other significant voices. Humans are primarily social and not sexual creatures. They are motivated by social and not by sexual interest. Their inferiorities are not limited to the sexual domain but may extend to all facets of being, both physical and psychological. They strive to develop a unique style of life in which the sexual drive plays a minor role. In fact, the way in which one satisfies sexual needs is determined by one’s style of life and not vice versa. Adler’s dethroning of sex was for many people a welcome relief from the monotonous pansexualism of Freud.

Finally, Adler considered consciousness to be the center of personality. This alone makes him a pioneer in the development of an ego-oriented psychology. Humans are conscious beings; they are ordinarily aware of the reasons for their behavior. They are conscious of their inferiorities and conscious of the goals for which they strive. More than that, humans are self-conscious individuals capable of planning and guiding their actions with full awareness of their meaning for their own self-realization. This is the complete antithesis of Freud’s theory, which had virtually reduced consciousness to the status of a nonentity—a mere froth floating on the great sea of the unconscious.

Alfred Adler, like other personality theorists whose primary training was in medicine and who practiced psychiatry, began his theorizing in the field of abnormal psychology. He formulated a theory of neurosis before broadening his theoretical scope to include the normal personality, a step that occurred during the 1920s (H. L. & R. R. Ansbacher, 1956). Adler’s theory of personality is an extremely economical one in the sense that a few basic concepts sustain the whole theoretical structure. For that reason, Adler’s viewpoint can be rather quickly sketched under a few general rubrics. These are (1) fictional finalism, (2) striving for superiority, (3) inferiority feelings and compensation, (4) social interest, (5) style of life, and (6) the creative self.

Shortly after Adler dissociated himself from the circle that surrounded Freud, he fell under the philosophical influence of Hans Vaihinger. In his 1911 book *The philosophy of "as if"* (English translation, 1925), Vaihinger propounded the curious and intriguing notion that humans live by many purely fictional ideas that have no counterpart in reality. These fictions, for example, “all men are created equal,” “honesty is the best policy,” and “the end justifies the means,” enable humans to deal more effectively with reality. They are auxiliary
constructs or assumptions and not hypotheses that can be tested and confirmed. They can be dispensed with when their usefulness has disappeared.

Adler took over this philosophical doctrine of idealistic positivism and bent it to his own design. Freud, it will be recalled, laid great stress upon constitutional factors and experiences during early childhood as determiners of personality. Adler discovered in Vaihinger the rebuttal to this rigid historical determinism; that is, humans are motivated more by their expectations of the future than by experiences of the past. These goals do not exist in the future as a part of some teleological design—neither Vaihinger nor Adler believed in predestination or fatality—instead they exist subjectively or mentally here and now as strivings or ideals that affect present behavior. If a person believes, for example, that there is a heaven for virtuous people and a hell for sinners, this belief will exercise considerable influence on his or her conduct. These fictional goals were, for Adler, the subjective causation of psychological events. As he put it, "The most important question of the healthy and the diseased mind is not whence? but, whither?" (Ansbacher & Ansbacher, 1956, p. 91).

Like Jung, Adler identified Freud's theory with the principle of causality and his own with the principle of finalism:

*Individual Psychology insists absolutely on the indispensability of finalism for the understanding of all psychological phenomena. Causes, powers, instincts, impulses, and the like cannot serve as explanatory principles. The final goal alone can explain man's behavior. Experiences, traumata, sexual development mechanisms cannot yield an explanation, but the perspective in which these are regarded, the individual way of seeing them, which subordinates all life to the final goal, can do so. (1930, p. 400)*

This final goal may be a fiction, that is, an ideal that is impossible to realize but that nonetheless is a very real spur to human striving and the ultimate explanation of conduct. Adler believed, however, that the normal person could free him- or herself from the influence of these fictions and face reality when necessity demanded, something that the neurotic person is incapable of doing.

What is the final goal toward which all humans strive and that gives consistency and unity to personality? By 1908, Adler had reached the conclusion that aggression was more important than sexuality. A little later, the aggressive impulse was replaced by the "will to power." Adler identified power with masculinity and weakness with femininity. It was at this stage of his thinking (circa 1910) that he set forth the idea of the "masculine protest," a form of overcompensation that both men and women indulge in when they feel inadequate and inferior. Later, Adler abandoned the "will to power" in favor of the
“striving for superiority,” to which he remained committed thereafter. Thus, there were three stages in his thinking regarding the final goal of humans: to be aggressive, to be powerful, and to be superior.

Adler made it very clear that by superiority he did not mean social distinction, leadership, or a preeminent position in society. By superiority, Adler meant something very analogous to Jung’s concept of the self or Goldstein’s principle of self-actualization. It is a striving for perfect completion. It is “the great upward drive”:

I began to see clearly in every psychological phenomenon the striving for superiority. It runs parallel to physical growth and is an intrinsic necessity of life itself. It lies at the root of all solutions of life’s problems and is manifested in the way in which we met these problems. All our functions follow its direction. They strive for conquest, security, increase, either in the right or in the wrong direction. The impetus from minus to plus never ends. The urge from below to above never ceases. Whatever premises all our philosophers and psychologists dream of—self-preservation, pleasure principle, equalization—all these are but vague representations, attempts to express the great upward drive. (1930, p. 398)

Where does the striving for superiority or perfection come from? Adler said that it is innate. Not only is it a part of life; in fact, it is life itself. From birth to death, the striving for superiority carries the person from one stage of development to the next higher stage. It is a prepotent dynamic principle. There are no separate drives, for each drive receives its power from the striving for completion. Adler acknowledged that the striving for superiority may manifest itself in a thousand different ways and that each person has his or her own concrete mode of achieving or trying to achieve perfection. The neurotic person, for example, strives for self-esteem, power, and self-aggrandizement—in other words, for egoistic or selfish goals—whereas the normal person strives for goals that are primarily social in character.

Precisely how do the particular forms of the striving for superiority come into being in the individual? In order to answer this question, it is necessary to discuss Adler’s concept of inferiority feelings.

Very early in his career, while he was still interested in general medicine, Adler put forth the idea of organ inferiority and overcompensation (English translation, 1917). At that time, he was interested in finding the answer to the perennial question of why people, when they become sick or suffer some affliction, become sick or afflicted in a particular region of the body. One person develops heart trouble, another lung trouble, and a third arthritis. Adler
suggested that the reason for the site of a particular affliction was a basic inferiority in that region, an inferiority that existed either by virtue of heredity or because of some developmental abnormality. He then observed that a person with a defective organ often tries to compensate for the weakness by strengthening it through intensive training. The most famous example of compensation for organ inferiority is that of Demosthenes, who stuttered as a child and became one of the world’s greatest orators. Another more recent example is that of Theodore Roosevelt, who was a weakling in his youth and developed himself by systematic exercise into a physically stalwart man.

Shortly after he had published his monograph on organ inferiority Adler broadened the concept to include any feelings of inferiority, those that arise from subjectively felt psychological or social disabilities as well as those that stem from actual bodily weakness or impairment. At this time, Adler equated inferiority with unmanliness or femininity, the compensation for which was called “the masculine protest.” Later, however, he subordinated this view to the more general one that feelings of inferiority arise from a sense of incompleteness or imperfection in any sphere of life. For example, the child is motivated by its feelings of inferiority to strive for a higher level of development. When it reaches this level, it begins to feel inferior again and the upward movement is initiated once more. Adler contended that inferiority feelings are not a sign of abnormality; they are the cause of all improvement in the human lot. Of course, inferiority feelings may be exaggerated by special conditions such as pampering or rejecting the child. In this case, certain abnormal manifestations may ensue, such as the development of an inferiority complex or a compensatory superiority complex. But under normal circumstances, the feeling of inferiority or a sense of incompleteness is the great driving force of mankind. In other words, humans are pushed by the need to overcome their inferiority and pulled by the desire to be superior.

Adler was not a proponent of hedonism. Although he believed that inferiority feelings were painful, he did not think that the relief of these feelings was necessarily pleasurable. Perfection, not pleasure, was for him the goal of life.

During the early years of his theorizing, when he was proclaiming the aggressive, power-hungry nature of humans and the idea of the masculine protest as an overcompensation for feminine weakness, Adler was severely criticized for emphasizing selfish drives and ignoring social motives. Striving for superiority sounded like the war cry of the Nietzschean superman, a fitting companion for the Darwinian slogan of survival of the fittest.

Adler, who was an advocate of social justice and a supporter of social democracy, enlarged his conception of humans to include the factor of social interest (1939). Although social interest takes in such matters as cooperation,
interpersonal and social relations, identification with the group, empathy, and so forth, it is much broader than all of these. In its ultimate sense, social interest consists of the individual helping society to attain the goal of a perfect society: “Social interest is the true and inevitable compensation for all the natural weaknesses of individual human beings” (Adler, 1929b, p. 31).

The person is embedded in a social context from the first day of life. Cooperation manifests itself in the relationship between the infant and the mother, and henceforth the person is continuously involved in a network of interpersonal relations that shape the personality and provide concrete outlets for striving for superiority. Striving for superiority becomes socialized; the ideal of a perfect society takes the place of purely personal ambition and selfish gain. By working for the common good, humans compensate for their individual weaknesses.

Adler believed that social interest is inborn; humans are social creatures by nature, not by habit. However, like any other natural aptitude, this innate predisposition does not appear spontaneously but has to be brought to fruition by guidance and training. Because he believed in the benefits of education, Adler devoted a great deal of his time to establishing child guidance clinics, to improving the schools, and to educating the public regarding proper methods of rearing children.

It is interesting to trace in Adler’s writings the decisive, although gradual, change that occurred in his conception of humans from the early years of his professional life when he was associated with Freud to his later years when he had achieved an international reputation. For the young Adler, humans are driven by an insatiable lust for power and domination in order to compensate for a concealed deep-seated feeling of inferiority. For the older Adler, humans are motivated by an innately given social interest that causes them to subordinate private gain to public welfare. The image of the perfect person living in a perfect society blotted out the picture of the strong, aggressive person dominating and exploiting society. Social interest replaced selfish interest.

**STYLE OF LIFE**

This is the slogan of Adler’s personality theory. It is a recurrent theme in all of Adler’s later writings (for example, 1929a, 1931) and the most distinctive feature of his psychology. Style of life is the system principle by which the individual personality functions; it is the whole that commands the parts. Style of life is Adler’s chief idiographic principle; it is the principle that explains the uniqueness of the person. Everyone has a style of life, but no two people develop the same style.

Precisely what is meant by this concept? This is a difficult question to answer because Adler had so much to say about it and because he said different and sometimes conflicting things about it in his various writings. Then, too,
it is difficult to differentiate it from another Adlerian concept, that of the creative self.

Every person has the same goal, that of superiority, but there are innumerable ways of striving for this goal. One person tries to become superior through developing the intellect, while another bends all of his or her efforts to achieving muscular perfection. The intellectual has one style of life, the athlete another. The intellectual reads, studies, thinks; he or she lives a more sedentary and more solitary life than the active person does. The intellectual arranges the details of existence, domestic habits, recreations, daily routine, relations to family, friends, and acquaintances, social activities, in accordance with the goal of intellectual superiority. Everything done is done with an eye to this ultimate goal. All of a person's behavior springs from his or her style of life. The person perceives, learns, and retains what fits the style of life and ignores everything else.

The style of life determines how a person confronts the three "life problems" of adulthood: social relations, occupation, and love and marriage. Preliminary versions of these problems during childhood focus on friendships, school, and the opposite sex. When the individual's attempts to deal with these tasks is guided by social interest, he or she is on the "useful side of life." If personal superiority displaces social interest as a goal, the person seeks distance from the life tasks and occupies the "useless" side of life (see Figure 4.1).

Ansbacher and Ansbacher (1964) draw an analogy between Adler's conception of human life as movement and the physicist's analysis of movement in terms of direction and speed. Human behavior occurs in a social space, and its direction comes from the degree of social interest. Similarly, the speed or energy component of a human life can be described in terms of the individual's degree of activity. Adler believed that a "human being cannot be typified or classified. . . . each individual must be studied in the light of his own peculiar development" (Ansbacher & Ansbacher, 1964, p. 68). Nevertheless, "for teaching purposes only," Adler described four different styles of life, each conceptualized in terms of the degree of social interest and activity. The "ruling" type is high in activity but low in social interest. Such people attempt to deal with life problems by dominating them. The "getting" type, which is "surely the most frequent," expects to be given everything he or she needs. The "avoiding" type tries to avoid defeat in life's problems by avoiding the problems themselves. Both the second and the third types are low in social interest and in activity. Adler's fourth type, the "socially useful," exhibits activity in the service of others. Such people confront the life tasks and attempt to resolve them in a manner consistent with the needs of other individuals. Artaur Ashe might serve as an example of this positive style of life. It is interesting to note the correspondence between these types and general types proposed by other theorists. For example, the ruling, getting, and avoiding types are roughly
Figure 4.1
The useful and useless sides of life. (Reprinted with permission from Ansbacher, 1977, p. 61.)

The commonly useful side: the norm
The commonly useless side: all failures

Goal of personal superiority

Goal of perfection

Life problems
Relationship of the "I" to the "you"

Occupation

Love, marriage

Preliminary problems
Friendship

School

Relationship to the other sex

Seeking distance from the life problems

Style of life after the fifth year of life

analogous to the strategies of moving against, toward, and away from others, as described by Karen Horney.

The style of life is formed very early in childhood, by the age of four or five, and from then on experiences are assimilated and utilized according to this unique style of life. Attitudes, feelings, and apperceptions become fixed
and mechanized at an early age, and it is practically impossible for the style of life to change thereafter. The person may acquire new ways of expressing his or her unique style of life, but these are merely concrete and particular instances of the same basic style found at an early age.

What determines the individual's style of life? In his earlier writings, Adler said that it is largely determined by the specific inferiorities, either fancied or real, that the person has. The style of life is a compensation for a particular inferiority. If the child is a physical weakling, its style of life will take the form of doing those things that will produce physical strength. The dull child will strive for intellectual superiority. Napoleon's conquering style of life was determined by his slight physical stature, and Hitler's rapacious craving for world domination by his sexual impotence. This simple explanation of human conduct that appealed to so many of Adler's readers and was widely applied in the analysis of character during the 1920s and 1930s did not satisfy Adler himself. It was too simple and too mechanistic. He looked for a more dynamic principle and found the creative self.

This concept is Adler's crowning achievement as a personality theorist. When he discovered the creative power of the self, all his other concepts were subordinated to it. Here at last was the prime mover, the philosopher's stone, the elixir of life, the first cause of everything human for which Adler had been searching. The unitary, consistent, creative self is sovereign in the personality structure.

Like all first causes, the creative power of the self is hard to describe. We can see its effects, but we cannot see it. It is something that intervenes between the stimuli acting upon the person and the responses the person makes to these stimuli. In essence, the doctrine of a creative self asserts that humans make their own personalities. They construct them out of the raw material of heredity and experience:

Heredity only endows him [man] with certain abilities. Environment only gives him certain impressions. These abilities and impressions, and the manner in which he "experiences" them—that is to say, the interpretation he makes of these experiences—are the bricks, or in other words his attitude toward life, which determines this relationship to the outside world. (Adler, 1935, p. 5)

The creative self is the yeast that acts upon the facts of the world and transforms these facts into a personality that is subjective, dynamic, unified, personal, and uniquely stylized. The creative self gives meaning to life; it creates the goal as well as the means to the goal. The creative self is the active principle of human life, and it is not unlike the older concept of soul.
In summary, it may be said that Adler fashioned a humanistic theory of personality that was the antithesis of Freud’s conception of the individual. By endowing humans with altruism, humanitarianism, cooperation, creativity, uniqueness, and awareness, Adler restored to humans a sense of dignity and worth that psychoanalysis had largely destroyed. In place of the dreary materialistic picture that horrified and repelled many readers of Freud, Adler offered a portrait of humans that was more satisfying, more hopeful, and far more complimentary to humans. Adler’s conception of the nature of personality coincided with the popular idea that individuals can be the masters, not the victims, of their fate.

The neurosis is altogether a veiling maneuver. Behind the illness is the pathological ambitious striving of the patient to regard himself as something extraordinary. . . . The symptoms are a big heap of rubbish on which the patient builds in order to hide himself. The fictive superiority of the patient dates from the time he was pampered. . . . While we see clearly what he is doing, he is unknowingly busy erecting his obstacles, like a seasoned criminal, he is seeking to secure an alibi. . . . It always ends in “What couldn’t I have accomplished if I were not impeded by the symptoms.” Our task is to make conceptual what was in him unconceptualized. (Ansbacher & Ansbacher, 1964, pp. 198–199)

Note the similarity between this passage and Freud’s famous summary of psychoanalytic therapy, “Where Id was, there Ego shall be.”

The neurotic develops symptoms as protection from the overwhelming sense of inferiority that he or she is trying so desperately to avoid. This incessant quest to protect the self from inferiority becomes a vicious circle, for the lack of social interest that led to the problem also precludes its solution. (As we will see later in the present chapter, this dilemma is very similar to the vicious circle of insecurity and alienation described so eloquently by Karen Horney.) The neurotic’s inability to deal with life’s problems leads him or her to develop “safeguards.” These safeguards are analogous to Freudian defense mechanisms, but they serve to protect the neurotic from the low self-esteem
engendered by inferiority and failure at life's tasks, not from anxiety generated by a conflict between instinctual urges and moral prohibitions. Adler described three general categories of safeguards. *Excuses* refer to any attempts to avoid blame for failures in life. *Aggression* entails blaming self or others for failures. *Distancing* includes procrastination, claims of helplessness, or attempts to avoid problems. These safeguards have a very cognitive and contemporary flavor. In addition, notice their similarity to the specific defense mechanisms described by Anna Freud (see Chapter 5) and to Karen Horney's descriptions of moving toward, against, and away from other people (see later in this chapter).

Adler's empirical observations were made largely in the therapeutic setting and consist for the most part of reconstructions of the past as remembered by the patient and appraisals of present behavior on the basis of verbal reports. To a large extent, these observations centered on what Adler termed the "three entrance gates to mental life": birth order, early memories, and dreams. There is space to mention only a few examples of Adler's investigative activities.

In line with his interest in the social determiners of personality, Adler observed that the personalities of the oldest, middle, and youngest child in a family were likely to be quite different (1931, pp. 144–154). He attributed these differences to the distinctive experiences that each child has as a member of a social group. The first-born or oldest child is given a good deal of attention until the second child is born; then it is suddenly dethroned from its favored position and must share its parents' affections with the new baby. This experience may condition the oldest child in various ways, such as hating people, protecting him- or herself against sudden reversals of fortune, and feeling insecure. Oldest children are also apt to take an interest in the past, when they were the center of attention. Neurotics, criminals, drunkards, and perverts, Adler observes, are often first-born children. If the parents handle the situation wisely by preparing the oldest child for the appearance of a rival, the oldest child is more likely to develop into a responsible, protective person.

The second or middle child is characterized by being ambitious. It is constantly trying to surpass its older sibling. It also tends to be rebellious and envious but by and large is better adjusted than either the older or younger sibling.

The youngest child is the spoiled child. Next to the oldest child it is more likely to become a problem child and a neurotic maladjusted adult.

Although early tests of Adler's birth-order theory failed to lend much
support to it (Jones, 1931), the more sophisticated work of Schachter (1959) provided confirmation of the Adlerian thesis and opened the subject for an immense amount of research. A great deal of research on birth order was conducted during the 1960s and 1970s (for bibliographies see Forer, 1977; Vockell, Felker, & Miley, 1973), although a review by Schooler reported a “general lack of consistent findings” (1972, p. 174; see also Forer, 1976). More recently, birth order has been included as a component of the nonshared environment that plays such an important role in behavior genetics models of personality (see Chapter 8; Hoffman, 1991; Plomin & Daniels, 1987).

Early Memories

Adler felt that the earliest memory a person could report was an important key to understanding one's basic style of life (1931). For example, a girl began an account of her earliest memory by saying, “When I was three years old, my father...” This indicates that she is more interested in her father than in her mother. She then goes on to say that the father brought home a pair of ponies for an older sister and her and that the older sister led her pony down the street by the halter while she was dragged along in the mud by her pony. This is the fate of the younger child—to come off second best in the rivalry with an older sibling—and it motivates her to try to surpass the pacemaker. Her style of life is one of driving ambition, an urge to be first, a deep feeling of insecurity and disappointment, and a strong foreboding of failure.

A young man who was being treated for severe attacks of anxiety recalled this early scene: “When I was about four years old I sat at the window and watched some workmen building a house on the opposite side of the street, while my mother knitted stockings.” This recollection indicates that the young man was pampered as a child because his memory includes the solicitous mother. The fact that he is looking at others who are working suggests that his style of life is that of a spectator rather than a participant. This is borne out by the fact that he becomes anxious whenever he tries to take up a vocation. Adler suggested to him that he consider an occupation in which his preference for looking and observing could be utilized. The patient took Adler's advice and became a successful dealer in art objects.

Adler used this method with groups as well as individuals and found that it was an easy and economical way of studying personality. Early recollections are used as a projective technique (Bruhn, 1984; 1985; Mayman, 1968; Mosak, 1958). In addition, several research instruments for evaluating early memories have been developed (Altman & Rule, 1980; Kihlstrom & Harackiewicz, 1982). Perhaps the most interesting contemporary use of early memories is its incorporation in the new wave of cognitive research (e.g., Bruhn, 1990;
Kihlstrom & Harackiewicz, 1982; Strauman, 1990). In particular, Cantor and Kihlstrom's (1985, 1987, 1989) concept of social intelligence includes the categories of declarative–semantic knowledge, declarative–episodic knowledge, and procedural knowledge. Autobiographical memory, which bears a clear connection with Adler's emphasis on early memories, is one of the components of the episodes that make up our declarative–episodic knowledge.

Adler was particularly interested in the kinds of early influences that predispose the child to a faulty style of life. He discovered three important factors: (1) children with inferiorities, (2) spoiled children, and (3) neglected children. Children with physical or mental infirmities bear a heavy burden and are likely to feel inadequate in meeting the tasks of life. They consider themselves to be and often are failures. However, if they have understanding, encouraging parents, they may compensate for their inferiorities and transform their weakness into strength. Many prominent people started life with some organic weakness for which they compensated. Over and over again Adler spoke out vehemently against the evils of pampering for he considered this to be the greatest curse that can be visited upon the child. Pampered children do not develop social feeling; they become despots who expect society to conform to their self-centered wishes. Adler considered them to be potentially the most dangerous class in society. Neglect of the child also has unfortunate consequences. Badly treated in childhood, as adults they become enemies of society. Their style of life is dominated by the need for revenge. These three conditions—organic infirmity, pampering, and rejection—produce erroneous conceptions of the world and result in a pathological style of life.

We already have mentioned contemporary research on birth order and early recollections. In addition, research is under way on the measurement and correlates of social interest.

Two instruments have been developed for the measurement of social interest: the Social Interest Scale (SIS; Crandall, 1975) and the Social Interest Index (SII; Gruenier, Tseng, & Friedland, 1973). The SIS provides an overall index of social interest, and the SII includes separate subscales for friendship, love, work, and self-significance. Crandall (e.g., 1980, 1981, 1984) presents a variety of validating data for the SIS. For example, scores on the SIS correlate with self-report measures of adjustment and well-being (Crandall, 1980), and
individuals with high scores are more cooperative and less hostile than those with low scores (Crandall, 1981). Studies demonstrating that individuals higher in social interest have more close friends (Watkins & Hector, 1990) and that scores exhibit predicted correlations with other personality characteristics (Mozdzierz & Semyck, 1980) provide similar support for the SII.

Two problems must be noted in this research. First, scores on the two measures exhibit only a weak relationship to one another. Leak, Miller, Perry, and Williams (1985) suggest that the SIS and SII share only about 10% common variance. This may be because social interest is a “tremendously heterogeneous construct” or it may reflect fundamental measurement problems. Second, obtained relationships with criterion behaviors tend to be weak. The measures of social interest do not carry predictive power consistent with the central role ascribed to social interest in Adler’s theory.

**ERICH FRONMM**

Erich Fromm was born in Frankfurt, Germany, in 1900 and studied psychology and sociology at the Universities of Heidelberg, Frankfurt, and Munich. After receiving a Ph.D. degree from Heidelberg in 1922, he was trained in psychoanalysis in Munich and at the famous Berlin Psychoanalytic Institute. He came to the United States in 1933 as a lecturer at the Chicago Psychoanalytic Institute and then entered private practice in New York City. He taught at a number of universities and institutes in this country and in Mexico. Fromm moved to Switzerland in 1976, where he died in 1980. See Evans (1966) and Hausdorff (1972) for details on Fromm’s personal and intellectual development. His books have received considerable attention not only from specialists in the fields of psychology, sociology, philosophy, and religion but also from the general public.

Fromm was heavily influenced by the writings of Karl Marx, particularly by an early work, *The economic and philosophical manuscripts*, composed in 1844. This work, in an English translation by T. B. Bottomore, is included in Fromm’s *Marx’s concept of man* (1961). In *Beyond the chains of illusion* (1962), Fromm compared the ideas of Freud and Marx, noting their contradictions and attempting a synthesis. Fromm regarded Marx as a more profound thinker than Freud and used psychoanalysis mainly to fill in the gaps in Marx. Fromm (1959) wrote a highly critical, even polemical, analysis of Freud’s personality and influence and, by way of contrast, an unconditional eulogy of Marx (1961). Although Fromm could be accurately called a Marxian personality theorist, he himself preferred the label *dialectic humanist*. Fromm’s writings have been inspired by his extensive knowledge of history, sociology, literature, and philosophy. His many books (e.g., 1950, 1951, 1956, 1970, 1973, 1976) may be said to have influenced lay readers more than academic psychologists.

The essential theme of all of Fromm’s writings is that a person feels lonely and isolated because he or she has become separated from nature and from
other people. This condition of isolation is not found in any other species of animal; it is the distinctive human situation. The child, for example, gains freedom from the primary ties with its parents with the result that it feels isolated and helpless. The serf eventually secured his freedom only to find himself adrift in a predominantly alien world. As a serf, he belonged to someone and had a feeling of being related to the world and to other people, even though he was not free. In his book *Escape from freedom* (1941), Fromm developed the thesis that as humans have gained more freedom throughout the ages they have also felt more alone. Freedom then becomes a negative condition from which they try to escape.

What is the answer to this dilemma? The healthy strategy is for the person to unite with other people in the spirit of love and shared work. The unhealthy option is for the person to attempt to "escape from freedom." One can attempt to escape through three means. The first escape is through authoritarianism, either via a masochistic submission to powerful others or a sadistic attempt to become the powerful authority. A second escape is through destructiveness, the attempt to escape from powerlessness by destroying the social agents and institutions that produce a sense of helplessness and isolation. The more one's urge to grow is frustrated, the more destructive he or she will become. This analysis corresponds very well to the increasing prevalence of wanton violence among members of disadvantaged classes in our society. The third mode of escape is through automatism conformity, in which one renounces selfhood by adopting a "pseudo self" based on the expectations of others. Notice how similar this dynamic is to processes described by Karen Horney and Carl Rogers (see Chapter 11) as well as Carl Jung's "inflation of the persona" (see Chapter 3). In the healthy case, humans use their freedom to develop a better society. In the unhealthy cases, they acquire a new bondage.

*Escape from freedom* was written under the shadow of the Nazi dictatorship and shows that this form of totalitarianism appealed to people because it offered them a new security. But as Fromm pointed out in subsequent books (1947, 1955, 1964), any form of society that humans have fashioned, whether it be that of feudalism, capitalism, fascism, socialism, or communism, represents an attempt to resolve the basic contradiction of humans. This contradiction consists of a person being both a part of nature and separate from it, of being both an animal and a human being. As an animal— one has certain physiological needs that must be satisfied. As a human being one possesses self-awareness, reason, and imagination. Experiences that are uniquely human are feelings of tenderness, love, and compassion; attitudes of interest, responsibility, identity, integrity, vulnerability, transcendence, and freedom; and values and norms (1968). The two aspects of a person being both animal and human constitute the basic conditions of human existence: "*The understanding of man's psyche must be based on the analysis of man's needs stemming from the conditions of his existence*" (1955, p. 25).
Five specific needs rise from the conditions of human existence: the need for relatedness, the need for transcendence, the need for rootedness, the need for identity, and the need for a frame of orientation. The need for relatedness stems from the stark fact that humans, in becoming human, have been torn from the animal's primary union with nature: "The animal is equipped by nature to cope with the very conditions it is to meet" (1955, p. 23), but humans with their power to reason and imagine have lost this intimate interdependence with nature. In place of those instinctive ties with nature that animals possess humans have to create their own relationships, the most satisfying being those that are based upon productive love. Productive love always implies mutual care, responsibility, respect, and understanding.

The urge for transcendence refers to a person's need to rise above his or her animal nature, to become a creative person instead of remaining a creature. If the creative urges are thwarted, a person becomes a destroyer. Fromm pointed out that love and hate are not antithetical drives; they are both answers to a person's need to transcend his or her animal nature. Animals can neither love nor hate, but humans can.

Humans desire natural roots; they want to be an integral part of the world, to feel that they belong. As children, they are rooted to their mothers, but if this relationship persists past childhood, it is considered to be an unwholesome fixation. A person finds the most satisfying and healthiest roots in a feeling of kinship with other men and women. But one wants also to have a sense of personal identity, to be a unique individual. If one cannot attain this goal through individual creative effort, he or she may obtain a certain mark of distinction by identifying with another person or group. The slave identifies with the master, the citizen with the country, the worker with the company. In this case, the sense of identity arises from belonging to someone and not from being someone.

Humans also need to have a frame of reference, a stable and consistent way of perceiving and comprehending the world. The frame of reference that they develop may be primarily rational, primarily irrational, or it may have elements of both.

Finally, Fromm (1973) introduced a sixth basic need, the need for excitation and stimulation. In describing this need, he drew a distinction between simple and activating stimuli. Simple stimuli produce an automatic, almost reflex, response, and they are best thought of in terms of drives; for example, when we are hungry, we eat. We frequently become bored with simple stimuli. Activating stimuli, in contrast, entail striving for goals. Fromm's activating stimuli sound much like Allport's properate striving (see Chapter 7) and Maslow's metaneeds (see Chapter 11).

For Fromm these needs are purely human and purely objective. They are not found in animals and they are not derived from observing what humans say they want. Nor are these strivings created by society; rather they have
become embedded in human nature through evolution. What then is the relation of society to the existence of humans? Fromm believed that the specific manifestations of these needs, the actual ways in which a person realizes inner potentials, are determined by "the social arrangements under which he lives" (1955, p. 14). One's personality develops in accordance with the opportunities that a particular society offers one. In a capitalistic society, for example, a person may gain a sense of personal identity by becoming rich or develop a feeling of rootedness by becoming a dependable and trusted employee in a large company. In other words, a person's adjustment to society usually represents a compromise between inner needs and outer demands. He or she develops a social character in keeping with the requirements of the society.

Fromm identified and described five social character types that are found in today's society: receptive, exploitative, hoarding, marketing, and productive. These types represent the different ways in which individuals can relate to the world and to each other. Only the last of these was considered by him to be healthy and to express what Marx called "free conscious activity." Any given individual is a blend of these five types of orientations toward the world, although one or two of the orientations may stand out more prominently than the others. Thus, it is possible for a person to be either a productive–hoarding type or a nonproductive–hoarding type. A productive–hoarding type might be a person who acquires land or money in order to be more productive; a nonproductive–hoarding type may be a person who hoards just for the sake of hoarding without any benefit to society.

Fromm (1964) also described a sixth pair of character types, the necrophilous, who is attracted to death, versus the biophilous, who is in love with life. Fromm noted that what might be considered a parallel between this formulation and Freud's life and death instincts is actually not a parallel. For Freud, both life and death instincts are inherent in the biology of humans, whereas for Fromm, life is the only primary potentiality. Death is merely secondary and only enters the picture when the life forces are frustrated.

In his final book, Fromm (1976) added a distinction between the "having" and the "being" orientations toward life. A having orientation reflects a person's competitive concern with possessing and consuming resources. This orientation is fostered by technological societies. The being mode, in contrast, focuses on what one is, not what one has, and on sharing rather than on competition. Such an orientation will develop only if society encourages it.

From the standpoint of the proper functioning of a particular society, it is absolutely essential that the child's character be shaped to fit the needs of society. The task of the parents and of education is to make the child want to act as it has to act if a given economic, political, and social system is to be maintained. Thus, in a capitalistic system the desire to save must be implanted in people so that capital is available for an expanding economy. A society that has evolved a credit system must see to it that people will feel an inner
compulsion to pay their bills promptly. Fromm gave numerous examples of the types of character that develop in a democratic, capitalistic society (1947).

By making demands upon humans that are contrary to their nature, society warps and frustrates humans. It alienates them from their “human situation” and denies them the fulfillment of the basic conditions of existence. Both capitalism and communism, for example, try to make an individual into a robot, a wage slave, a nonentity, and they often succeed in driving the person into insanity, antisocial conduct, or self-destructive acts. Fromm did not hesitate to stigmatize a whole society as being sick when it fails to satisfy the basic needs of humans (1955).

Fromm also pointed out that when a society changes in any important respect, as occurred when feudalism changed into capitalism or when the factory system displaced the individual artisan, such a change is likely to produce dislocations in the social character of people. The old character structure does not fit the new society, which adds to a person’s sense of alienation and despair. One is cut off from traditional ties, and until one can develop new roots and relations, one feels lost. During such transitional periods, a person becomes a prey to all sorts of panaceas that offer a refuge from loneliness. (As described in the next chapter, Erik Erikson provided an analogous treatment of the negative consequences that occur when a person must attempt to function in a society that emphasizes values inconsistent with the orientation to which he or she has been socialized.)

The problem of a person’s relations to society was one of great concern to Fromm, and he returned to it again and again. Fromm was utterly convinced of the validity of the following propositions: (1) humans have an essential, inborn nature; (2) society is created by humans in order to fulfill this essential nature; (3) no society that has yet been devised meets the basic needs of human existence; and (4) it is possible to create such a society.

What kind of a society did Fromm advocate?

[It is one] in which man relates to man lovingly, in which he is rooted in bonds of brotherliness and solidarity . . . ; a society which gives him the possibility of transcending nature by creating rather than by destroying, in which everyone gains a sense of self by experiencing himself as the subject of his powers rather than by conformity, in which a system of orientation and devotion exists without man’s needing to distort reality and to worship idols. (1955, p. 362)

From even suggested a name for this perfect society: Humanistic Communitarian Socialism. In such a society everyone would have equal opportunity to become fully human. There would be no loneliness, no feelings of isolation, no despair. People would find a new home, one suited to the “human situation.” Such a society would realize Marx’s goal of transforming a person’s alienation
under a system of private property into an opportunity for self-realization as a social, productively active human being under socialism. Fromm extended the blueprint of the ideal society by spelling out how our present technological society can be humanized (1968). Fromm's views have been sharply criticized by Schaar (1961).

Although Fromm's views grew out of his observations of individuals in treatment and his wide reading in history, economics, sociology, philosophy, and literature, he conducted one large-scale empirical investigation. In 1957 Fromm initiated a social psychological study of a Mexican village to test his theory of social character. He trained Mexican interviewers to administer an in-depth questionnaire that could be interpreted and scored for important motivational and characterological variables. This questionnaire was supplemented by the Rorschach Ink Blot Method, which reveals more deeply repressed attitudes, feelings, and motives. By 1963 data collection had been completed, and in 1970 the findings were published (Fromm & Maccoby, 1970).

Three main social character types were identified: the productive–hoarding, the productive–exploitative, and the unproductive–receptive. The productive–hoarding type are the landowners, the productive–exploitative the business people, and the unproductive–receptive the poor workers. Since people with similar character structures tend to intermarry, the three types constitute a fairly rigid class structure in the village.

Before the influence of technology and industrialization reached the village, there were only two main classes: the landowners and the peasants. The productive–exploitative type existed only as a deviant type. It was this type, however, that took the initiative in making the fruits of technology available to the villagers, becoming thereby symbols of progress and leaders of the community. They provided cheap entertainment in the form of movies, radio, and television and factory-made commodities. As a consequence, the poor peasants were weaned away from their traditional cultural values without gaining many of the material advantages of a technological society. What they did gain was shoddy in comparison with what they had formerly: movies replaced festivals, radio replaced local bands, ready-made clothes replaced handwoven garments, and mass-produced utensils and furniture replaced handmade ones. The main focus of the study, however, was to illustrate Fromm's thesis that character (personality) affects and is affected by social structure and social change.

**KAREN HORNERY**

Karen Horney was born in Hamburg, Germany, on September 16, 1885, and died in New York City, on December 4, 1952. She received her medical training at the University of Berlin and was associated with the Berlin Psychanalytic Institute from 1918 to 1932. She was analyzed by Karl Abraham and Hans Sachs, two of the preeminent training analysts in Europe at that time. Upon
the invitation of Franz Alexander, she came to the United States and was Associate Director of the Chicago Psychoanalytic Institute for two years. In 1934 she moved to New York, where she practiced psychoanalysis and taught at the New York Psychoanalytic Institute. Becoming dissatisfied with orthodox psychoanalysis, she and others of similar convictions founded the Association for the Advancement of Psychoanalysis and the American Institute of Psychoanalysis. She was Dean of this institute until her death.

Horney’s professional history has been detailed in several recent publications (Quinn, 1987; Rubins, 1978; Sayers, 1991), and some of her own diaries have been published (Horney, 1980). These publications also highlight central events in Horney’s rich personal life, including relationships with her father and mother, her brother, her husband Oskar, Erich Fromm, and her own children as well as her emotional problems and her struggles with the male-dominated psychoanalytic orthodoxy.

During the years before and after 1930, Horney published a series of papers that criticized Freud and proposed her own feminine psychology. It was a continuation of these challenges to orthodoxy that led to her demotion by and subsequent resignation from the New York Psychanalytic Institute. Horney conceived of her ideas as falling within the framework of Freudian psychology, however, not as constituting an entirely new approach to the understanding of personality. She wrote, “nothing of importance in the field of psychology and psychotherapy has been done without reliance on Freud’s fundamental findings” (1939, p. 18).

She aspired to eliminate the fallacies in Freud’s thinking—fallacies that have their root, she believed, in his mechanistic, biological orientation—in order that psychoanalysis may realize its full potentialities as a science of humans: “My conviction, expressed in a nutshell, is that psychoanalysis should outgrow the limitations set by its being an instinctivistic and a genetic psychology” (1939, p. 8).

Following Adler, Horney also believed that Freud’s deemphasis of the interrelationships among people led him to an erroneous overemphasis on sexual motivation and conflict. She transformed Freud’s instinctual focus into a cultural focus. People internalize negative cultural stereotypes in the form of basic anxiety and inner conflicts such that the individual with an emotional problem is “a stepchild of our culture.” For Horney, concerns over security and over intrapsychic and interpersonal alienation provide the primary motivating forces for personality. These concerns may lead us to erect a protective structure in an attempt to provide what is doomed to be a false sense of security. As a consequence, “in the center of psychic disturbances are unconscious
strivings developed in order to cope with life despite fears, helplessness, and isolation. I have called them 'neurotic trends' (1942, p. 40).

Horney objected strongly to Freud's concept of penis envy as the determining factor in the psychology of women. Freud, it will be recalled, observed that the distinctive attitudes and feelings of women and their most profound conflict grew out of their feeling of genital inferiority and their jealousy of the male. Horney believed that feminine psychology is based on lack of confidence and an overemphasis of the love relationship and has very little to do with the anatomy of her sex organs. [Horney's views on feminine psychology have been brought together and published posthumously (1967).]

Horney felt that the Oedipus complex is not a sexual-aggressive conflict between child and parent but an anxiety growing out of basic disturbances, for example, rejection, overprotection, and punishment, in the child's relationships with the mother and father. Aggression is not inborn, as Freud stated, but is a means by which humans try to protect their security. Narcissism is not really self-love but self-inflation and overevaluation owing to feelings of insecurity. Horney also took issue with the following Freudian concepts: repetition compulsion; the id, ego, and superego; anxiety; and masochism (1939). On the positive side, Horney endorsed Freud's doctrines of psychic determinism, unconscious motivation, and emotional, nonrational motives.

According to Horney, children naturally experience anxiety, helplessness, and vulnerability, in much the same way that Adler described inferiority as a childhood experience. Without loving guidance to help children learn to cope with threats imposed by nature and society, they may develop the basic anxiety that is Horney's primary theoretical concept. Basic anxiety refers to

the feeling a child has of being isolated and helpless in a potentially hostile world. A wide range of adverse factors in the environment can produce this insecurity in a child: direct or indirect domination, indifference, erratic behavior, lack of respect for the child's individual needs, lack of real guidance, disparaging attitudes, too much admiration or the absence of it, lack of reliable warmth, having to take sides in parental disagreements, too much or too little responsibility, overprotection, isolation from other children, injustice, discrimination, unkept promises, hostile atmosphere, and so on and so on. (1945, p. 41)

Horney's term for all of these adverse factors was basic evil. As another analogy, the student should note how similar this concept is to the conditions Erik Erikson describes as contributing to a sense of basic mistrust (see Chapter
5). In general, Horney suggested that anything that disturbs the security of the child in relation to his or her parents produces basic anxiety.

The basic evil experienced by the child naturally provokes resentment, or basic hostility. This in turn produces a dilemma or conflict for the child, because expressing the hostility would risk punishment and would jeopardize his or her receipt of parental love. This conflict between resentment and need for love replaces the Freudian conflict between instinctual impulse and internalized prohibition. This dilemma and the resulting sense of alienation are very similar to the dynamics subsequently described by Carl Rogers (see Chapter 11). Children deal with their hostility by repressing it. Horney (1937, p. 86) suggested that the repression may be fueled by three different strategies:

“I have to repress my hostility because I need you.”
“I have to repress my hostility because I am afraid of you.”
“I have to repress my hostility for fear of losing love.”

Regardless of its cause, the repression exacerbates the conflict, leading to a vicious cycle: The anxiety produces an excessive need for affection. When these needs are not met, the child feels rejected and the anxiety and hostility intensify. Because this new hostility also must be repressed in order to protect whatever sense of security the child has, anxiety increases, and the need for repression leads to more hostility. Then the cycle begins again. The child, and later the troubled adult, is locked into a circle of intensifying distress and unproductive behavior.

The insecure, anxious child develops various strategies by which to cope with its feelings of isolation and helplessness (1937). It may become hostile and seek to avenge itself against those who have rejected or mistreated it. Or the child may become overly submissive in order to win back the love that it feels it has lost. It may develop an unrealistic, idealized picture of itself in order to compensate for its feelings of inferiority (1950). The child may try to bribe others into loving it or may use threats to force people to like it. It may wallow in self-pity to gain people’s sympathy.

If the child cannot get love, it may seek to obtain power over others. In that way, it compensates for its sense of helplessness, finds an outlet for hostility, and is able to exploit people. Or the child becomes highly competitive, in which the winning is far more important than the achievement. It may turn its aggression inward and belittle itself.

THE NEUROTIC NEEDS

Any one of these strategies may become a more or less permanent fixture in the personality. A particular strategy may, in other words, assume the character of
a drive or need in the personality dynamics. Horney presented a list of ten needs that are acquired as a consequence of trying to find solutions for the problem of disturbed human relationships (1942). She called these needs "neurotic" because they are irrational solutions to the problem:

1. The neurotic need for affection and approval. This need is characterized by an indiscriminate wish to please others and to live up to their expectations. The person lives for the good opinion of others and is extremely sensitive to any sign of rejection or unfriendliness.

2. The neurotic need for a "partner" who will take over one's life. The person with this need is a parasite. He or she overvalues love and is extremely afraid of being deserted and left alone.

3. The neurotic need to restrict one's life within narrow borders. Such a person is undemanding, content with little, prefers to remain inconspicuous, and values modesty above all else.

4. The neurotic need for power. This need expresses itself in craving power for its own sake, in an essential disrespect for others, and in an indiscriminate glorification of strength and a contempt for weakness. People who are afraid to exert power openly may try to control others through intellectual exploitation and superiority. Another variety of the power drive is the need to believe in the omnipotence of will. Such people feel they can accomplish anything simply by exerting will power.

5. The neurotic need to exploit others.

6. The neurotic need for prestige. One's self-evaluation is determined by the amount of public recognition received.

7. The neurotic need for personal admiration. People with this need have an inflated picture of themselves and wish to be admired on this basis, not for what they really are.

8. The neurotic ambition for personal achievement. Such persons want to be the very best and drive themselves to greater and greater achievements as a result of their basic insecurity.

9. The neurotic needs for self-sufficiency and independence. Having been disappointed in attempts to find warm, satisfying relationships with people, the person sets him- or herself apart from others and refuses to be tied down to anyone or anything. Such people become "loners."

10. The neurotic need for perfection and unassailability. Fearful of making mistakes and of being criticized, people who have this need try to make themselves impregnable and infallible. They are constantly searching for flaws in themselves so that they may be covered up before they become obvious to others.
These ten needs are the sources from which inner conflicts develop. The neurotic’s need for love, for example, is insatiable; the more the neurotic gets, the more he or she wants. Consequently, neurotics are never satisfied. Likewise, their need for independence can never be fully satisfied because another part of their personality wants to be loved and admired. The search for perfection is a lost cause from the beginning. All of the foregoing needs are unrealistic.

THREE SOLUTIONS

In a later publication (1945), Horney classified these ten needs under three headings: (1) moving toward people, for example, need for love; (2) moving away from people, for instance, need for independence; and (3) moving against people, for example, need for power. Moving toward people, sometimes called compliance or the self-effacing solution, represents the attempt to deal with insecurity by reasoning, “If you love me, you will not hurt me.” Moving away from people, termed withdrawal or the resignation solution, represents the child attempting to solve his or her insecurity conflict by saying, “If I withdraw, nothing can hurt me.” Moving against people, labeled aggression or the expansive solution, is the child saying, “If I have power, no one can hurt me” (Horney, 1937, pp. 96–99). Each of these “neurotic trends” overemphasizes one of the elements involved in basic anxiety: helplessness in moving toward people, isolation in moving away from people, and hostility in moving against people. Each of the rubrics represents a basic orientation toward others and oneself. Horney finds in these different orientations the basis for inner conflict. The essential difference between a normal and a neurotic conflict is one of degree: “The disparity between the conflicting issues is much less great for the normal person than for the neurotic” (1945, p. 31). In other words, everyone has these conflicts but some people, primarily because of early experiences with rejection, neglect, overprotection, and other kinds of unfortunate parental treatment, possess them in an aggravated form.

While the normal person can resolve these conflicts by integrating the three orientations, since they are not mutually exclusive, the neurotic person, because of greater basic anxiety, must utilize irrational and artificial solutions. He or she consciously recognizes only one of the trends and denies or represses the other two. Horney agreed with Adler that the neurotic is not flexible.

ALIENATION

In her later books, Horney (1945, 1950) emphasized an alternative coping strategy on the part of the neurotic; that is, the neurotic may defensively turn away from the real self toward some idealized alternative. In the process, Horney emphasizes alienation as the consequence of the child’s attempt to
cope with basic anxiety. Anxiety and hostility lead the child to regard his or her "real self" as inadequate, unworthy, and unlovable. Given this negative self-image, a "despised self" emerges. The child responds defensively to this despicable self-description by creating and striving to obtain an idealized image of the person he or she should be. This "idealized self" exists in conjunction with a series of stringent self-expectations, creating what Horney termed "the tyranny of the should" and the "search for glory." The neurotic pursues the self-esteem he or she is lacking by striving to achieve an unrealistic version of the person he or she "ought" to be. Again, the parallels with the neurotic's rigid fictional finalisms, as previously described by Adler, and the maladjusted person's adherence to conditions of worth, as subsequently described by Carl Rogers, are striking.

In addition to these central strategies, Horney (1945, Chapter 8) described a series of auxiliary approaches to the neurotic conflict. Thus, neurotics may defensively develop "blind spots" or "compartments" as they choose not to see discrepancies between their behavior and their idealized self. Or they may engage in "rationalization," "cynicism," or "excessive self-control." All of these unconscious devices serve as pseudosolutions to the neurotic's basic conflict. As a final strategy, the neurotic may attempt to deal with inner conflicts by externalizing them. That is, neurotics may resort to "the tendency to experience internal processes as if they occurred outside oneself and, as a rule, to hold these external factors responsible for one's difficulties" (1945, p. 116). The person says, in effect, "I don't want to exploit other people, they want to exploit me." This solution creates conflicts between the person and the outside world.

All of these conflicts are avoidable or resolvable if the child is raised in a home where there is security, trust, love, respect, tolerance, and warmth. That is, Horney, unlike Freud and Jung, did not feel that conflict is built into the nature of humans and is therefore inevitable. Conflict arises out of social conditions: "The person who is likely to become neurotic is one who has experienced the culturally determined difficulties in an accentuated form, mostly through the medium of childhood experience" (1937, p. 290).

**HARRY STACK SULLIVAN**

Harry Stack Sullivan was the creator of a new viewpoint that is known as the *interpersonal theory of psychiatry*. Its major tenet as it relates to a theory of personality is that personality is "the relatively enduring pattern of recurrent interpersonal situations which characterize a human life" (1953, p. 111). Personality is a hypothetical entity that cannot be isolated from interpersonal situations, and interpersonal behavior is all that can be observed as personality. Consequently, it is vacuous. Sullivan believed, to speak of the individual as the object of study because the individual does not and cannot exist apart from his or her relations with other people. From the first day of life, the baby is a part of an interpersonal situation, and throughout the rest of its life it remains
a member of a social field. Even hermits who have resigned from society carry with them into the wilderness memories of former personal relationships that continue to influence their thinking and acting.

Although Sullivan did not deny the importance of heredity and maturation in forming and shaping the organism, he felt that that which is distinctly human is the product of social interactions. Moreover, the interpersonal experiences of a person may and do alter his or her purely physiological functioning, so that even the organism loses its status as a biological entity and becomes a social organism with its own socialized ways of breathing, digesting, eliminating, circulating, and so forth.

For Sullivan, the science of psychiatry is allied with social psychology, and his theory of personality bears the imprint of his strong preference for social psychological concepts and variables. He wrote:

*The general science of psychiatry seems to me to cover much the same field as that which is studied by social psychology, because scientific psychiatry has to be defined as the study of interpersonal relations, and this in the end calls for the use of the kind of conceptual framework that we now call field theory. From such a standpoint, personality is taken to be hypothetical. That which can be studied is the pattern of processes which characterize the interaction of personalities in particular recurrent situations or fields which “include” the observer. (1950, p. 92)*

Harry Stack Sullivan was born on a farm near Norwich, New York, on February 21, 1892, and died on January 14, 1949, in Paris, France, on his way home from a meeting of the executive board of the World Federation for Mental Health in Amsterdam. He received his medical degree from the Chicago College of Medicine and Surgery in 1917 and served with the armed forces during World War I. Following the war he was a medical officer of the Federal Board for Vocational Education and then became an officer with the Public Health Service. In 1922 Sullivan went to Saint Elizabeth’s Hospital in Washington, D.C., where he came under the influence of William Alanson White, a leader in American neuropsychiatry. From 1923 until the early 1930s he was associated with the Medical School of the University of Maryland and with the Sheppard and Enoch Pratt Hospital in Towson, Maryland. It was during this period of his life that Sullivan conducted investigations of schizophrenia that established his reputation as a clinician. He left Maryland to open an office on Park Avenue in New York City for the express purpose of studying the obsessional process in private patients. At this time he began his formal analytic training with Clara Thompson, a student of Sandor Ferenczi. This was not Sullivan’s first exposure to psychoanalysis. He had about 75 hours of analysis while he was still a medical student. In 1933 he became president of the William Alanson White Foundation, serving in that office until 1943. In 1936,
he helped found and became director of the Washington School of Psychiatry, which is the training institution of the foundation. The journal *Psychiatry* began publication in 1938 to promote Sullivan’s theory of interpersonal relations. He was its coeditor and then editor until his death. Sullivan served as consultant for the Selective Service System in 1940–1941; he was a participant during 1948 in the UNESCO Tensions Project established by the United Nations to study tensions affecting international understanding; and he was appointed a member of the international preparatory commission for the International Congress of Mental Health in the same year. Sullivan was a scientific statesman as well as a prominent spokesman for psychiatry, the leader of an important school for training psychiatrists, a remarkable therapist, an intrepid theoretist, and a productive medical scientist. By his vivid personality and original thinking, he attracted a number of people who became his disciples, students, colleagues, and friends.

Aside from William Alanson White, the chief influences on Sullivan’s intellectual development were Freud, Adolph Meyer, and the Chicago School of Sociology, which consisted of George Herbert Mead, W. I. Thomas, Edward Sapir, Robert E. Park, E. W. Burgess, Charles E. Merriam, William Healy, and Harold Lasswell. Sullivan felt particularly close to Edward Sapir, who was one of the pioneers in advocating a closer working relationship between anthropology, sociology, and psychoanalysis. Sullivan began to formulate his theory of interpersonal relations in 1929 and had consolidated his thinking by the mid-1930s.

During his lifetime Sullivan published only one book setting forth his theory (1947). However, he kept detailed notebooks and many of his lectures to the students of the Washington School of Psychiatry were recorded. These notebooks and recordings, as well as other unpublished material, have been turned over to the William Alanson White Psychiatric Foundation. Five books based upon the Sullivan material have been published, the first three with introductions and commentaries by Helen Swick Perry and Mary Gavell, the last two by Mrs. Perry alone. The *interpersonal theory of psychiatry* (1953) consists mainly of a series of lectures given by Sullivan in the winter of 1946–1947 and represents the most complete account of his theory of interpersonal relations. The *psychiatric interview* (1954) is based upon two lecture series that Sullivan gave in 1944 and 1945, and *Clinical studies in psychiatry* (1956) is drawn from lectures given in 1943. Sullivan’s papers on schizophrenia, most of which date back to the time he was associated with the Sheppard and Enoch Pratt Hospital, have been brought together and published under the title *Schizophrenia as a human process* (1962). The last volume that has appeared is *The fusion of psychiatry and social science* (1964). The first and last volumes in this series of five are the most pertinent for gaining an understanding of Sullivan’s social psychological theory of personality.
Patrick Mullahy, a philosopher and disciple of Sullivan, has edited several books dealing with the theory of interpersonal relations. One of these, *A study of interpersonal relations* (1949), contains a group of papers by people associated with the Washington School and the William Alanson White Institute in New York City. All of the articles were originally printed in *Psychiatry*, including three by Sullivan. Another book entitled *The contributions of Harry Stack Sullivan* (1952) consists of a group of papers presented at a memorial symposium by representatives of various disciplines, including psychiatry, psychology, and sociology. This book contains a succinct account of interpersonal theory by Mullahy and a complete bibliography of Sullivan's writings through 1951. Digests of Sullivan's views also appear in three other books by Mullahy (1948, 1970, 1973). Sullivan's interpersonal theory has been treated at length by Dorothy Blitstein (1953) and his life and work by Chapman (1976) and Perry (1982).

Sullivan insisted repeatedly that personality is a purely hypothetical entity, "an illusion," that cannot be observed or studied apart from interpersonal situations. The unit of study is the interpersonal situation and not the person. The organization of personality consists of interpersonal events rather than intrapsychic ones. Personality only manifests itself when the person is behaving in relation to one or more other individuals. These people do not need to be present; in fact, they can even be illusory or nonexistent figures. A person may have a relationship with a folk hero like Paul Bunyan or a fictional character like Anna Karenina or with ancestors or as-yet-unborn descendants: "Psychiatry is the study of phenomena that occur in interpersonal situations, in configurations made up of two or more people all but one of whom may be more or less completely illusory" (1964, p. 33). Perceiving, remembering, thinking, imagining, and all of the other psychological processes are interpersonal in character. Even nocturnal dreams are interpersonal, since they usually reflect the dreamer's relationships with other people.

Although Sullivan granted personality only hypothetical status, nonetheless he asserted that it is a dynamic center of various processes that occur in a series of interpersonal fields. Moreover, he gave substantive status to some of these processes by identifying and naming them and by conceptualizing some of their properties. The principal ones are *dynamisms, personifications,* and *cognitive processes.*

A dynamism is the smallest unit that can be employed in the study of the individual. It is defined as "the relatively enduring pattern of energy transformations, which recurrently characterize the organism in its duration as a living
organism" (Sullivan, 1953, p. 103). An energy transformation is any form of behavior. It may be overt and public, like talking, or covert and private, like thinking and fantasizing. Because a dynamism is a pattern of behavior that endures and recurs, it is about the same thing as a habit. Sullivan's definition of pattern is quaintly phrased; it is "an envelope of insignificant particular differences" (1953, p. 104). This means that a new feature may be added to a pattern without changing the pattern just as long as it is not significantly different from the other contents of the envelope. If it is significantly different, it changes the pattern into a new pattern. For example, two apples may be quite different in appearance and yet be identified as apples because their differences are not important. However, an apple and a banana are different in significant respects and consequently form two different patterns.

The dynamisms that are distinctively human in character are those that characterize one's interpersonal relations. For example, one may behave in a habitually hostile way toward a certain person or group of persons, which is an expression of a dynamism of malevolence. A man who tends to seek out lascivious relationships with women displays a dynamism of lust. A child who is afraid of strangers has a dynamism of fear. Any habitual reaction toward one or more persons, whether it be in the form of a feeling, an attitude, or an overt action, constitutes a dynamism. All people have the same basic dynamisms, but the mode of expression of a dynamism varies in accordance with the situation and the life experience of the individual.

A dynamism usually employs a particular zone of the body such as the mouth, the hands, the anus, and the genitals by means of which it interacts with the environment. A zone consists of a receptor apparatus for receiving stimuli, an effector apparatus for performing action, and a connecting apparatus called eductors in the central nervous system that connects the receptor mechanism with the effector mechanism. Thus, when the nipple is brought to the baby's mouth, it stimulates the sensitive membrane of the lips, which discharges impulses along nerve pathways to the motor organs of the mouth that produce sucking movements.

Most dynamisms serve the purpose of satisfying the basic needs of the organism. However, there is an important dynamism that develops as a result of anxiety. This is called the dynamism of the self or the self-system.

The Self-System. Anxiety is a product of interpersonal relations, being transmitted originally from the mother to the infant and later in life by threats to one's security. To avoid or minimize actual or potential anxiety, people adopt various types of protective measures and supervisory controls over their behavior. One learns, for example, that one can avoid punishment by conforming to parents' wishes. These security measures form the self-system that sanctions certain forms of behavior (the good-me self), forbids other forms (the bad-me self), and excludes from consciousness still other forms that are too alien and
disgusting to even be considered (the not-me self). Through these processes, the self-system acts as a filter for awareness. Sullivan employed the term _selective attention_ for the unconscious refusal to attend to anxiety-generating events and feelings. This process bears an obvious similarity to the defense mechanisms described by Freud (see Chapter 2) and to the model of self-defense presented by Carl Rogers (see Chapter 11).

The self-system as the guardian of one’s security tends to become isolated from the rest of the personality: it excludes information that is incongruous with its present organization and fails thereby to profit from experience. Since the self guards the person from anxiety, it is held in high esteem and is protected from criticism. As the self-system grows in complexity and independence, it prevents the person from making objective judgments of his or her own behavior and it glosses over obvious contradictions between what the person really is and what the self-system says he or she is. Notice how similar these dynamics are to those described by Horney earlier in this chapter. In general, the more experiences people have with anxiety, the more inflated their self-system becomes and the more it becomes dissociated from the rest of the personality. Although the self-system serves the useful purpose of reducing anxiety, it interferes with one’s ability to live constructively with others.

Sullivan believed that the self-system is a product of the irrational aspects of society. By this he meant that the young child is made to feel anxious for reasons that would not exist in a more rational society; it is forced to adopt unnatural and unrealistic ways of dealing with its anxiety. Although Sullivan recognized that the development of a self-system is absolutely necessary for avoiding anxiety in modern society, and perhaps in any kind of society that humans are capable of fashioning, he also acknowledged that the self-system as we know it today is “the principal stumbling block to favorable changes in personality” (1953, p. 169). Perhaps with tongue-in-cheek, he wrote, “The self is the content of consciousness at all times when one is thoroughly comfortable about one’s self respect, the prestige that one enjoys among one’s fellows, and the respect and deference which they pay one” (1964, p. 217).

A personification is an image that an individual has of him- or herself or of another person. It is a complex of feelings, attitudes, and conceptions that grows out of experiences with need satisfaction and anxiety. For example, the baby develops a personification of a good mother by being nursed and cared for by her. Any interpersonal relationship that involves satisfaction tends to build up a favorable picture of the satisfying agent. On the other hand, the baby’s personification of a bad mother results from experiences with her that evoke anxiety. The anxious mother becomes personified as the bad mother. Ultimately, these two personifications of the mother along with any others that
may be formed, such as the seductive mother or the overprotective mother, fuse together to form a complex personification.

These pictures that we carry around in our heads are rarely accurate descriptions of the people to whom they refer. They are formed in the first place in order to cope with people in fairly isolated interpersonal situations, but once formed, they usually persist and influence our attitudes toward other people. Thus, a person who personifies his or her father as a mean and dictatorial man may project this same personification onto other older men, for example, teachers, police officers, and employers. Consequently, something that serves an anxiety-reducing function in early life may interfere with one's interpersonal relations later in life. These anxiety-fraught pictures distort one's conceptions of currently significant people. Personifications of the self such as the good-me and the bad-me follow the same principles as personifications of others. The good-me personification results from interpersonal experiences that are rewarding in character, the bad-me personification from anxiety-arousing situations. And like personifications of other people, these self-personifications tend to stand in the way of objective self-evaluation.

Personifications that are shared by a number of people are called stereotypes. These are consensually validated conceptions, that is, ideas that have wide acceptance among the members of a society and are handed down from generation to generation. Examples of common stereotypes in our culture are the absent-minded professor, the unconventional artist, and the hard-headed business executive.

Cognitive Processes

Sullivan's unique contribution regarding the place of cognition in the affairs of personality is his threefold classification of experience. Experience, he said, occurs in three modes: prototaxic, parataxic, and syntactic. Prototaxic experience "may be regarded as the discrete series of momentary states of the sensitive organism" (1953, p. 29). This type of experience is similar to what James called the "stream of consciousness," the raw sensations, images, and feelings that flow through the mind of a sensate being. They have no necessary connections among themselves and possess no meaning for the experiencing person. The prototaxic mode of experience is found in its purest form during the early months of life and is the necessary precondition for the appearance of the other two modes.

The parataxic mode of thinking consists of seeing causal relationship between events that occur at about the same time but are not logically related. The eminent Czech writer Franz Kafka portrayed an interesting case of parataxic thinking in one of his short stories. A dog who lived in a kennel surrounded by a high fence was urinating one day when a bone was thrown over the fence. The dog thought, "My urinating made that bone appear." Thereafter, whenever he wanted something to eat, he lifted his leg. Sullivan believed that much of
our thinking does not advance beyond the level of parataxis; we see causal connections between experiences that have nothing to do with one another. All superstitions, for instance, are examples of parataxic thinking. Parataxic thinking has much in common with the process Skinner called superstitious behavior (see Chapter 12).

The third and highest mode of thinking is the syntaxic, which consists of consensually validated symbol activity, especially of a verbal nature. A consensually validated symbol is one that has been agreed upon by a group of people as having a standard meaning. Words and numbers are the best examples of such symbols. The syntaxic mode produces logical order among experiences and enables people to communicate with one another.

In addition to this formulation of the modes of experience, Sullivan emphasized the importance of foresight in cognitive functioning: "Man, the person, lives with his past, the present and the neighboring future all clearly relevant in explaining his thought and action" (1950, p. 84). Foresight depends upon one's memory of the past and interpretation of the present.

Although dynamisms, personifications, and cognitive processes do not complete the list of the constituents of personality, they are the chief distinguishing structural features of Sullivan's system.

Sullivan, in common with many other personality theorists, conceived of personality as an energy system whose chief work consists of activities that will reduce tension. Sullivan said there is no need to add the term "mental" to either energy or tension since he used them in exactly the same sense as they are used in physics.

Sullivan began with the familiar conception of the organism as a tension system that theoretically can vary between the limits of absolute relaxation, or euphoria as Sullivan preferred to call it, and absolute tension as exemplified by extreme terror. There are two main sources of tension: (1) tensions that arise from the needs of the organism and (2) tensions that result from an anxiety. Needs are connected with the physiochemical requirements of life; they are such conditions as lack of food or water or oxygen that produce a disequilibrium in the economy of the organism. Needs may be general in character, such as hunger, or they may be more specifically related to a zone of the body, such as the infant's need to suck. Needs arrange themselves in a hierarchical order; those lower down on the ladder must be satisfied before those higher on the ladder can be accommodated. One result of need reduction is an experience of satisfaction: "Tensions can be regarded as needs for particular energy transformations that will dissipate the tension, often with an accom-
panying change of 'mental' state, a change of awareness, to which we can apply the general term, satisfaction" (1950, p. 85). The typical consequence of prolonged failure to satisfy the needs is a feeling of apathy that produces a general lowering of the tensions.

Anxiety is the experience of tension that results from real or imaginary threats to one's security. In large amounts, it reduces the efficiency of the individuals in satisfying their needs, disturbs interpersonal relations, and produces confusion in thinking. Anxiety varies in intensity depending upon the seriousness of the threat and the effectiveness of the security operations that the persons have at their command. Severe anxiety is like a blow on the head; it conveys no information to the person but instead produces utter confusion and even amnesia. Less severe forms of anxiety can be informative. In fact, Sullivan believed that anxiety is the first great educative influence in living. Anxiety is transmitted to the infant by the "mothering one," who is herself expressing anxiety in her looks, tone of voice, and general demeanor. Sullivan admitted that he did not know how this transmission takes place, although it is probably accomplished by some kind of empathic process whose nature is obscure. As a consequence of this mother-transmitted anxiety, other objects in the near surroundings become freighted with anxiety by the operation of the parataxic mode of associating contiguous experiences. The mother's nipple, for example, is changed into a bad nipple that produces avoidance reactions in the baby. The infant learns to veer away from activities and objects that increase anxiety. When the baby cannot escape anxiety, it tends to fall asleep.

This dynamism of somnolent detachment, as Sullivan calls it, is the counterpart of apathy, which is the dynamism aroused by unsatisfied needs. In fact, these two dynamisms cannot be objectively differentiated. Sullivan said that one of the great tasks of psychology is to discover the basic vulnerabilities to anxiety in interpersonal relations rather than to try to deal with the symptoms resulting from anxiety.

Energy is transformed by performing work. Work may be overt actions involving the striped muscles of the body or it may be mental, such as perceiving, remembering, and thinking. These overt or covert activities have as their goal the relief of tension. They are to a great extent conditioned by the society in which the person is raised: "What anyone can discover by investigating his past is that patterns of tensions and energy transformations which make up his living are to a truly astonishing extent matters of his education for living in a particular society" (Sullivan, 1950, p. 83).

Sullivan did not believe that instincts are important sources of human motivation, and he did not accept the libido theory of Freud. An individual learns to behave in a particular way as a result of interactions with people,
and not because he or she possesses innate imperatives for certain kinds of action.

Sullivan was very assiduous in spelling out the sequence of interpersonal situations to which the person is exposed in passing from infancy to adulthood and the ways in which these situations contribute to the formation of personality. More than any other personality theorist, with the possible exceptions of Freud and Erikson, Sullivan viewed personality from the perspective of definite stages of development. Whereas Freud held the position that development is largely an unfolding of the sex instinct, Sullivan argued persuasively for a more social psychological view of personality growth, one in which the unique contributions of human relationships would be accorded their proper due. Although Sullivan did not reject biological factors as conditioners of the growth of personality, he did subordinate them to the social determiners of psychological development. Moreover, he was of the opinion that sometimes these social influences run counter to the biological needs of the person and have detrimental effects upon his personality. Sullivan was not one to shy away from recognizing the deleterious influences of society. In fact, Sullivan, like other social psychological theorists, was a sharp, incisive critic of contemporary society.

Sullivan delineated six stages in the development of personality prior to the final stage of maturity. These six stages are typical for Western European cultures and may be different in other societies. They are (1) infancy, (2) childhood, (3) the juvenile era, (4) preadolescence, (5) early adolescence, and (6) late adolescence.

The period of infancy extends from birth to the appearance of articulate speech. It is the period in which the oral zone is the primary zone of interaction between the baby and its environment. Nursing provides the baby with its first interpersonal experience. The feature of the environment that stands out during infancy is the object that supplies food to the hungry baby, either the nipple of the mother's breast or the nipple of the bottle. The baby develops various conceptions of the nipple depending upon the kinds of experiences it has with it. These are (1) the good nipple, which is the signal for nursing and a sign that satisfaction is forthcoming; (2) the good but unsatisfactory nipple, because the baby is not hungry; (3) the wrong nipple, because it does not give milk and is a signal for rejection and subsequent search for another nipple; and (4) the bad nipple of the anxious mother, which is a signal for avoidance.

Other characteristic features of the infantile state are (1) the appearance of the dynamisms of apathy and somnolent detachment; (2) the transition from a prototaxic to a parataxic mode of cognition; (3) the organization of
personifications such as the bad, anxious, rejecting, frustrating mother and the good, relaxed, accepting, satisfying mother; (4) the organization of experience through learning and the emergence of the rudiments of the self-system; (5) the differentiation of the baby's own body so that the baby learns to satisfy its tensions independently of the mothering one, for example, by thumbsucking; and (6) the learning of coordinated movements involving hand and eye, hand and mouth, and ear and voice.

The transition from infancy to childhood is made possible by the learning of language and the organization of experience in the syntactic mode. Childhood extends from the emergence of articulate speech to the appearance of the need for playmates. The development of language permits, among other things, the fusion of different personifications, for instance, the good and bad mother, and the integration of the self-system into a more coherent structure. The self-system begins to develop the conception of gender: The little boy identifies with the masculine role as prescribed by society, the little girl with the feminine role. The growth of symbolic ability enables the child to play at being a grownup; Sullivan called these as-if performances *dramatizations*. It also allows the child to become concerned with various activities both overt and covert that serve the purpose of warding off punishment and anxiety; Sullivan calls these *preoccupations*.

One dramatic event of childhood is the *malevolent transformation*, the feeling that one lives among enemies. This feeling, if it becomes strong enough, makes it impossible for the child to respond positively to the affectionate advances of other people. The malevolent transformation distorts the child's interpersonal relations and causes the child to isolate itself. It says, in effect, "Once upon a time everything was lovely, but that was before I had to deal with people." The malevolent transformation is caused by painful and anxious experiences with people and may lead to a regression to the less threatening stage of infancy.

Sublimation, which Sullivan defined as "the unwitting substitution for a behavior pattern which encounters anxiety or collides with the self-system, of a socially more acceptable activity pattern which satisfies parts of the motivational system that caused trouble" (1953, p. 193), appears during childhood. The excess of tension that is not discharged by sublimation is expended in symbolic performances, for instance, in nocturnal dreams.

The juvenile stage extends throughout most of the grammar school years. It is the period for becoming social, for acquiring experiences of social subordination to authority figures outside of the family, for becoming competitive and cooperative, for learning the meaning of ostracism, disparagement, and group feeling. The juvenile learns to be inattentive to external circumstances that do not interest him or her, to supervise behavior by internal controls, to form stereotypes in attitudes, to develop new and more
effective modes of sublimation, and to distinguish more clearly between fantasy and reality.

One great event of this period is the emergence of a conception of orientation in living:

One is oriented in living to the extent to which one has formulated, or can easily be led to formulate (or has insight into), data of the following types: the integrating tendencies (needs) which customarily characterize one’s interpersonal relations; the circumstances appropriate to their satisfaction and relatively anxiety-free discharge; and the more or less remote goals for the approximation of which one will forego intercurrent opportunities for satisfaction or the enhancement of one’s prestige. (1953, p. 243)

The relatively brief period of preadolescence is marked by the need for an intimate relationship with a peer of the same sex, a chum in whom one can confide and with whom one can collaborate in meeting the tasks and solving the problems of life. This is an extremely important period because it marks the beginning of genuine human relationships with other people. In earlier periods, the interpersonal situation is characterized by the dependence of the child upon an older person. During preadolescence, the child begins to form peer relationships in which there are equality, mutuality, and reciprocity between the members. Without an intimate companion, the preadolescent becomes the victim of a desperate loneliness.

The main problem of the period of early adolescence is the development of a pattern of heterosexual activity. The physiological changes of puberty are experienced by the youth as feelings of lust. The lust dynamism emerges out of these feelings and begins to assert itself in the personality. The lust dynamism involves primarily the genital zone, but other zones of interaction such as the mouth and the hands also participate in sexual behavior. There is a separation of erotic need from the need for intimacy; the erotic need takes as its object a member of the opposite sex while the need for intimacy remains fixated upon a member of the same sex. If these two needs do not become divorced, the young person displays a homosexual rather than a heterosexual orientation. Sullivan pointed out that many of the conflicts of adolescence arise out of the opposing needs for sexual gratification, security, and intimacy. Early adolescence persists until the person has found some stable pattern of performances that satisfies the person’s genital drives.

Sullivan wrote, “Late adolescence extends from the patterning of preferred genital activity through unnumbered educative and eductive steps to the establishment of a fully human or mature repertory of interpersonal relations as permitted by available opportunity, personal and cultural” (1953, p. 297). In other words, the period of late adolescence constitutes a rather prolonged
initiation into the privileges, duties, satisfactions, and responsibilities of social
living and citizenship. The full complement of interpersonal relations gradually
takes form and there is a growth of experience in the syntactic mode that permits
a widening of the symbolic horizons. The self-system becomes stabilized, more
effective sublimations of tensions are learned, and stronger security measures
against anxiety are instituted.

When the individual has ascended all of these steps and reached the final
stage of adulthood, he or she has been transformed largely by means of inter-
personal relations from an animal organism into a human person. One is not
an animal, coated by civilization and humanity, but an animal that has been
so drastically altered that one is no longer an animal but a human being, or,
if one prefers, a human animal.

Although Sullivan firmly rejected any hard and fast instinct doctrine, he did
acknowledge the importance of heredity in providing certain capacities, chief
among which are the capacities for receiving and elaborating experiences. He
also accepted the principle that training cannot be effective before maturation
has laid the structural groundwork. Thus, the child cannot learn to walk until
the muscles and bony structure have reached a level of growth that will support
it in an upright position. Heredity and maturation provide the biological substrata
for the development of personality, that is, the capacities and predispositions
and inclinations. The culture operates through a system of interpersonal
relations to make manifest the abilities and the actual performances (energy
transformations) by which the person reaches the goal of tension reduction
and need satisfaction.

The first educative influence is that of anxiety that forces the young organ-
ism to discriminate between increasing and decreasing tension and to guide
its activity in the direction of the latter. The second great educational force is
that of trial and success. Success, as many psychologists have pointed out,
tends to stamp in the activity that has led to gratification. Success may be
equated with the earning of rewards, such as a mother’s smile or a father’s
praise. Similarly, failure may be equated with punishments, such as a mother’s
forbidding look or a father’s words of disapproval. One may also learn by
imitation and by inference.

Sullivan did not believe that personality is set at an early age. It may
change at any time as new interpersonal situations arise because the organism
is extremely plastic and malleable. Although the forward thrust of learning
and development predominates, regressions can and do occur when pain,
anxiety, and failure become intolerable.
Harry Stack Sullivan, in common with other psychiatrists, acquired his empirical knowledge of personality by working with patients suffering from various types of personality disorders but chiefly with schizophrenics and obsessional cases. As a young psychiatrist, Sullivan discovered that the method of free association did not work satisfactorily with schizophrenics because it aroused too much anxiety. Other methods were tried, but these also proved to provoke anxiety that interfered with the communication process between patient and therapist. Consequently, Sullivan became interested in studying the forces that impede and facilitate communication between two people. In so doing, he found that the psychiatrist was much more than an observer; he or she was also a vital participant in an interpersonal situation. The psychiatrist had his or her own apprehensions, such as professional competence and personal problems, to deal with. As a result of this discovery, Sullivan developed his conception of the therapist as a participant observer:

The theory of interpersonal relations lays great stress on the method of participant observation, and relegates data obtained by other methods to at most a secondary importance. This in turn implies that skill in the face to face, or person to person psychiatric interview is of fundamental importance. (1950, p. 122)

The psychiatric interview is Sullivan’s term for the type of interpersonal, face-to-face situation that takes place between the patient and the therapist. There may be only one interview or there may be a sequence of interviews with a patient extending over a long period of time. Sullivan defined the interview as “a system, or series of systems, of interpersonal processes, arising from participant observation in which the interviewer derives certain conclusions about the interviewee” (1954, p. 128). How the interview is conducted and the ways in which the interviewer reaches conclusions regarding the patient form the subject matter of Sullivan’s book, The psychiatric interview (1954).

Sullivan divided the interview into four stages: (1) formal inception, (2) reconnaissance, (3) detailed inquiry, and (4) termination.

The interview is primarily a vocal communication between two people. Not only what the person says but how he or she says it—intonations, rate of speech, and other expressive behavior—are the chief sources of information for the interviewer. The interviewer should be alert to subtle changes in the patient’s vocalizations (e.g., changes in volume) because these clues often reveal vital evidence regarding the patient’s focal problems and attitudinal changes toward the therapist. In the inception, the interviewer should avoid asking too many questions but should maintain an attitude of quiet observation. The interviewer should try to determine the reasons for the patient’s coming and something about the nature of the patient’s problems.
The period of reconnaissance centers about finding out who the patient is. The interviewer does this by means of an intensive interrogatory into the past, present, and future of the patient. These facts about the patient's life fall under the heading of personal data or biographical information. Sullivan does not advocate a hard-and-fast, structured type of questioning that adheres to a standard list of questions. On the other hand, Sullivan insists that the interviewer should not let the patient talk about irrelevant and trivial matters. The patient should learn that the interview is serious business and that there should be no fooling around. Nor should the interviewer ordinarily make notes of what the patient says at any time during the course of treatment because note taking is too distracting and tends to inhibit the communication process.

By the end of the first two stages of the interview process the psychiatrist should have formed a number of tentative hypotheses regarding the patient's problems and their origins. During the period of detailed inquiry, the psychiatrist attempts to ascertain which of several hypotheses is the correct one. He or she does this by listening and by asking questions. Sullivan suggested a number of areas that should be inquired into—such matters as toilet training, attitude toward the body, eating habits, ambition, and sexual activities—but here again he did not insist upon any formal prospectus that should be rigidly followed.

As long as everything runs smoothly, the interviewer is not likely to learn anything about the vicissitudes of interviewing, chief of which is the impact of the interviewer's attitudes upon the patient's capacity for communication. But when the communication process deteriorates, the interviewer is forced to ask him- or herself, "What did I say or do which caused the patient to become anxious?" There is always a good deal of reciprocity between the two parties—Sullivan's term for it is reciprocal emotion—and each is continually reflecting the feelings of the other. It is incumbent upon therapists to recognize and to control their own attitudes in the interest of maximum communication. In other words, they should never forget their role as an expert participant observer. A series of interviews is brought to termination by the interviewer making a final statement of what he or she has learned, by prescribing a course for the patient to follow, and by assessing for the patient the probable effects of the prescription upon his or her life.

Sullivan's principal research contribution in psychopathology consists of a series of articles on the etiology, dynamics, and treatment of schizophrenia. These studies were conducted for the most part during his period of association with the Sheppard and Enoch Pratt Hospital in Maryland and were published in psychiatric journals during the years 1924–1931. They reveal Sullivan's great talents for making contact with and understanding the mind of the psychotic. Empathy was a highly developed trait in Sullivan's personality, and he
used it to excellent advantage in studying and treating the victims of schizophrenia. For Sullivan, these victims are not hopeless cases to be shut away in the wards of mental institutions; they can be treated successfully if the psychiatrist is willing to be patient, understanding, and observant.

While Sullivan was at Sheppard and Enoch Pratt Hospital, he established a special ward for patients. It consisted of a suite of two bedrooms and a sitting room for six male schizophrenics. This ward was isolated from the rest of the hospital and was staffed by six male attendants who were handpicked and trained by Sullivan. He made a practice of having an attendant in the room with him while he was interviewing a patient, because he found it was reassuring to the patient. No female nurses—in fact, no women—were allowed in the ward. Sullivan believed in the effectiveness of the homogeneous ward consisting of patients of the same sex, the same age group, and the same psychiatric problem.

Sullivan's role as a political psychiatrist was also evident in some of his research activities. He believed that one had "to serve in order to study." He did research on southern blacks with Charles S. Johnson and on Washington blacks with E. Franklin Frazier (Sullivan, 1964). His work during the war consisted of setting up procedures for screening draftees, of building morale, and of developing effective leadership. And we have already noted his intense concern with working for a world free of tensions and conflicts.

The four theories presented in this chapter belong together because they all emphasize the influence of social variables in shaping personality. All of them, in one way or another, constitute a reaction against the instinctivist position of Freudian psychoanalysis, yet each of the theorists acknowledges their indebtedness to the seminal thinking of Freud. They have all stood on Freud's shoulders and have added their own cubits to his towering height. They have invested personality with social dimensions equal if not superior in importance to the biological dimensions provided by Freud and Jung. Moreover, these theories have helped to place psychology in the sphere of the social sciences.

In spite of the common ground that they occupy, each theory stresses somewhat different clusters of social variables. Erich Fromm devotes most of his attention to describing the ways in which the structure and dynamics of a particular society mold its members so that their social character fits the common values and needs of that society. Karen Horney, although she recognizes the influence of the social context in which a person lives, dwells more upon the intimate factors within the family setting that shape personality. In this respect, Sullivan's interpersonal theory resembles Horney's views more than it does Fromm's. For Sullivan the human relationships of infancy, childhood, and adolescence are of paramount concern, and he is most eloquent
and persuasive when he is describing the nexus between the "mothering one" and the baby. Adler, on the other hand, roams widely throughout society looking for factors that are relevant to personality and finds them everywhere.

Although all four theories strenuously oppose Freud's instinct doctrine and the fixity of human nature, none of the four adopts the radical environmentalist position that an individual's personality is created solely by the conditions of the society into which he or she is born. Each theory, in its own way, agrees that there is such a thing as human nature that the baby brings with it, largely in the form of fairly general predispositions or potentialities rather than as specific needs and traits. These generalized potentialities as exemplified by Adler's social interest and Fromm's need for transcendence are actualized in concrete ways by means of the formal and informal educative agencies of the society. Under ideal conditions, these theories agree, the individual and society are interdependent; the person serves to further the aims of the society and society in turn helps the person to attain his or her goals. In short, the stand adopted by these four theorists is neither exclusively social or sociocentric nor exclusively psychological or psychocentric; it is truly social psychological in character.

Furthermore, each theory asserts not only that human nature is plastic and malleable but also that society is equally plastic and malleable. If a particular society does not fulfill the demands of human nature, it can be changed by humans. In other words, humans create the kind of society they think will benefit them the most. Obviously, mistakes are made in developing a society, and once these errors have become crystallized in the form of social institutions and customs, it may be difficult to change them. Yet each theorist was optimistic regarding the possibility of change, and each in his or her own way tried to bring about fundamental changes in the structure of society. Adler supported social democracy, pressed for better schools, started child guidance centers, urged reforms in the treatment of criminals, and lectured widely on social problems and their cures. Fromm and Horney, through their writings and talks, have pointed the way to a better society. Fromm, in particular, has spelled out some of the basic reforms that need to be made to achieve a sane society. Sullivan was actively engaged in trying to bring about social amelioration through the medium of international cooperation at the time of his death. All four of them in their professional capacities as psychotherapists had extensive experiences with the casualties of an imperfect social order; consequently, they spoke from personal knowledge and practical experience in their roles as critics and reformers.

Another assumption each theory makes is that anxiety is socially produced. Humans are not by nature "the anxious animal." They are made anxious by the conditions under which they live—by the specter of unemployment, by intolerance and injustice, by threat of war, by hostile parents. Remove these conditions, say our theorists, and the wellsprings from which anxiety gushes
forth will dry up. Nor are humans by nature destructive, as Freud believed. They may become destructive when their basic needs are frustrated, but even under conditions of frustration other avenues such as submission or withdrawal may be taken.

All of the theories with the exception of Sullivan's also underscore the concepts of the unique individual and the creative self. In spite of attempts by society to regiment people, each person manages to retain some degree of creative individuality. Indeed, it is by virtue of a person's inherent creative powers that he or she is able to effect changes in society. People create different kinds of societies on different parts of the globe, and at different times in history, in part, because people are different. Humans are not only creative; they are also self-conscious. They know what they want and strive consciously to reach their goals. The idea of unconscious motivation is not accorded much weight by these social psychological theorists.

In general, the theories developed by Adler, Fromm, Horney, and Sullivan enlarged the scope of Freudian psychology by providing room for the social determinants of personality. A number of critics, however, have disparaged the originality of these social psychological theories. They say that such theories merely elaborate upon one aspect of classical psychoanalysis, namely, the ego and its defenses. Freud saw clearly that personality traits often represented the person's habitual defenses or strategies against inner and outer threats to the ego. The needs, trends, styles, orientations, personifications, dynamisms, and so forth, in the theories treated in this chapter are accommodated in Freudian theory under the heading of ego-defenses. Therefore, these critics conclude, nothing new has been added to Freud, and a great deal has been subtracted. By reducing personality to the single system of the ego, the social psychological theorist has cut the personality off from the vital springs of human behavior, springs that have their ultimate sources in the evolution of humans as a species. By enlarging upon the social character of human personality, they have alienated humans from their great biological heritage.

A criticism sometimes voiced against the conception of humans evolved by Adler, Fromm, and Karen Horney (it does not apply to Sullivan) is that it is too sugar coated and idealistic. In a world that has been torn apart by two great wars, not to mention the many other forms of violence and irrationality that people display, the picture of a rational, self-conscious, socialized individual strikes one as being singularly inappropriate and invalid. One can, of course, blame society and not humans for this deplorable state of affairs, and this is what these theorists do. But then they say, or at least imply, that rational humans created the kind of social arrangements that are responsible for human irrationality and unhappiness. This is the great paradox of these theories. If people are so self-conscious, so rational, and so social, why have they evolved so many imperfect social systems?
It has been pointed out by a philosopher, Isaac Franck (1966), that the conception of the person presented by Fromm and other social and humanistic psychologists is less a product of research and more a result of their normative preconceptions. They are moralists and not scientists. Franck insists that human propensities and traits are ethically neutral, and therefore ethical prescriptions cannot be deduced from factual statements about humans. It would be difficult, however, to find any personality theorist from Freud to Fromm who does not openly or covertly make moralistic and ethical judgments about the harmful effects of the social environment upon humans. And many of them do prescribe remedies. Participant-observers are not likely to remain neutral, however scientific they may be.

Another less devastating criticism, but one that carries more weight with psychologists as distinguished from psychoanalysts, is the failure of these social psychological theories to specify the precise means by which a society molds its members. How does a person acquire social character? How does one learn to be a member of society? This evident neglect of the learning process in theories that depend so heavily upon the concept of learning to account for the ways in which personality is formed is considered to be a major omission. Is it enough just to be exposed to a condition of society in order for that condition to affect the personality? Is there a mechanical stamping in of socially approved behavior and an equally mechanical stamping out of socially disapproved behavior? Or does the person react with insight and foresight to the social milieu, selecting those features that he or she thinks will produce a better organization of personality and rejecting other features that he or she feels are inconsistent with their self-organization? For the most part these theories stand silent on the nature of the learning process.

Although these social psychological theories have not stimulated a great deal of research in comparison with some other theories, they have served to foster an intellectual climate in which social psychological research could flourish and has done so. Adler, Fromm, Karen Horney, and Sullivan are not solely responsible for the rise of social psychology, but their influence has been considerable. Each of them has contributed in no small measure to the picture of humans as social beings. This is their great value in the contemporary scene.
Erik Erikson and Contemporary Psychoanalytic Theory

INTRODUCTION AND CONTEXT

EGO PSYCHOLOGY

Anna Freud

OBJECT RELATIONS

Heinz Kohut

THE MERGING OF PSYCHOANALYSIS AND PSYCHOLOGY

George Klein

Robert White

ERIK H. ERIKSON

PERSONAL HISTORY

THE PSYCHOSOCIAL THEORY OF DEVELOPMENT

I. Basic Trust Versus Basic Mistrust

II. Autonomy Versus Shame and Doubt

III. Initiative Versus Guilt

IV. Industry Versus Inferiority

V. Identity Versus Identify Confusion

VI. Intimacy Versus Isolation

VII. Generativity Versus Stagnation

VIII. Integrity Versus Despair

A NEW CONCEPTION OF THE EGO

CHARACTERISTIC RESEARCH AND RESEARCH METHODS

Case Histories

Play Situations

Anthropological Studies

Psychohistory

CURRENT RESEARCH

Identity Status

Other Stages

Cross-Cultural Status

CURRENT STATUS AND EVALUATION
INTRODUCTION AND CONTEXT

What has happened to Freud’s theory of personality since his death in 1939? This is the question we will address in the present chapter. Before beginning the discussion, it should be noted that a lot happened to psychoanalytic theory during Freud’s lifetime. In order to see this, one has only to compare the Introductory lectures published in 1917, with the New Introductory lectures published in 1933. In 1917, there were no id, ego, or superego. Nor were there any death instinct and its derivatives, aggression and self-destruction. In 1917, anxiety was the result of repression; in 1933, it was the cause of repression. By 1933, Freud had evolved a new theory of the female Oedipus complex. It would be wrong, however, to conclude from these comparisons that psychoanalytic theory was in continual flux and change during Freud’s lifetime. Many of the original concepts remained the same. The steady elaboration and extension of the basic ideas rather than radical revisions marked the course of Freud’s work.

There are those who feel that Freud became more speculative as he grew older and that his speculations about the origins, structures, and dynamics of the mind—what Freud called “metapsychology”—were a far cry from his theoretical formulations, which were closely tied to data obtained from the direct clinical observation of patients. Others point out, however, that the seeds of his metapsychology were already planted in Project for a scientific psychology (1895) and Chapter 7 of The interpretation of dreams (1900) and that Freud was always interested in arriving at a general theory of the mind or personality and not in merely conceiving a theory of neurosis.

Although Freud was surrounded by a number of stimulating men and women, he was the master builder of psychoanalytic theory during his lifetime. He laid the foundations, guided the course of its development, and assumed sole responsibility for its major revisions. Freud was receptive to ideas advanced by his associates in the psychoanalytic movement and often credited them with new insights, but he was adamant about preserving the conceptual pillars upon which psychoanalysis was based. Anyone who attempted to undermine these pillars or to replace them was no longer considered a part of the psychoanalytic enterprise. Inevitably, a number of psychoanalysts seceded and developed their own theories. Notable among these were Adler, Jung, Rank, and Reich. It would be incorrect, however, to say, as some have done, that Freud was dictatorial or that he was personally vindictive toward those who dissented. In Jung’s case, for example, the correspondence between Freud and Jung (McGuire, 1974) reveals that Freud made a great effort, and a kindly one, to persuade Jung of the incorrectness of his (Jung’s) views. (Parenthetically, it may be observed that it was fortunate Freud did not succeed in persuading Jung). A theory is, after all, the brainchild of one person; it cannot be conceived by a committee.

Upon the death of Freud in 1939, his followers were faced with the difficult task of deciding what should be done regarding the future development of
psychoanalytic theory. The course many chose was to amplify aspects of Freud's system, to make more explicit some of Freud's postulates, to sharpen the definitions of some of the basic concepts, to extend the range of phenomena covered by psychoanalytic explanations, and to employ observational methods other than the psychoanalytic interview to validate propositions derived from Freudian theory. Changes in psychoanalytic therapy have also been instituted, but this aspect of psychoanalysis lies outside the scope of the present volume.

In much of the psychoanalytic literature, both past and present, the opening paragraphs of an article or chapter in a book are devoted to a presentation of what Freud had to say concerning the topic under consideration. This is followed by the writer's amplification of the topic and the presentation of new evidence or arguments. Freud's writings are the primary authority, and quotations from them are sprinkled throughout the article or book to justify the points made by the writer. In spite of this strong allegiance to Freud's ideas on the part of his followers—and their understandable tendency to treat the formidable corpus of his published works as sacred writings—some new trends can be detected in the psychoanalytic literature since Freud's death. We shall discuss some of these trends.

We shall also take note of the growing rapprochement of psychology and psychoanalysis. It is no secret that most psychologists were hostile toward Freud's ideas prior to World War II, but, for reasons to be discussed in this chapter, this hostility has diminished. Not only have Freud's ideas permeated psychology, but also psychologists have made theoretical and empirical contributions to psychoanalysis.

The chief focus of the chapter will fall on the writings of Erik Erikson. He, probably more than any other contemporary figure, best exemplifies the ways in which classical psychoanalysis has been elaborated, extended, and applied. His extensive writings have also provided a bridge between psychology and psychoanalysis.

Easily the most striking development in psychoanalytic theory since Freud's death is the emergence of a new theory of the ego, sometimes referred to as ego psychology. Although Freud regarded the ego as the executive of the total personality, at least in the case of the healthy person, he never granted it an autonomous position; it always remained subservient to the wishes of the id. In what was to be his final pronouncement on psychoanalytic theory, Freud (1940) reiterated what he had said so many times before: "This oldest portion [the id] of the mental apparatus remains the most important throughout life," (p. 14). The id and its instincts express "the true purpose of the individual organism's life." There is no question as to how Freud felt regarding the
relationship of the ego and the id: The id is the dominant member of the partnership.

**Anna Freud**

In contrast to Freud’s position, some psychoanalytic theorists have proposed a greater emphasis on the role of the ego in the total personality. The first of these theorists was Freud’s own daughter, Anna. Anna Freud’s life and unique status within psychoanalysis have been reviewed by a number of authors (e.g., Coles, 1992; Dyer, 1983; Roazen, 1968, 1969, 1971; Sayers, 1991; Young-Bruehl, 1988), and her publications have been compiled in eight volumes published by the International Universities Press.

Anna Freud’s story is inevitably intertwined with that of her father. For example, Anna was born in 1895, the final publication year for the collaborative *Studies on Hysteria* and the year in which Sigmund Freud wrote his *Project for a Scientific Psychology*. Later, Anna was poised to launch her own analytic practice in 1923, the year in which her father published *The Ego and the Id*. This, however, also was the year of Sigmund Freud’s first surgery for oral cancer, and Anna increasingly became her father’s nurse, secretary, and companion during the remaining 16 years of his life.

Anna Freud’s position within psychoanalysis has generated a number of fascinating ironies. For example, it is remarkable that Sigmund Freud’s search for an intellectual heir, which was bitterly unsuccessful with colleagues such as Carl Jung, ultimately succeeded with his own daughter. Sigmund Freud conducted Anna’s training analysis, and Anna ultimately became her father’s intellectual custodian, but her own work demonstrated how her father’s model could profitably be expanded. In addition, it was Anna who actually studied children and the childhood periods about which Sigmund Freud had erected such elaborate interpretations based on the clinical recollections of adult patients. This work convinced Anna Freud that the analytic techniques proposed by her father must be modified for the analysis of children. Free association was of little use with young children, for example, and transference became a much more complicated phenomenon. Perhaps Anna Freud’s most important modification, however, was conceptual as well as technical. Her work in England with children ravaged by the traumatic events of World War II convinced Anna that an exclusive focus on intrapsychic conflict is inadequate with children; rather, a child’s past and present external reality can greatly influence his or her behavior and pathology. Anna and her colleagues established therapeutic, residential centers (e.g., the Hampstead Nurseries and Bulldogs Bank) for these children. Some of her interpretations of the behavior of these children stand in sharp contrast to those provided by her father. For example, a group of children evacuated from a Nazi concentration camp subsequently displayed a fear of large trucks, and Anna interpreted this phobia in terms of the similarity between these vehicles and trucks previously seen in the concentration camp.
This straightforward inference provides a remarkable alternative to her father's Oedipal interpretation of the phobia Little Hans developed for horses.

Anna Freud is best known for her work on the ego and its defense mechanisms, as described in the classic book *The ego and the mechanisms of defense*, which she published in 1936. In contrast to subsequent ego psychologists, she conceptualized the ego in a manner consistent with the orthodox analytic view of the interrelationships among id, ego, and superego. That is, the role of the ego is to negotiate gratification of instinctual impulses while accommodating internalized moral constraints, albeit with somewhat more autonomy than Sigmund Freud had proposed. Anna Freud provided a systematic discussion of the defensive strategies to which the ego may resort, extending her father's treatment to include the following ten defense mechanisms: regression, repression, reaction formation, isolation, undoing, projection, introjection, turning against the self, reversal, and sublimation.

Anna Freud's second major theoretical contribution was the extension of child development to include maturational sequences beyond the expression of and defense against sexual and aggressive impulses. These sequences, which she termed *developmental lines*, entail a progression from irrational dependence on external constraints to more rational mastery of people, situations, and impulses. Thus, developmental lines chronicle the child's gradual acquisition of ego mastery, and they provide a foundation for Erik Erikson's stage theory, as described later in this chapter. As an example, consider the developmental line from egocentricity to companionship. According to Anna Freud's analysis, the child initially has a selfish orientation in which other children are seen only as rivals. Subsequently, other children are seen as lifeless toys. Gradually, other children come to be seen as potential helpers and partners whose assistance may be useful in dealing with specific tasks. Eventually, the child can conceptualize other children as individuals in their own right and as legitimate targets for a variety of emotions and interactions. Other major developmental lines describe the progression from dependency to emotional self-reliance, sucking to rational eating, wetting and soiling to bladder and bowel control, irresponsibility to responsibility in bodily management, and body to toy and play to work (A. Freud, 1965). Later in her career, she proposed additional lines moving from physical to mental pathways of discharge, from animate to inanimate objects, and from irresponsibility to guilt (A. Freud, 1973). The central importance attributed to developmental lines by Anna Freud is revealed in the following passage:

*With complete temporal balance and harmony between the various lines, the result could not fail to be a completely harmonious, well-balanced personality. . . . In fact, progress on any line is subject to influence from three sides: the variation in innate givens, which provide the raw material out of which id and ego are differentiated; the environmental*
conditions and influences, which only too often differ widely from what is appropriate and favorable for normal growth; the interactions between internal and external forces, which constitute the individual experience of each child. . . . it is this variety of progress on the lines, i.e., developmental failures and successes, which can be held responsible for the innumerable variations in human characters and personalities. (A. Freud, 1973, p. 69).

Despite the modifications, Anna Freud regarded her formulations as consistent with Sigmund Freud's emphasis on instinctual impulses. In contrast, the new ego theory proposed by Heinz Hartmann (1958, 1964) not only embraces such topics as the development of the reality principle in childhood, the integrative or synthesizing functions of the ego, the ego's auxiliary processes of perceiving, remembering, thinking, and acting, and the defenses of the ego but, more important, it has put forward the concept of the autonomy of the ego. Discussions of the autonomous functions of the ego usually begin by quoting from one of Freud's last articles, in which he wrote, "But we must not overlook the fact that id and ego are originally one, and it does not imply a mystical over-valuation of heredity if we think it credible that, even before the ego exists, its subsequent lines of development, tendencies and reactions are already determined" (Freud, 1937, pp. 343–344). Proceeding from this quotation, Hartmann postulates that there is an undifferentiated phase early in life during which both the id and the ego are formed. The ego does not emerge out of an inborn id, but each system has its origin in inherent predispositions and each has its own independent course of development. Moreover, it is asserted that the ego processes are operated by neutralized sexual and aggressive energies. The aims of these ego processes can be independent of purely instinctual objectives. Thus, the ego and the instincts develop and function in an independent and complementary manner. Just as the instincts have biological bases, so also are there "inborn ego apparatuses" that permit the individual to adapt to the environment. Adaptation is a reciprocal process that entails both change in the self ("autoplastic" change) and change in the world ("alloplastic" change). The reader should note the similarity between this model and Piaget's distinction between accommodation and assimilation as well as Bandura's concept of reciprocal determinism (see Chapter 14). As Westen (1990) points out, Hartmann was, to a large extent, a cognitive psychologist.

Ego defenses do not have to be pathological or negative in character; they may serve healthy purposes in the formation of personality. Hartmann believes that a defense may become independent of its origin in combating the instincts and serve the functions of adjustment and organization. Ego theorists also attribute a conflict-free sphere to the ego. This means that some processes of the égo are not in conflict with the id, the superego, or the external world.
These ego processes may, of course, be incompatible with one another so that the person has to decide which is the best of several ways to solve a problem or make an adaptation.

Parallel to the emergence of this new conception of an autonomous ego has been a growing interest in the adaptive functions of the ego, that is, the nondefensive ways in which the ego deals with reality, or with what Freud called “reality testing.” For making effective adaptations to the world, the ego has at its disposal the cognitive processes of perceiving, remembering, and thinking. One consequence of this new emphasis on the ego’s cognitive processes has been to draw psychoanalysis closer to psychology, a trend discussed later in this chapter. Among the leaders of this adaptational viewpoint are Rapaport (1960), Gill (1959), and Klein (1970). See Blanck and Blanck (1974, 1979) for general discussions of ego psychology.

This trend of treating the ego as an autonomous system whose origin is parallel with the id and that is endowed with autonomous functions and energy sources has not gone unchallenged by other psychoanalysts. Nacht (1952), for example, deplores this new “ego psychology,” which he considers sterile and regressive. The psychologist Robert R. Holt (1965) has made a critical evaluation of the concept of ego autonomy as presented in the writings of Hartmann and Rapaport and concludes that it will not come to occupy an important place in psychoanalytical thinking. Holt writes, “One would instead be mainly concerned to describe the relative roles of drive, external stimuli and press, and various inner structures in determining behavior, and the complex interactions between them” (p. 157). It might be pointed out that this is precisely what Freud was saying and doing throughout his life.

This new ego theory has appealed to many psychologists because it focuses on the traditional subject matter of psychology, namely, perception, memory, learning, and thinking. It also has an appeal because it emphasizes the characteristic processes and behavior of the normal person in contradistinction to the deviant processes and behavior of a patient population. Furthermore, ego theory tends to place more emphasis on the rational, conscious, constructive aspects of human personality, in contrast to the emphasis placed on the unconscious and irrational by classical psychoanalysis. Finally, ego theory is said to be more “humanistic” than orthodox psychoanalytic theory.

A related group of theorists who have provided even more radical revisions of orthodox psychoanalysis emphasize the role of object relations in the formation and functioning of the personality. According to Westen (1990, p. 26), the emergence of this point of view represents “undoubtedly the major development in psychoanalysis since Freud.” This focus on object relations and the concept of self has led Eagle (1984, p. 3) to write, “Some of what were once thought
to be the very foundational propositions of psychoanalysis have been markedly reformulated" (see also Cashdan, 1988).

Freud proposed that "object-choice" occurs when people "cathect," or invest instinctual energy in, objects that can be used to gratify instinctual urges. Eagle (1984, p. 10) describes Freud's instinctual theory as follows:

"Objects and object relations are important primarily as means and vehicles for discharge of libidinal and aggressive drives. In this regard, the former, indeed, have a secondary and derived status. . . . we would develop neither an interest in objects nor object relations nor reality-testing ego functions were objects not necessary for drive gratification and were immediate gratification possible. . . . we are forced to have commerce with objects. But . . . our interest in and relationship with objects continues to be directly or indirectly linked to their use in and relevance for drive gratification."

For the object relations theorists, in contrast, objects are internalized representations of real people, not "mere outlet[s] for the discharge of an instinct. Object relations are primary, not derived from instinctual discharge, and they function to provide structure to the self" (McAdams, 1994, p. 96). As a consequence, the object relations theorists emphasize the acquisition and importance of representations of the self and others. In the process, the focus shifts from the Freudian primacy of instinctual discharge to the primacy of interpersonal relationships.

W. R. D. Fairbairn, for example, conceptualized humans as primarily concerned with seeking objects rather than seeking pleasure. He wrote, "psychology may be said to resolve itself into a study of the relationships of the individual to his objects, whilst, in similar terms, psychopathology may be said to resolve itself more specifically into a study of the relationships of the ego to its internalized objects" (1952, p. 60). Fairbairn reinterpreted many of Freud's postulates in terms of the ego's object-seeking activities (Eagle, 1984). For example, repression acts on split-off ego structures and internalized objects that are intolerable, not on instinctual impulses. The psychosexual stages reflect techniques adopted by the ego to regulate relationships with objects, not to permit discharge of a family of libidinal impulses. Aggression is a response to deprivation and frustration, not a wired-in instinct. The ego has its own dynamic aims, and conflict reflects splits in the ego, not incompatibilities between id and ego. Furthermore, the ego is present at birth, it has its own dynamic structure, and it is the source of its own energy. In fact, there is only the ego; there is no id. The ego's main functions are to seek and to establish relations with objects in the external world. In summary, Fairbairn proposed that the individual's development and behavior reflect the ego's relationship with external and internalized objects. The central issue in personality develop-
ment is not the channeling and rechanneling of instinctual impulses, but the progression from infantile dependence and primary identification with objects to a state of differentiation of self from the object.

The infant's first relation is with the mother and subsequently with the father, peers, and partners. Thus, object relations theories are essentially concerned with interpersonal relationships. The frustrations and losses that invariably occur in relations with these various objects leave a residue of internalized representations of the lost objects. These internalized images live on in the unconscious. They coalesce to form the individual's self, they conflict with one another, and they provide a basis for subsequent interpersonal relationships. Freud himself introduced this model of object relations in his discussions of mourning, melancholia, and the Oedipus complex, but object relations theorists propose that the internalization of lost objects is a much more pervasive phenomenon. Inconsistencies among these internalized objects may lead to splits within the ego, and the fantasized internal objects may interfere with formation of mature interpersonal relationships.

A number of other workers have made major contributions to the development of object relations approaches (e.g., Bowlby, 1969, 1973; Guntrip, 1971; Kernberg, 1976). Particularly noteworthy among these is Margaret Mahler (e.g., 1968; Mahler, Pine, & Bergman, 1975). Mahler described six stages through which children pass in the process of progressing from a state of nondifferentiation between the "I" and the "not-I" to a state of separation and individuation in which they recognize their own bodily and psychological identity. Other researchers have provided intriguing empirical investigations of object relations (e.g., Blatt & Lerner, 1983; see Westen, 1990, for an introduction).

The most influential of the object relations theorists is Heinz Kohut (1966, 1971, 1977, 1984), and it is Kohut who also has provided the clearest model of the self and its role in pathology. In essence, Kohut substituted self for conflict as the central factor in personality and psychopathology. In the process, he also provided the clearest connections with traditional personality theorists.

As we will see later in this chapter, Kohut followed Erik Erikson in his belief that the family and society with which individuals are confronted today differ substantially from those experienced by Freud's patients. Families in Freud's time proved threatening because they were too close and intimate. Families today, in contrast, are threatening because they are too distant and uninvolved: Parents are too removed emotionally and too concerned with their own narcissistic needs. As a consequence, they prove to be less than satisfactory as models of healthy selfhood and satisfying interpersonal relationships. The receipt of empathic reactions from important other people is as important to the health of the self as the presence of oxygen is to the health of the
body. In Kohut’s analysis, our deepest fears reflect not castration anxiety or conflictual id impulses but the potential for loss of love objects.

Kohut’s model of the personality grew out of his attempts to understand “narcissistically disturbed” people. Such people are deficient in self-control and self-esteem, and Kohut traced their pathology to a traumatically damaged sense of self. Kohut’s model of the self is bipolar, where the two poles are ambitions for power and success and idealized goals and values. These two poles are linked by a “tension arc” comprised of the individual’s basic talents and skills. This bipolar self develops as the child interacts with self-objects, or people who are so important that we incorporate them as part of ourselves. This assimilation into the self occurs through a process of transmuting internalization, in which the child adopts what are perceived to be the desirable features of the self-objects. The primary self-object during the first two years of life tends to be the mother. The mother serves as a mirroring self-object when she empathically confirms and admires the child’s strength, health, greatness, and specialness. This affirmation of the child’s agency and power contributes to formation of the ambition pole of the bipolar self. Later, the mother and/or father serve as idealizing self-objects who model perfection, power, strength, calmness, and care. These attachments help to establish the idealized goals and values pole of the self.

Note that the key issue during this process is not drive satisfaction but the presence or absence of empathic and loving relationships. Healthy mirroring and idealizing afford development of the ideal personality type, the person with an autonomous self. Such people are characterized by healthy levels of self-esteem and by mutually fulfilling interpersonal relationships. Exposure to deficient self-objects produces children who possess a noncohesive, empty, or injured self. Kohut (Kohut & Wolf, 1978) described four prototypic instances of such failure: The understimulated self is a numb and empty person who may engage in sensation seeking and substance abuse. This syndrome develops when self-objects habitually fail to provide mirroring and idealizing. The fragmenting self is insecure, weak, and low in self-esteem. This type of self develops when self-objects inflict humiliation and narcissistic injuries on the child. The overstimulated self develops unrealistic fantasies of greatness as a consequence of self-objects who were overly indulgent in their mirroring. Such people avoid situations where they might be the center of attention. Finally, people who develop an overburdened self perceive the world as a hostile and dangerous place. Such an attitude reflects self-objects who failed in their idealizing role of modeling strength and calmness.

For Kohut, the primary developmental and therapeutic goal was replacing the fragmented self with a cohesive self, in contrast to Freud’s goal of replacing id with ego. Furthermore, it is ambitions, ideals, and self-esteem that serve as the primary motivational forces in our lives. This position stands at a considerable distance from the classical psychoanalysis of Sigmund Freud. As
Westen (1990) described, major areas of controversy exist between classical psychoanalysis and the object relations of “self” theorists. First, the object relations theorists largely dispensed with the instinctual drive model. Humans are seen as object seekers, not pleasure seekers. Second, the correspondence between the self and the Freudian structural model of id, ego, and superego is by no means clear. Third, the cohesiveness of the self is inconsistent with the fundamental psychoanalytic notions of conflict and compromise; object relational difficulties do not easily reduce to conflicts between sexual or aggressive wishes and superego prohibitions.

Psychoanalysis and psychology have a common background in nineteenth-century science, but they remained independent of one another for a number of years because of their different interests. In its early years, psychology was concerned with investigating the elements and processes of consciousness. Sensation, perception, memory, and thinking were its chief topics of interest. Psychoanalysis, on the other hand, was a psychology of the unconscious; its interests were in the areas of motivation, emotion, conflict, neurotic symptoms, dreams, and character traits. Moreover, the science of psychology grew up in an academic and laboratory setting, whereas psychoanalysis developed in a clinical setting; so representatives of the two disciplines had little contact with each other.

Gradually, the gap between the two disciplines began to diminish, and following World War II, the interpenetration of psychology and psychoanalysis has grown at an accelerated rate. Shakow and Rapaport (1964) and Hall and Lindzey (1968) discuss the reasons why psychology and psychoanalysis have grown closer together. On the one hand, psychoanalysis, which Freud always regarded as being a branch of psychology, has shown more interest in “normal” behavior, culminating in the construction of an ego psychology. The extent to which the “psychologizing” of psychoanalysis has progressed is indicated by the title of a book of essays honoring the father of ego psychology, Heinz Hartmann. It is called Psychoanalysis: a general psychology (Loewenstein et al., 1966). Labeling psychoanalysis “a general psychology” goes beyond Freud’s claim that it was a part but not the whole of psychology.

Psychology for its part began to take an interest in motivation and personality, and the field of clinical psychology burgeoned during and following World War II. Psychologists found much that was relevant to its new concerns in psychoanalysis. Even prior to the war, individual psychologists such as Kurt Lewin and Henry Murray conducted empirical research that was related to and in part inspired by psychoanalysis. During the late 1930s the efforts that were made to bring about a rapprochement between Hull’s reinforcement theory and aspects of psychoanalysis by such psychologists as Neal Miller,
Hobart Mowrer, and Robert Sears brought more experimentalists into contact with Freud’s conceptions of personality.

On the theoretical side, David Rapaport (1959, 1960) drew up a conceptual model of psychoanalysis that is closely interwoven with a number of traditional psychological concepts. In fact, Rapaport has been one of the key figures in the growing interpenetration between psychoanalysis and psychology. Klein, Erikson, and others have acknowledged Rapaport’s great influence on their thinking. Symposia that included both psychologists and psychoanalysts interested in examining the mutual relations between the two fields were also helpful in reducing the communication gap (Bellak, 1959; Frenkel-Brunswik et al., 1954; Pumpian-Mindlin, 1952).

Surely one of the most important factors in bringing about a closer relationship between psychology and psychoanalysis was the opportunity offered psychologists to obtain competent training in psychoanalysis from qualified psychoanalysts. Psychoanalytic institutes and places like the Menninger Clinic in Topeka, Kansas, and the Austen Riggs Center in Stockbridge, Massachusetts, opened their doors to selected postdoctoral psychologists in the years following World War II. Prior to that time, psychoanalytic training was available only to persons with a medical degree. At least, this was the case in the United States. The monopolizing of psychoanalysis by the medical profession is ironical in view of the fact that Freud himself was strongly opposed to psychoanalysis becoming exclusively a medical specialty and argued vigorously for an open-door policy in the training of psychoanalysts (1926a). Many of the early psychoanalysts were not physicians.

Psychologists who received psychoanalytic training returned then to universities where they were able to offer their students a better and more sympathetic understanding of psychoanalysis. They also initiated research programs that had a psychoanalytic orientation. Nor should the role played by the National Institute of Mental Health of the Department of Health, Education, and Welfare be overlooked. This Institute has provided large sums of money for training and research in psychoanalytically oriented psychology. Without this financial support it is doubtful whether such great strides could have been made in uniting the two fields.

George Klein may be taken as an exemplar of those psychologists who in the postwar years combined a traditional education in psychology with training in psychoanalysis. These individuals brought to psychoanalysis the values of laboratory experimentation and quantification and a respect for theory building as well as a firm grounding in cognitive processes. They received from psychoanalysis the kind of theoretical orientation and insights into the person that were lacking in their educational background. That psychoanalysis is no longer
considered to be alien to academic psychology is due in large part to the pioneer efforts of these psychologists.

Klein received his graduate training in psychology at Columbia University where he did experimental investigations on animal behavior and human perception, highly respectable areas of psychology. After being discharged from the Air Force in 1946, he went to the Menninger Clinic, one of the few places in the United States where psychologists could obtain psychoanalytically oriented training in clinical psychology. Like many other psychologists of that period, Klein underwent a personal psychoanalysis and later graduated from the New York Psychoanalytic Institute. His principal identification remained with psychology, however. As a professor of psychology and one of the founders of the Research Center for Mental Health at New York University, Klein, in collaboration with other psychologists and graduate students, carried on an extensive research program on topics heavily influenced by psychoanalytic thought. In 1959, Klein founded a monograph series, Psychological Issues, which has provided a forum for the presentation of research findings and theoretical issues relevant to psychoanalysis.

Klein's principal contributions to the fusion of psychology and psychoanalysis were fourfold. First, he and his associates demonstrated that clinically derived hypotheses could be investigated in the laboratory under rigorously controlled conditions. Second, he and his associates provided an opportunity for doctoral candidates in psychology interested in psychoanalysis to pursue their studies in a research-oriented environment. Third, by virtue of the fact that Klein was himself a recognized and acceptable member of traditional psychology, his writings helped to weaken the hostility many psychologists felt toward what they considered to be "unscientific" psychoanalysis. Finally, Klein made important contributions to psychoanalytic theory, contributions that also helped to make the theory more palatable to psychologists.

As we said earlier, Klein was only one psychologist among many who were instrumental in breaking down the barriers between psychology and psychoanalysis. As noted in another chapter, Henry Murray and his many brilliant students at Harvard were a strong force, perhaps the strongest, in introducing psychoanalysis into the mainstream of academic psychology. Murray was medically trained and a psychoanalyst, however, and not a traditionally trained psychologist. Moreover, he evolved a theory of personality that, although strongly influenced by psychoanalysis, was uniquely his own theory. Klein, on the other hand, and many like him were and remained psychologists despite their training in psychoanalysis. Not only did they labor to make psychoanalysis more scientific, but they also contributed to the elaboration and modification of classical psychoanalysis. They were not concerned with formulating a new theory.

Although Klein's research activities embraced a number of areas, he is probably best known for his studies of the different ways in which we perceive
a situation, remember a past event, or solve a problem: "Our focus has been the perceiver and how he organizes experience in his own way" (Klein, 1970, p. 142).

In a series of perceptual studies, it was found that some people employed the strategy of "leveling" their perceptions whereas others employed the strategy of "sharpening" their perceptions. Levelers compared with sharpeners, for instance, were poorer at making correct estimates of the sizes of squares that were gradually increased in size. Levelers tended to make the same estimate of size for large squares as they did for small ones. They did not notice the difference. Sharpeners varied their estimates so they were much more accurate. These strategies Klein called cognitive controls or attitudes. In subsequent experiments, it was found that people behaved consistently in different types of tasks. People who were levelers in estimating size were less able to discover hidden faces in a picture because they were less aware of small differences in the picture than sharpeners. This personal consistency in the use of a particular strategy is called cognitive style. A number of other cognitive strategies have been identified (Gardner et al., 1959).

For Klein, needs, motives, drives, and emotions are not the only processes that direct and control behavior. Indeed, they may not even be the most important ones. The way in which a person's cognitive structure is organized, for example, whether he or she is a leveler or a sharpener, also directs and controls behavior and thereby helps to determine its effectiveness in adapting to the world.

Although Klein acknowledged that his research on cognitive processes was motivated by the ego theory of Hartmann and others, it may be pointed out that these studies are more in the tradition of academic psychology than in the tradition of psychoanalysis. They could have been planned and executed without recourse to psychoanalytic ego theory.

Psychologists trained in psychoanalysis not only have made laboratory investigations of Freudian hypotheses, they also have engaged in dissecting and reformulating psychoanalytic theory. George Klein, to take one example, devoted the last years of his life to disentangling what he called the clinical theory of psychoanalysis from its metapsychology (Klein, 1976; also Gill & Holzman, 1976). Metapsychology refers to speculations about the structure, dynamics, origins, and development of personality. Freud's metapsychology, Klein claims, is based on a natural science conception of humans. It treats the individual as a biological system, that is, an organism, consisting of structures (id, ego, and superego) charged with instinctual energies. The energies in the different structures come into conflict with one another (cathexis versus anticathexis), resulting in the accumulation of tensions. The aim of the organism is to discharge these tensions and return to a state of rest. In attempting to realize this aim, the instinctual energies undergo what Freud called vicissitudes of various kinds including repression, displacement, projection, and
reaction formation. Metapsychology is, in Klein’s view, impersonal and mecha-
nistic.

Freud’s clinical theory as described by Klein is a theory of the person
rather than one of the organism. It is personal and humanistic. It tries to
understand this individual’s problems and to interpret his or her experience
and behavior in terms of his or her aims, intentions, directions, and purposes.
It looks for reasons rather than causes. Klein feels that the two theories, the
clinical and the metapsychological, should be sharply differentiated, which he
says Freud did not do, because they present quite different views of the individ-
ual. The former is psychological and human, but the latter is biological and
physical. In fact, Klein would dispense with metapsychology entirely because
it serves no useful purpose for the psychologist and may even be a detriment
to the proper understanding of the individual. Since Freud has been repeatedly
criticized by psychologists for his depersonalized model, Klein’s rejection of
metapsychology has eliminated from psychoanalytic theory this major imped-
iment to its acceptance by psychologists. Klein has been joined in this endeavor
by Gill (1976), who asserts defiantly “metapsychology is not psychology.”

Other psychologists who have contributed to the reformation of psychoana-
lytic theory are Schafer (1976) and Holt (1976). One of the most influential
of this group has been Robert White.

White (1963a) has joined the ego psychologists in proposing not only that the
ego has its own intrinsic energy but also that there are intrinsic ego satisfac-
tions independent of id or instinctual gratifications. Notable among these auton-
omous ego satisfactions is the person’s sense of competence in performing
adaptive tasks.

In an enormously influential paper, White defined competence as “an
organism’s capacity to interact effectively with its environment” (1959, p. 297).
He proceeded to argue that the motivation to attain competence cannot be
accounted for within traditional drive (e.g., Clark Hull) or instinct (e.g., Sig-
mund Freud) theories. Classical drive reduction models work well for survival
motives such as hunger and sex, but they are not adequate to account for the
tendency observed in the early 1950s for a wide variety of organisms to engage
in exploratory behavior. Unlike other drives, exploratory behavior is not easily
related to an organic need or deficit; it does not lead to a specific consummatory
response, and it appears to entail increasing excitement rather than arousal
reduction. In similar fashion, White argued, the urge for competence does not
fit orthodox drive models.

Neither does competence motivation fit the classical psychoanalytic model
of instinctual motivation. Ego psychological approaches, such as Hendrick’s
“instinct to master” and Hartmann’s autonomous functions existing in a “con-

Robert White

conflict-free ego sphere,” initially appear compatible with competence motivation,
but the attempt to account for them in terms of neutralized instinctual energies is no more successful than the orthodox behaviorists' attempts to include exploration as a primary drive. Once again, the necessary assumptions of a somatic source and tension reduction do not correspond with the reality of the phenomenon. Instead, White proposes a distinct motivation to become competent, based on the organism's "intrinsic need to deal with the environment" (1959, p. 318), and he calls this motivation effectance. Effectance motivation is set aside when drives whose satisfaction is necessary for survival demand the organism's attention, but "effectance motivation is persistent in the sense that it regularly occupies the spare waking time between episodes of homeostatic crisis" (1959, p. 321).

This motivation is easily seen in children at play. A child's play can be understood as "the agreeable task of developing an effective familiarity with his environment. This involves discovering the effects he can have on the environment and the effects the environment will have on him. To the extent that these results are preserved by learning, they build up an increased competence in dealing with the environment. The child's play can thus be viewed as serious business" (1959, p. 321).

The most compelling application of White's effectance model is his attempt to reconceptualize the Freudian psychosexual stages of development. White (1960) raises two objections to the Freudian stage model. First, Freud's libido model is inadequate to account for the emotional development of children. Note that White is not rejecting Freud's model; rather, he is arguing that libido must be augmented by attention to growth in the child's sense of competence. That is, key aspects of development can only be understood from the perspective of changes in the child's actual competence and subjective sense of competence, where this latter term is conceptualized as "the cumulative product of one's history of efficacies and inefficacies" (1960, pp. 103–104; cf. Skinner's reinforcement history, as discussed in Chapter 12). Second, the Freudian developmental prototypes (i.e., the infant at the breast, the child on the toilet, the phallic child concerned with genital impulses toward parents, and the mature adult concerned with heterosexual relationships), even when translated into more contemporary interpersonal terms, provide inadequate models for development.

Consider the Freudian oral stage. White agrees that "if one is determined to use a single model for everything that happens during the first year, the model of the feeding child is clearly the proper choice" (1960, p. 112). But this single model cannot easily account for other behaviors, such as play and the child's increasing interest in feeding itself. Indeed, most parents will appreciate Gesell's description of the spoon's "hazardous journey" when the child attempts to guide it from dish to mouth. If oral gratification were the only issue, children should not attempt to interfere with or take over adults' attempts to feed them. But children do try to take over this function, and they
apparently delight in doing so. Play and increasing self-reliance are inexplicable from a libidinal point of view, but they are entirely consistent with a competence model that emphasizes the payoff accruing to the child from increasingly effective interactions with the environment. In summary, the psychosexual version of the oral stage represents "a regrettable overgeneralization from a very sound core" (1960, p. 113), and White proposes that we employ complementary oral and competence models.

Similarly, White suggests that the negativism of a child in the throes of the "terrible two's" is better understood as an "intrinsic crisis in the growth of social competence," not a displacement from issues in toilet training. Adults often are struck by the attempts of two- or three-year-old children to do things by themselves, even to the extent of becoming angry when an adult demonstrates the "right way" to do something or by children who renounce parental entreaties to share. For White, such attempts to establish autonomy are better understood as manifestations of the motivation to establish competence than as derivatives of toilet training. Notice how consistent this orientation is with Adler's focus on the child's increasing attempts to compensate for feelings of inferiority (see Chapter 4).

White readily acknowledges the "clearly sexual flavor to some of the child's activities and interests" during what Freud termed the phallic stage, but he does not see sexuality as the only issue during this stage. Many of the issues here are fundamentally asexual. Language, action, imagination, and initiative are of intrinsic importance to the child at this stage, and these concerns are best understood in terms of the child's striving for an enhanced sense of competence. Indeed, White is more concerned with competence and its vicissitudes than with Freud's "instincts and their vicissitudes"! Furthermore, the Freudian prototype represents a hopeless situation for the child, for parents inevitably prevail in the Oedipal conflict, just as they inevitably triumph in the clash over toilet training.

White rejected Freud's assumption that the latency period is a time of sexual quiescence: "For once we can almost say that Freud underestimated the importance of sex" (1960, p. 127). Furthermore, Freud's grouping of six to eight years in the child's life into a period of relative unimportance obscures numerous significant events. Many of these events, such as the demands for productivity and interpersonal relationships that accompany entry into formal schooling, reflect and influence the child's emerging sense of competence. Lingering residues from the pregenital stages can be consolidated or altered by events during this period, and the adult's "ego strength" is largely affected by events during this important time. With classic understatement, White concludes, "Freud's handling of the latency period was not one of his happier ventures" (1960, p. 127).

By now, the reader probably can anticipate White's evaluation of the genital stage. For Freud, the actions and object-choices during adulthood are largely
reexpressions of infantile conflicts and impulses. In contrast, White regarded the issues of adolescence and adulthood as real. In part, White attributed this outlook to his "occupational bias":

My professional life is spent among late adolescents whose sexual problems and social relations have for the most part not overwhelmed them. We talk together about their plans for study, their abilities and limitations, their struggles with materials to be learned and skills to be attained, their occupational leanings, career plans, and concerns about modern society as the scene of their future endeavors. We talk, in other words, mostly about their competence, and I do not believe that understanding is fostered by interpreting these concerns too much as displacements of instinctual drives, defense mechanisms, or interpersonal relations. They are real. (1960, p. 134).

In addition, White took seriously Freud's dictum that the mature individual is able "to love and to work," but he could not understand the latter in terms of the former: "Unfortunately the climactic turmoil of the orgasm is completely the wrong model for work" (1960, p. 135).

In summary, White argues persuasively that Freud's libidinal model must be supplemented by a competence model: "We should try to be as shrewd in detecting the vicissitudes of the sense of competence as Freud was with sexuality, aggression, and defense" (1960, p. 137). In addition to its intuitive appeal, we have noted linkages between White's competence model and other theoretical positions. We will encounter the notion of competence again when we discuss Gordon Allport's principle of mastery and competence (see Chapter 7) and most notably when we present Albert Bandura's more situationally specific construct of self-efficacy (see Chapter 14).

**ERIK H. ERIKSON**

The choice of Erik H. Erikson as the central figure in this chapter on contemporary psychoanalytic theory is an obvious one. No other person since the death of Sigmund Freud has worked so conscientiously to elaborate and extend the structure of psychoanalysis laid down by Freud and to reformulate its principles for an understanding of the modern world. The world changes, and unless a theory keeps abreast of these changes, it eventually stagnates and becomes irrelevant. One has only to read Freud chronologically to see how he kept his views abreast of the changing times. Since Freud's death, Erikson more than any other person discussed in this chapter has performed that function. He has breathed new life into psychoanalytic theory.
Two quotations from *Childhood and Society* (1950, 1963) indicate how Erikson's version of psychoanalysis has moved beyond that of Freud. The first reveals how Erikson reconceptualized the Freudian instinct: "Man's 'inborn instincts' are drive fragments to be assembled, given meaning, and organized during a prolonged childhood by methods of child training and schooling which vary from culture to culture and are determined by tradition" (1963, p. 95). That is, humans come with "minimal instinctive equipment," and these instincts are "highly mobile and extraordinarily plastic" (1963, pp. 95–96). The second quotation reveals how much Erikson saw the world as changing during the fifty years between publication of *The Interpretation of Dreams* (1900) and *Childhood and Society* (1950):

> I have focused on the problem of ego identity and on its anchoring in a cultural identity because I feel it to be that part of the ego which at the end of adolescence integrates the infantile ego states and neutralizes the autocracy of the infantile superego. . . . the patient of today suffers most under the problem of what he should believe in and who he should—or, indeed, might—be or become; while the patient of early psychoanalysis suffered most under inhibitions which prevented him from being what and who he thought he knew he was. . . . The study of identity, then, becomes as strategic in our time as the study of sexuality was in Freud's time. . . . Freud's findings regarding the sexual etiology of the neurotic part of a mental disturbance are as true for our patients as they were for his; while the burden of identity loss which stands out in our considerations probably burdened Freud's patients as well as ours, as reinterpretations would show. Different periods thus permit us to see in temporary exaggeration different aspects of essentially inseparable parts of personality. (pp. 279–283)

Some critics may say that Erikson's elaborations deviate so markedly from the letter and the spirit of psychoanalysis that they fall outside of the Freudian tradition. It is not our intention, however, to make an exhaustive comparison of Erikson's views with those of Freud's to determine whether he is or is not a true Freudian. The question, in any event, is a trivial one. The reader may find, if desired, one version of the differences between Erikson and Freud in Roazen (1976). Whatever others may say, Erikson considered himself a Freudian psychoanalyst. Trained in psychoanalysis at its very vortex, Vienna, analyzed by Anna Freud, a long-time practitioner of psychoanalysis, a member of its official organizations, and a training psychoanalyst for 35 years, Erikson felt that his views were consonant with the basic doctrine of psychoanalysis laid down by Freud. If Erikson has to be pinned down by a name, he would probably prefer to be called a post-Freudian.
in the education of children that he enrolled in and graduated from a school for the training of teachers in the Montessori method. The Montessori method stresses the development of the child's own initiative through play and work. This experience had a lasting influence on Erikson.

An even more profound influence was his inevitable exposure to psychoanalysis. He became acquainted with the Freud circle, underwent a training in psychoanalysis with Anna Freud, and studied psychoanalysis at the Vienna Psychoanalytic Institute, from which he graduated in 1933. He had now found his professional identity.

While studying psychoanalysis and teaching at the school, Erikson married Joan Serson, a Canadian-born dancer and fellow teacher. They decided to move to Denmark. When that did not work out satisfactorily, they came to the United States, settling in Boston in 1933. Erikson became the first child psychoanalyst in that city. He was also given a position at the Harvard Medical School and acted as a consultant to various agencies as well. While in Boston, Erikson did research with Henry A. Murray at the Harvard Psychological Clinic. After three years in Boston, Erikson accepted a position in the Yale University Institute of Human Relations and an instructorship in the Medical School. In 1938, an invitation to observe Indian children at the Sioux reservation in South Dakota proved irresistible. In 1939, Erikson went to California, where he became associated with the Institute of Child Welfare at the University of California in Berkeley, which was conducting a large-scale longitudinal study of child development. He also resumed his work as a psychoanalyst, taking time off to observe the Yurok Indians of Northern California.

During these years in California, Erikson wrote his first book, *Childhood and society* (1950; revised edition, 1963). This book had an immediate and far-reaching impact. Although Erikson has published nine other books since then, *Childhood and society* is generally regarded as the most significant since it lays down the themes that were to preoccupy Erikson for the rest of his life.

After resigning from his first professorship at the University of California as a protest against a special loyalty oath required of faculty members (it was later declared unconstitutional), Erikson took a position at the Austen Riggs Center in Stockbridge, Massachusetts, a leading center of residential psychiatry. In 1960, Erikson was appointed a professor at Harvard where his course on the life cycle became very popular with students. Erikson retired in 1970 and moved to a suburb of San Francisco. The Eriksons returned to Massachusetts in 1987, after the founding in Cambridge of the Erik Erikson Center. Erikson died on May 12, 1994, in Harwich, Massachusetts (see Hopkins, 1995).

Now let us turn to a discussion of Erikson's theoretical formulations.
Development, as we have pointed out, proceeds by stages—eight in all, according to Erikson's timetable. The first four stages occur during infancy and childhood, the fifth stage during adolescence, and the last three stages during the adult years up to and including old age. In Erikson's writings, particular emphasis is placed on the adolescent period because it is then that the transition between childhood and adulthood is made. What happens during this stage is of the greatest significance for adult personality. Identity, identity crises, and identity confusion are undoubtedly the most familiar of Erikson's concepts.

These consecutive stages, it should be noted, are not laid out according to a strict chronological timetable. Erikson feels that a given child has its own timetable, and therefore it would be misleading to specify an exact duration for each stage. Moreover, each stage is not passed through and then left behind. Instead, each stage contributes to the formation of the total personality. In Erikson's words, “anything that grows has a ground plan, and . . . out of this ground plan the parts arise, each part having its time of special ascendancy, until all parts have arisen to form the functioning whole” (1968, p. 92). This is known as the epigenetic principle, a term borrowed from embryology.

In describing the eight stages of psychosocial development, we have brought together and paraphrased material from four sources. In Childhood and society (1950, 1963) and later in Identity: Youth and crisis (1968), Erikson set forth the stages in terms of the basic ego quality that emerges during each stage. In Insight and responsibility (1964) he discussed the virtues or ego strengths that appear during successive stages. In Toys and reasons (1976), he described the ritualization peculiar to each stage. By ritualization Erikson means a playful and yet culturally patterned way of doing or experiencing something in the daily interplay of individuals. The basic purpose of these ritualizations is to turn the maturing individual into an effective and familiar member of a community. Unfortunately, ritualizations can become rigid and perverted and turn into ritualisms.

Erikson's most recent summary of the stages was presented in The life cycle completed (1985). Two charts from that publication serve as a good summary of the stages. The first (see Figure 5.1) describes the major characteristics and consequences of each stage. The student should refer to it when reading the descriptions that follow. The nucleus of each stage is a "basic crisis," representing the challenge to the evolving ego produced by contact with a new facet of society. For example, the child's entry into school during the fourth stage guarantees that he or she must confront the issue of industry versus inferiority, as well as a new complex of social agents. Thus, the stages described by Erikson are psychosocial, in contrast to the psychosexual stages described by Freud.

The second chart (see Figure 5.2) was intended to make the important but often overlooked point that the basic crisis that forms the core of each stage does not exist only during that stage. Each crisis is most salient during
Figure 5.1
Summary of the eight stages. Reprinted with permission from Erikson (1985, pp. 32–33).

<table>
<thead>
<tr>
<th>Stages</th>
<th>A: Psychosexual stages and modes</th>
<th>B: Psychosocial crises</th>
<th>C: Radius of significant relations</th>
<th>D: Basic strengths</th>
<th>E: Core-pathology basic antipathies</th>
<th>F: Related principles of social order</th>
<th>G: Binding ritualizations</th>
<th>H: Ritualism</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Infancy</td>
<td>Oral-respiratory, sensory-kinesthetic (incorporative modes)</td>
<td>Basic trust vs. basic mistrust</td>
<td>Maternal person</td>
<td>Hope</td>
<td>Withdrawal</td>
<td>Cosmic order</td>
<td>Numinous</td>
<td>Idolism</td>
</tr>
<tr>
<td>II. Early childhood</td>
<td>Anal-urethral, muscular (retentive-eliminative)</td>
<td>Autonomy vs. shame, doubt</td>
<td>Parental persons</td>
<td>Will</td>
<td>Compulsion</td>
<td>“Law and order”</td>
<td>Judicious</td>
<td>Legalism</td>
</tr>
<tr>
<td>III. Play age</td>
<td>Infantile-genital, locomotor (intrusive, inclusive)</td>
<td>Initiative vs. guilt</td>
<td>Basic family</td>
<td>Purpose</td>
<td>Inhibition</td>
<td>Ideal prototypes</td>
<td>Dramatic</td>
<td>Moralism</td>
</tr>
<tr>
<td>IV. School age</td>
<td>“Latency”</td>
<td>Industry vs. inferiority</td>
<td>“Neighborhood,” school</td>
<td>Competence</td>
<td>Inertia</td>
<td>Technological order</td>
<td>Formal (technical)</td>
<td>Formalism</td>
</tr>
<tr>
<td>V. Adolescence</td>
<td>Puberty</td>
<td>Identity vs. identity confusion</td>
<td>Peer groups and outgroups; models of leadership</td>
<td>Fidelity</td>
<td>Repudiation</td>
<td>Ideological worldview</td>
<td>Ideological</td>
<td>Totalism</td>
</tr>
<tr>
<td>VI. Young adulthood</td>
<td>Genitality</td>
<td>Intimacy vs. isolation</td>
<td>Partners in friendship, sex, competition, cooperation</td>
<td>Love</td>
<td>Exclusivity</td>
<td>Patterns of cooperation and competition</td>
<td>Affiliative</td>
<td>Elitism</td>
</tr>
<tr>
<td>VII. Adulthood</td>
<td>(Procreativity)</td>
<td>Generativity vs. stagnation</td>
<td>Divided labor and shared household</td>
<td>Care</td>
<td>Rejectivity</td>
<td>Currents of education and tradition</td>
<td>Generational</td>
<td>Authoritarianism</td>
</tr>
<tr>
<td>VIII. Old age</td>
<td>(Generalization of sensual modes)</td>
<td>Integrity vs. despair</td>
<td>“Mankind” “My kind”</td>
<td>Wisdom</td>
<td>Disdain</td>
<td>Wisdom</td>
<td>Philosophical</td>
<td>Dogmatism</td>
</tr>
</tbody>
</table>

a particular stage, but it has roots in previous stages and consequences in subsequent stages. For example, identity versus identity confusion is the defining crisis during adolescence, but identity formation begins during the first four stages, and the sense of identity negotiated during adolescence influences and evolves further during the final three stages. As a consequence, the “empty” cells in Figure 5.2 are not empty at all, and to see them as empty is to misunderstand the nature of Erikson’s stages. Let us now consider each stage in turn.

I. Basic Trust Versus Basic Mistrust

The earliest basic trust is established during the oral-sensory stage and is demonstrated by the infant in its capacity to sleep peacefully, to take nourishment comfortably, and to excrete relaxfully. Each day, as its wakeful hours
### Figure 5.2
Sequence of the eight stages. Reprinted with permission from Erikson (1985, pp. 56–57).

<table>
<thead>
<tr>
<th>Age</th>
<th>Stage</th>
<th>Conflict</th>
<th>Psychosocial Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old age</td>
<td>VIII</td>
<td>Integrity vs. despair, disgust, WISDOM</td>
<td></td>
</tr>
<tr>
<td>Adulthood</td>
<td>VII</td>
<td>Generativity vs. stagnation, CARE</td>
<td></td>
</tr>
<tr>
<td>Young adulthood</td>
<td>VI</td>
<td>Intimacy vs. isolation, LOVE</td>
<td></td>
</tr>
<tr>
<td>Adolescence</td>
<td>V</td>
<td>Identity vs. identity confusion, FIDELITY</td>
<td></td>
</tr>
<tr>
<td>School age</td>
<td>IV</td>
<td>Industry vs. inferiority, COMPETENCE</td>
<td></td>
</tr>
<tr>
<td>Play age</td>
<td>III</td>
<td>Initiative vs. guilt, PURPOSE</td>
<td></td>
</tr>
<tr>
<td>Early childhood</td>
<td>II</td>
<td>Autonomy vs. shame, doubt, WILL</td>
<td></td>
</tr>
<tr>
<td>Infancy</td>
<td>I</td>
<td>Basic trust vs. basic mistrust, HOPE</td>
<td></td>
</tr>
</tbody>
</table>

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increase, the infant becomes more familiar with sensual experiences, and their familiarity coincides with a sense of feeling good. Situations of comfort and the people responsible for these comforts become familiar and identifiable to the infant. Because of the infant’s trust in and familiarity with the maternal person, it achieves a state of acceptance in which that person may be absent for awhile. This initial social achievement by the infant is possible because it is developing an inner certainty and trustfulness that the maternal person will return. Daily routines, consistency, and continuity in the infant’s environment provide the earliest basis for a sense of psychosocial identity. Through continuity of experiences with adults the infant learns to rely on them and to trust them:
but perhaps even more importantly it learns to trust itself. Such assurance must
outbalance the negative counterpart of basic trust—namely, basic mistrust,
which, in principle, is essential for human development.

The proper ratio of trust and mistrust results in the ascendance of hope:
"Hope is both the earliest and the most indispensable virtue inherent in
the state of being alive" (Erikson, 1964, p. 115). The foundation of hope relies
on the infant’s initial relations with trustworthy maternal parents who are
responsive to its needs and provide such satisfying experiences as tranquility,
nourishment, and warmth. All the verifications of hope originate in the mother-
child-world. Through an ever-increasing number of experiences in which the
infant’s hope is verified, it receives inspiration for new hopefulness. Simultane-
ously, it develops a capability to abandon disappointed hopes and to foresee
hope in future goals and prospects. It learns what hopes are within the realm
of possibility and directs its expectations accordingly. As it matures, it finds
that hopes that were once high priority are superseded by a higher level or
more advanced set of hopes. Erikson stated, "Hope is the enduring belief in
the attainability of fervent wishes, in spite of the dark urges and rages which
mark the beginning of existence" (1964, p. 118).

This first stage of life, infancy, is the stage of the numinous ritualization.
What Erikson meant by numinous is the baby’s sense of the hallowed presence
of the mother, her looking, holding, touching, smiling, feeding, naming, and
otherwise “recognizing” him. These repeated interactions are highly personal
and yet culturally ritualized. Recognition of the infant by the mother affirms
and certifies the infant and its mutuality with the mother. Lack of recognition
can cause estrangement in the infant’s personality—a sense of separation and
abandonment.

Each of the early stages establishes a ritualization that is continued on
into childhood and there contributes to the society’s rituals. The perverted
form of the numinous ritual is expressed in adult life by idolatrous hero worship,
or idolism.

During the second stage of life (the anal-muscular stage in the psychosexual
scheme) the child learns what is expected of it, what its obligations and
privileges are, and what limitations are placed upon it. The child’s striving for
new and more activity-oriented experiences places a dual demand upon it: a
demand for self-control and a demand for the acceptance of control from others
in the environment. In order to tame the child’s willfulness, adults will utilize
the universal and necessary human propensity for shame, yet they will encour-
age the child to develop a sense of autonomy and to eventually stand on its
own two feet. Adults who exercise control must also be firmly reassuring. The
child should be encouraged to experience situations that require the autonomy
of free choice. Excessive shamefulness will only induce the child to be shame-
less or force it to attempt to get away with things by being secretive, sneaky, and sly. This is the stage that promotes freedom of self-expression and lovingness. A sense of self-control provides the child with a lasting feeling of good will and pride; however, a sense of loss of self-control can cause a lasting feeling of shame and doubt.

The virtue of will emerges during this second stage of life. Trained self-will and the example of superior will displayed by others are the two origins from which the virtue of will develops. The child learns from itself and from others what is expected and what is expectable. Will is responsible for the child’s gradual acceptance of lawfulness and necessity. The elements of will are increased gradually through experiences involving awareness and attention, manipulation, verbalization, and locomotion. Will is the ever-increasing strength to make free choices, to decide, to exercise self-restraint, and to apply oneself.

Erikson called the ritualization of this stage judicious, because the child begins to judge itself and others and to differentiate between right and wrong. It develops a sense of the rightness or wrongness of certain acts and words, which prepares it for the experience, in the next stage, of feeling guilty. The child also learns to distinguish between “our kind” and others judged to be different; therefore others who are not like its own kind can be automatically assessed as wrong or bad. This is the ontogenetic basis of the worldwide estrangement that is called a divided species. In other writings, Erikson labeled this pseudospecies, the origin of intrahuman prejudice.

This period of judicious ritualization in childhood is the origin within the life cycle of the judicial ritual. In adulthood this ritual is exemplified by the courtroom trial and the procedures by which guilt or innocence is established.

The perverted ritualism of this stage is legalism, which is the victory of the letter of the law over the spirit—retribution for compassion. The legalistic person achieves satisfaction in having the convicted punished and humiliated, whether or not that was the intention of the law.

The third psychosocial stage of life, corresponding to the genital-locomotor stage of psychosexuality, is that of initiative, an age of expanding mastery and responsibility. The child during this stage presents itself as being decisively more advanced and more “together”; both physically and mentally. Initiative combines with autonomy to give the child a quality of pursuing, planning, and determination of achieving tasks and goals. The danger of this stage is the feeling of guilt that may haunt the child for an overzealous contemplation of goals, including genital fantasies, and the use of aggressive, manipulative means of achieving these goals. The child is eager to learn and learns well at this age; it strives to grow in the sense of obligations and performances.
Purpose is the virtue that ascends during this developmental stage. The child’s major activity at this age is playing, and purpose results from its playing, explorations, attempts and failures, and experimentation with its toys. In addition to physical games it undertakes mental games by assuming roles of parents and other adults in a make-believe world. By imitating these adult images, it realizes to some degree what it is like to be like them. Play provides the child with an intermediate reality; it learns what the purpose of things are, the connection between an inner and outer world, and how memories of the past apply to goals of the future. Thus, imaginative and uninhibited play are vitally important to the child’s development: “Purpose, then, is the courage to envisage and pursue valued goals uninhibited by the defeat of infantile fantasies, by guilt and by the foiling fear of punishment” (Erikson, 1964, p. 122).

This age of play is characterized by dramatic ritualization. The child actively participates in playacting, wearing costumes, imitating adult personalities, and pretending to be anything from a dog to an astronaut. This early stage of ritualization contributes to the dramatic element to be found in rituals (such as drama as a ritual of its own) throughout the remainder of its life. The inner estrangement that may ensue from this stage of childhood is a sense of guilt.

The negative counterpart of dramatic ritualization is the ritualism of impersonation throughout life. The adult plays roles or acts in order to present an image that is not representative of one’s true personality.

IV. Industry Versus Inferiority

During this fourth stage of the epigenetic process (in Freud’s scheme, the latency period), the child must submit to controlling its exuberant imagination and settling down to formal education. It develops a sense of industry and learns the rewards of perseverance and diligence. The interest in toys and play is gradually superseded by an interest in productive situations and the implements and tools used for work. The hazard of this stage is that the child may develop a sense of inferiority if it is (or is made to feel it is) unable to master the tasks that it undertakes or that are set for it by teachers and parents.

The virtue of competence emerges during the industry stage. Virtues of the previous stages (hope, will, and purpose) provided the child with a view of future tasks, although not a very specific view. The child now needs specific instruction in fundamental methods to become familiar with a technical way of life. It is ready and willing to learn about and use the tools, machines, and methods preparatory for adult work. As soon as it has developed sufficient intelligence and capacities for work, it is important that it apply itself to this work to prevent feelings of inferiority and regression of the ego. Work, in this sense, includes many and varied forms, such as attending school, doing chores at home, assuming responsibilities, studying music, learning manual skills, as well as participating in skillful games and sports. The important thing is that
the child must apply its intelligence and abounding energy to some undertaking and direction.

A sense of competence is achieved by applying oneself to work and to completing tasks, which eventually develops workmanship. The fundamentals of competence prepare the child for a future sense of workmanship; without it the child would feel inferior. During this age the child is eager to learn the techniques of productivity: “Competence, then, is the free exercise of dexterity and intelligence in the completion of tasks, unimpaired by infantile inferiority” (Erikson, 1964, p. 124).

School age is the stage of formal ritualization, when the child learns how to perform methodically. Watching and learning methods of performance provides the child with an overall sense of quality for craftsmanship and perfection. Whatever the child does—whether skills in school or tasks at home—it does it the proper way.

The distorted ritualism in adulthood is that of formalism, which consists of the repetition of meaningless formalities and empty rituals.

During adolescence the individual begins to sense a feeling of his own or her own identity, a feeling that one is a unique human being and yet prepared to fit into some meaningful role in society. The person becomes aware of individual inherent characteristics, such as likes and dislikes, anticipated goals of the future, and the strength and purpose to control one’s own destiny. This is a time in life when one wishes to define what one is at the present and what one wants to be in the future. It is a time for making vocational plans.

The activating inner agent in identity formation is the ego in its conscious and unconscious aspects. The ego at this stage has the capacity to select and integrate talents, aptitudes, and skills in identification with likeminded people and in adaptation to the social environment and to maintain its defenses against threats and anxiety, as it learns to decide what impulses, needs, and roles are most appropriate and effective. All of these ego-selected characteristics are assembled and integrated by the ego to form one’s psychosocial identity.

Because of the difficult transition from childhood to adulthood, on the one hand, and of a sensitivity to social and historical change, on the other, the adolescent during the stage of identity formation is likely to suffer more deeply than ever before or ever again from a confusion of roles, or identity confusion. This state can cause one to feel isolated, empty, anxious, and indecisive. The adolescent feels he or she must make important decisions but is unable to do so. Adolescents may feel that society is pushing them to make decisions; thus they become even more resistant. They are deeply concerned with how others view them and are apt to display a lot of self-consciousness and embarrassment.
During identity confusion, the adolescent may feel he or she is regressing rather than progressing, and, in fact, a periodical retreat to childishness appears to be a pleasant alternative to the complex involvement required in an adult society. The adolescent’s behavior is inconsistent and unpredictable during this chaotic state. At one moment he or she has an inner reservation not to commit to anyone in fear of being rejected, disappointed, or misled. The very next moment the adolescent may want to be a follower, a lover, or disciple, no matter what the consequences of such a commitment may be.

The term identity crisis refers to the necessity to resolve the transitory failure to form a stable identity, or a confusion of roles. Each successive state, in fact, “is a potential crisis because of a radical change in perspective” (Erikson, 1968, p. 96). The identity crisis, however, may seem particularly dangerous because the whole future of the individual as well as the next generation appears to depend on it.

Especially disturbing also is the development of a negative identity, that is, a sense of possessing a set of potentially bad or unworthy characteristics. The most common way of dealing with one’s negative identity is to project the bad characteristics onto others: “They are bad, not me.” Such projection can result in a lot of social pathology, including prejudice and crime and discrimination against various groups of people, but it is also an important part of the adolescent’s readiness for ideological involvement.

At this adolescent age the virtue of fidelity develops. Although now sexually mature and in many ways responsible, he or she is not yet adequately prepared to become a parent. The ego balance is confronted with a precarious situation: on the one hand, one is expected to assimilate oneself into an adult pattern of life, but, on the other hand, one must deny oneself the sexual freedom of an adult. Behavior shuttles back and forth from impulsive, thoughtless, sporadic actions to compulsive restraint. During this difficult time, however, the youth seeks an inner knowledge and understanding of himself or herself and attempts to formulate a set of values. The particular set of values that emerges is what Erikson calls fidelity: “Fidelity is the ability to sustain loyalties freely pledged in spite of the inevitable contradictions of value systems” (1964, p. 125).

Fidelity is the foundation upon which a continuous sense of identity is formed. The substance for fidelity is acquired through the “confirmation” of ideologies and truths and also through the affirmation of companions. The evolution of identity is based upon the human’s inherent need to feel that he or she belongs to some particular or “special” kind of people. For example, one needs to know that one belongs to a special ethnic group or religious group in which one may participate in its customs, rituals, and ideologies, or, indeed, that one prefers to participate in movements destined to change or renew the social structure. The youth’s identity gives definition to his or her environment.
The ritualization concurrent with the adolescent stage is that of ideology. Ideology is the solidarity of conviction that incorporates ritualizations from previous life stages into a coherent set of ideas and ideals. The estrangement that results from a lack of any integrated ideology is identity confusion.

The perversion of the ideology ritualization that may occur is totalism. Totalism is the fanatic and exclusive preoccupation with what seems to be unquestionably right or ideal.

In this stage, young adults are prepared and willing to unite their identity with others. They seek relationships of intimacy, partnerships, and affiliations and are prepared to develop the necessary strengths to fulfill these commitments despite the sacrifices they may have to make. Now, for the first time in their life, the youth can develop true sexual genitality in mutuality with a loved partner. Sex life in previous stages was restricted to a searching for sexual identity and a striving for transitory intimacies. For genitality to be of lasting social significance, it requires someone to love and to have sexual relations with and with whom one can share in a trusting relationship. The hazard of the intimacy stage is isolation, which is the avoidance of relationships because one is unwilling to commit oneself to intimacy. A transitory sense of isolation, too, is a necessary condition for making choices, but, of course, this can also result in severe personality problems.

The virtue of love comes into being during the intimacy stage of development. Love is the dominant virtue of the universe. It appears in many forms throughout earlier stages, beginning with the infant’s love for its mother, then the adolescent’s infatuations, and finally the love one exhibits in caring for others as an adult. Although love is apparent in the earlier stages, the development of true intimacy transpires only after the age of adolescence. Young adults are now capable of committing themselves to a joint relationship in which their mode of life is mutually shared with an intimate partner. Erikson wrote, “Love, then, is mutuality of devotion forever subduing the antagonisms inherent in divided function” (1964, p. 129). Although one’s individual identity is maintained in a joint intimacy relationship, one’s ego strength is dependent upon the mutual partner who is prepared to share in the rearing of children, the productivity, and the ideology of their relationship.

The corresponding ritualization of this stage is the affiliative, that is, a sharing together of work, friendship, and love. The corresponding ritualism, namely, elitism, is expressed by the formation of exclusive groups that are a form of communal narcissism.

The stage of generativity is characterized by the concern with what is generated—progeny, products, ideas, and so forth—and the establishment and
setting forth of guidelines for upcoming generations. This transmission of social values is a necessity for both the psychosexual and psychosocial aspects of personality enrichment. When generativity is weak or not given expression, the personality regresses and takes on a sense of impoverishment and stagnation.

The virtue of care develops during this stage. Care is expressed by one’s concern for others, by wanting to take care of those who need it and to share one’s knowledge and experience with them. This is accomplished through childrearing and teaching, demonstrating, and supervising. Humans as a species have an inherent need to teach, a need common to those of every vocation. Humans achieve satisfaction and fulfillment by teaching children, adults, employees, and even animals. Facts, logic, and truths are preserved throughout generations by this passion to teach. Caring and teaching are responsible for the survival of cultures, through reiteration of their customs, rituals, and legends. The advancement of every culture owes its progression to those who care enough to instruct and to live exemplary lives. Teaching also instills in humans a vital sense of feeling needed by others, a sense of importance that deters them from becoming too engrossed and absorbed with themselves. During one’s lifetime a multitude of experience and knowledge is accumulated, such as education, love, vocation, philosophy, and style of life. All these aspects of livelihood must be preserved and protected, for they are cherished experiences. The preservation of these experiences is accomplished by transcending or passing them on to others: “Care is the widening concern for what has been generated by love, necessity, or accident; it overcomes the ambivalence adhering to irreversible obligation” (1964, p. 131).

The ritualization of this stage is the generational, which is the ritualization of parenthood, production, teaching, healing, and so forth, roles in which the adult acts as a transmitter of ideal values to the young.

Distortions of the generational ritualization are expressed by the ritualism of authoritism. Authoritism is the seizure or encroachment of authority incompatible with care.

The last stage of the epigenetic process of development is labeled integrity. It can best be described as a state one reaches after having taken care of things and people, products, and ideas and having adapted to the successes and failures of existence. Through such accomplishments, individuals may reap the benefits of the first seven stages of life and perceive that their life has some order and meaning within a larger order. Although one who has reached a state of integrity is aware of various life styles of others, he or she preserves with dignity a personal style of life and defends it from potential threats. This style of life and the integrity of culture thus become the “patrimony of the soul.”

The essential counterpart of integrity is a certain despair over the vicissitudes of the individual life cycle, as well as over social and historical conditions,
not to speak of the nakedness of existence in the face of death. This can aggravate a feeling that life is meaningless, that the end is near, a fear of—and even a wish for—death. Time is now too short to turn back and attempt alternative styles of life.

*Wisdom* is the virtue that develops out of the encounter of integrity and despair in the last stage of life. Physical and mental activity of everyday functions are slowing down by this time in the life cycle. Simple wisdom maintains and conveys the integrity of accumulated experiences of previous years: “Wisdom, then, is detached concern with life itself, in the face of death itself” (Erikson, 1964, p. 133).

That the aging person is less adaptable to changing situations does not preclude a certain playfulness and curiosity that permits a closure of experience, as accrued from years of knowledge and judgment. Those in the stage of wisdom can represent to younger generations a style of life characterized by a feeling of wholeness and completeness. This feeling of wholeness can counteract the feeling of despair and disgust and the feeling of being finished as present life situations pass by. The sense of wholeness also alleviates the feeling of helplessness and dependence that can mark the very end of life.

The ritualization of old age may be called *integral*: this is reflected in the wisdom of the ages. In search of a corresponding ritualism Erikson suggests *sapientism*: “the unwise pretense of being wise.”

Freud, it will be recalled, conceived of the ego as the executive of the personality, an executive whose duties are to satisfy the impulses of the id, to deal with the social and physical exigencies of the external world, and to try to live up to the perfectionistic standards of the superego. Beleaguered from three sides, the ego resorts to various defenses to avoid being overwhelmed. This concept of a defensive ego, originated by Freud and elaborated by Anna Freud (1946), was modified by Hartmann and others (see pp. 178–179) to include adaptive and integrative functions.

As the foregoing discussion of Erikson’s stages of life demonstrates, he endowed the ego with a number of qualities that go far beyond any previous psychoanalytic conception of the ego. Such qualities as trust and hope, autonomy and will, industry and competence, identity and fidelity, intimacy and love, generativity and care, and integrity, although recognized human qualities, are not usually discussed in the psychoanalytic literature. When they are, the discussion usually consists of tracing such qualities back to infantile origins. Erikson scoffed at the exclusive emphasis on *originology*, as he called it, or *reductionism*, as others have labeled it.

Erikson asserted that he was aware of the “idealistic” connotations of such words as trust, hope, fidelity, intimacy, integrity, and so forth. He chose
them because they connote, in a variety of languages, universal human values that in primitive and ancient cultures as well as in modern life hold together three spheres essential to each other: the individual life cycle, the sequence of generations, and the basic social structure.

The kind of ego that Erikson described may be called the creative ego, although he did not use that word. It can and does find creative solutions to the new problems that beset it at each stage of life. It knows at each stage to use a combination of inner readiness and outer opportunity and does so with vigor and even a sense of joy. When thwarted, the ego reacts with renewed effort instead of giving up. The ego appears to be immensely robust and resilient. The powers of recovery, Erikson noted, are inherent in the young ego. The ego, in fact, thrives on conflict and crisis. It can be and usually is the master and not the slave of the id, the external world, and the superego. Indeed, Erikson said very little about the id and the superego, or about unconscious motivation and irrational strategies.

As a practicing psychoanalyst, Erikson was, of course, aware of the vulnerability of the ego, the irrational defenses it erects, and the devastating consequences of trauma, anxiety, and guilt. But he also saw that the patient’s ego usually is capable of dealing effectively with its problems with some help from the psychotherapist. This concentration on the potential strength of the ego characterizes all of Erikson’s writings.

Erikson’s conception of the ego was a very socialized and historical one. In addition to the genetic, physiological, and anatomical factors that help to determine the nature of the individual’s ego, there are also important cultural and historical influences. It is this placing of the ego in a cultural and historical context—a space–time frame—that is one of Erikson’s most creative contributions to ego theory.

Erikson also speculated about the dimensions a new ego identity might take (1974). An identity, he felt, must be anchored in three aspects of reality. The first is that of factuality: “a universe of facts, data, and techniques that can be verified with the observational methods and the work techniques of the time” (1974, p. 33). Then there is a sense of reality that can also be called universality because it combines the practical and concrete in a visionary world image. Gandhi, for one, had such a sense of reality. The third dimension is actuality, “a new way of relating to each other, of activating and invigorating each other in the service of common goals” (1974, p. 33). But then, perhaps with tongue in cheek, Erikson added a fourth dimension, luck or chance. This new ego identity would, at the same time, bring into existence a new world image in which a wider sense of common identity will gradually overcome the pseudospeciation that has helped to cause prejudice, discrimination, hate, crime, war, poverty, and enslavement. Only time will tell whether such a world image is attainable, but without the vision, Erikson might say, no new actuality can come into existence.
Observations made of patients in treatment constitute the main source of data for psychoanalytic theorists. Although Erikson derived his formulations from such observations, for the most part, he also observed normal children and adolescents in play situations, made several forays into Indian territory, and studied the lives of historical figures. He is probably best known for his psychohistorical studies, and his books on Luther (1958) and Gandhi (1969) are widely read.

Although Erikson has not published many case studies of his patients, the few that have appeared (1963) display a rare insight into the dynamics of personality and a compassion for disturbed people, especially children in trouble. His remarkable talent for establishing rapport with his patients is clearly evident, and his polished style makes these case studies literary events as well as scientific works.

In doing psychotherapy with children, Erikson, as have others, discovered that children could often reveal their concerns better when playing with toys than they could in words. This led Erikson to develop a standardized play situation making use of toys and blocks, which he employed in a nonclinical study of 150 boys and 150 girls between the ages of ten and twelve: "I set up a play table and a random selection of toys and invited the boys and girls of the study, one at a time to come in and to imagine that the table was a movie studio and the toys, actors and sets. I then asked them 'to construct on the table an exciting scene out of an imaginary moving picture’" (1963, p. 98). The child was then asked to tell a story about the scene he or she had constructed.

In studying a variety of connections between play configurations and the life history of these children, Erikson was astonished by the clear-cut differences in the use of play space in the scenes constructed by boys and girls. Boys, in general, built tall structures out of the blocks; girls tended to use the table as the interior of a house in which they placed furniture and people. They rarely used the blocks for constructing walls or structures. The boys’ scenes included a lot of implied action—traffic moving through streets, police officers who blocked the moving traffic, animals, and Indians. The girls’ scenes were more peaceful, although often the tranquility was disturbed by an intruding animal, boy, or man—never a girl or woman. Girls did not attempt to block these intrusions by erecting walls or closing doors. Erikson remarked that "the majority of these intrusions have an element of humor or pleasurable excitement" (1963, p. 105). Erikson observed that girls accentuate inner space and boys outer space. The reader should note that several attempts to replicate Erikson’s observations on sex differences in play construction have largely proven unsuccessful (Caplan, 1979; Cramer & Hogan, 1975).
In interpreting these differences between the sexes, Erikson emphasized what he called "the ground plan of the body"—meaning that at least in these prepubertal children the anatomical configuration of the maturing sexual organs strongly influenced the playful use of space in elaborating on exterior and interior configurations. These, of course, contain themes strongly influenced by traditional sex roles. These interpretations seem to agree with Freud's dictum that "anatomy is destiny," with the implication that sex differences are inborn and resistant to change.

Sex differences arise in part as a product of the developmental phenomena that Erikson terms psychosexual zones, organ modes, and social modalities. Although this segment of his theory is not well known, it is important because it provides the "prime link" between the psychosexual stages emphasized by Freud and the psychosocial stages for which Erikson is known. Zones correspond to the erogenous zones identified by Freud. Each of these libidinal zones is dominated during its stage of greatest sensitivity by a primary mode of functioning. Thus, the mouth primarily incorporates, the anus and urethra both retain and eliminate, the phallus intrudes, and the vagina includes. Each of these physical modes gives rise to a corresponding modality of social interaction. During the oral-sensory stage, for example, there are two incorporative modes. The first, in which the infant can hold objects in its mouth, produces the getting modality. The second, in which the infant can use its newly erupted teeth to bite onto objects, produces a grasping modality. Similarly, the retention and elimination modes of the anal-urethral-muscular stage evolve into the ability and desire for holding on and letting go. These modalities refer to attachments and commitments, much as the modes refer to interaction with objects.

Up to this point, the developmental progression has been similar for boys and girls. As revealed in Figure 5.3, however, the developmental paths through the infantile-genital stage diverge for boys and girls as a function of their different organ zones and physical modes. When reinforced by culture, the boy's intrusion predisposes him to making, in the sense of initiative and conquest, and the girl's intrusion predisposes her to catching, through attraction and appeal. In his 1975 presentation, however, Erikson took pains to emphasize that both sexes have both modalities at their disposal, such that this stage is dominated "in both sexes by combinations of intrusive and inclusive modes and modalities." Erikson did not totally renounce the concepts of penis envy for girls and castration anxiety for boys at this stage, but he shifted the emphasis in female development "from the exclusive sense of loss of an external organ to a budding sense of vital inner potential—the 'inner space,' then—that is by no means at odds with a full expression of vigorous intrusiveness in locomotion and in general patterns of initiative" (1975, p. 38). Genital modes that emerge after puberty are of necessity intrusive for males and inclusive for females. Under the force of cultural pressures, the different modalities may contribute
Figure 5.3
Zones, modes, and modalities as factors in the development of (a) boys and (b) girls. (Reprinted with permission from Erikson, 1963, p. 89.)
to exploitation of the female as the one who expects and is expected to remain dependent and in a child-caring role. The corresponding set of forces may lead the boy to competing or exploiting roles. Erikson emphasized that such outcomes need not occur.

Figure 5.3 presents Erikson's original schematic for illustrating this process. The small circles within the large circles represent the three organ zones: mouth on the top, anus on the bottom, and genitals on the side. Similarly, the Arabic numbers refer to modes: 1 and 2 for the two incorporative modes; 3 for retention and 4 for elimination, 5 for intrusion, and 1 again for inclusion. Finally, the Roman numerals refer to stages: I and II for the oral-sensory stage, III for the anal-urethral-muscular stage, IV for the infantile-genital-locomotor stage, and V for a rudimentary genital stage. The normative developmental sequence for boys follows the diagonal from I.1 to IV.5. The normative sequence for girls is from I.1 to III.3 and III.4, then on to IV.1 and IV.2.

Erikson (1975) subsequently discussed objections raised by feminist critics to these interpretations. He points out that he never said psychological similarities or differences between the sexes were determined solely by biological facts. Biology, while demarcating vital potentials, interacts with cultural and psychological variables to produce a given behavioral effect. Consequently, what males do and what females do with their masculine and feminine potentials is not rigidly controlled by their respective anatomies and physiologies but is amenable to differences in personality, social roles, and aspirations.

Expanding on Freud's dictum, Erikson (1975) wrote that "anatomy, history, and personality are our combined destiny." He did, however, recognize distinctive prototypic concerns for females and males. Echoing his discussion of zones, modes, and modalities, he suggested that "as birth control goes to the core of womanhood, the implications of arms control go to the core of the male identity, as it has emerged through evolution and history" (1975, p. 245). Just as birth control would permit women to choose roles other than motherhood, so arms control would permit males to choose roles beyond those defined by the imagery of technology and conquest. Erikson did not apologize for his postulation of separate modalities for men and women. Sounding almost Jungian in his suggestion that humans as a species need both potentialities, he described his vision of a world order that can evolve only "through an equal involvement of women and of their special modes of experience in the over-all planning and governing so far monopolized by men" (1975, p. 247).

Play situations serve about the same role in child analysis that dreams do in adult analysis. Although Erikson did not emphasize dreams in his writings, he wrote one very important theoretical paper on dreams (1954), using one of Freud's own dreams to illustrate his own views.
Erikson was one of only a few psychoanalysts who studied the relation of adult character traits to the ways in which children are brought up in primitive groups. In 1937, Erikson accompanied a field representative of the Commissioner of Indian Affairs to South Dakota to try to find out why Sioux children displayed such marked apathy. He discovered that the Sioux child was trapped in the dilemma of trying to reconcile the traditional tribal values inculcated in him or her during early training with the white man's values taught in the schools run by the Indian Service. Unable to effect a reconciliation, many children simply avoided the issue by withdrawing into a state of apathy.

Later, Erikson went to the Klamath River in Northern California where the Yurok Indians live. He was especially interested in making correlations between childhood training practices and the characteristic personality traits of these fishermen living along a river as compared to the hunters on the plains. For example, the acquisition and retention of possessions was a continuing preoccupation of the Yuroks. Reinforcement of this behavior began very early in life by teaching the child to be abstemious, to subordinate impulses to economic considerations, and to engage in fantasies about catching salmon and making money.

Erikson defined psychohistory as "the study of individual and collective life with the combined methods of psychoanalysis and history" (1974, p. 13). His book on Luther (1958) was subtitled, *A study in psychoanalysis and history.*

Erikson's interest in "psychoanalyzing" famous individuals began with his chapters on Hitler's childhood and Maxim Gorky's youth in *Childhood and society* (1950, 1963). These initial essays were followed by two full-length books, *Young man Luther* (1958) and *Gandhi's truth* (1969). He also wrote about George Bernard Shaw (1968), Thomas Jefferson (1974), William James (1968), and, in many of his writings, Freud. Freud himself probed the lives of famous people, including Leonardo da Vinci (1910a), Daniel Schreber, a German jurist (1911), Dostoevsky (1928), Moses (1939), and Woodrow Wilson in collaboration with William Bullitt (1967). There has been considerable dispute as to just how much of a role Freud played in the collaboration on Wilson.

**Case History and Life History.** Erikson took a giant methodological step in the study of historical figures when he envisioned that it was possible to apply the same methods used for reconstructing the past of a patient in psychoanalysis to reconstructing the past of a historical person. Case history becomes history. But he also realized, in making the transition from case history to life history, that the psychoanalyst needs to take into consideration what patients do in the world outside the clinic, what their world is like, and what restraints their world places on them as well as what opportunities it offers them. What can patients do given the world as it is, he asked. As a consequence of his
thinking about the lives of historical figures, he realized that the techniques of psychoanalysis "must supplement its clinical findings with the study of psycho-social functioning" (1975, p. 105).

Great men and women differ from patients, however, since they change the world by formulating a new world view that seizes the imagination of people and stirs them to action. One major difference between the life history of a famous person and the case history of a patient is as follows. In a case history, one tries to explain why a person fell to pieces; in a life history, one tries to explain how a person manages to stay together in spite of conflicts, complexes, and crises. This, of course, is an immensely important question. There must be many Hitlers roaming the streets or confined in mental or penal institutions, but there has only been one or possibly several successful (at least, for a time) Hitlers in modern times. Why does the same conflict or crisis break one person and make another?

In studying historical figures like Luther and Gandhi, Erikson was not interested in their childhood traumas as such, nor did he consider their adult behavior merely a fixation on or a regression to their infantile complexes. Instead he tried to show how the traumas of early life are reenacted in a transformed version in the deeds of adult life. It is simple enough to establish that Gandhi or Luther or any other man for that matter experienced conflicts and guilt over sensual feelings for his mother and hostile ones for his father. For Erikson the Oedipus complex or crisis is only the infantile form of a generational conflict. It is how this conflict is acted out in various forms throughout life that is important. Great men seem to be able to act it out in such a manner that it inspires and motivates many others to become their followers. Gandhi was an inspiration for millions of Indians who aspired to be free from British rule, as was Luther 400 years earlier for millions of Europeans who aspired to be free of the authority of Rome. In psychohistorical studies of great individuals one tries to show how the vicissitudes of their individual development history change the course of history.

What the great man does is to personify and to offer to people an integrating and liberating world view that, at the same time, is necessary for his own grandiosely conflicted identity and provides them with a sense of a new and wider collective identity. A common world view welds people together into an effective force for change. Luther’s personality and world view led to the Reformation, Gandhi’s to the liberation of India, Jefferson’s to American democracy, Lenin’s to Russian communism, and Mao’s to Chinese communism.

**Psychohistorical Methodology.** Erikson laid down fairly stringent rules as to how a psychohistorical study should proceed (1975). First, it is essential to bear in mind that the interpretation of any statement a person makes about his or her life must take into consideration several questions. At what point in their life did the person make the statement? How does the statement made
at a particular moment fit into the whole life history? What was going on in their world at the time the information was recorded? How do these contemporary world events articulate with the whole historical process? For example, Erikson had to face these questions when he analyzed and interpreted Gandhi's autobiography written when he was in his late fifties.

Moreover, the interpretation of an event in a life history should be "compatible with the developmental stage at which it is said to have occurred" (1975, p. 128) and also be plausible with respect to the whole continuity of a person's life. The probability of an event happening actually happened in the life of a person is strengthened if it can be shown that it occurs commonly "within the contemporary culture of the community and . . . within the history of that culture" (1975, pp. 132–133). Thus, it is as important for the biographer to be knowledgeable about the society, past and present, in which the person lives as it is for him or her to be informed about the events in the person's life. The person is made by history as well as making it.

The psychohistorian's interpretations are inevitably influenced by one's mood at the time one made the interpretations and by the intellectual tradition in which one has been trained. This means that if someone else of a different intellectual persuasion—say a Jungian or an existentialist—should write a life of Luther or Gandhi, their interpretations would differ from those of Erikson. (The same diversity, of course, is also to be found in the interpretations of patients' behavior by people of differing theoretical allegiances.) Even two Freudians do not agree in their interpretations, as the contrasting account of Luther by Norman O. Brown (1959) and Erikson (1958) show. (See Domhoff, 1970, for an interesting comparison of these "two Luthers.")

Erikson also pointed out that any psychohistorian "projects . . . on the men and the times he studies some un-lived portions and often the unrealized selves of his own life" (1975, p. 148). This observation suggests that the psychohistorian just as the psychotherapist should be psychoanalyzed to become aware of his or her own conflicts and complexes before writing or judging biographies.

As a consequence of Erikson's seminal psychohistorical studies, psychohistory has become a discipline in its own right with numerous practitioners. (See, e.g., McAdams, 1994, as well as the discussion in Chapter 7 of this text.) Erikson feels somewhat ambivalent about this new "industry" of which he is the entrepreneur.

Erikson's model of psychosexual stages has generated a variety of assessment strategies and a rich body of empirical investigations. We will begin with the best known measure of identity status, that developed by James Marcia. We then will examine research on two other psychosexual stages, and we will
conclude by considering recent work on the cross-cultural status of Erikson's stage model.

Identity Status

James Marcia (1966) developed a widely used measure of identity status in late adolescents and young adults. Marcia began by identifying four “concentration points” along a continuum of ego identity achievement: identity achievement, moratorium, foreclosure, and identity diffusion. He defined these statuses in terms of the extent to which the individual had experienced an identity crisis, or “engagement in choosing among meaningful alternatives” (1966. p. 551), and had developed an identity commitment, or investment in particular goals and behaviors.

Marcia employed a semistructured interview to establish the degree of crisis and commitment the individual exhibited in the areas of occupational choice plus political and religious ideology. (He later added the domain of sexuality. See, for example, Slugoski, Marcia, & Koopman, 1984.) The identity achievement person has experienced a crisis period during which he or she explored alternatives among various possibilities and subsequently has made commitments in the domains of occupation, ideology, and sexuality. The moratorium individual currently is in a crisis period. He or she has only vague commitments but appears to be struggling to form those commitments. This person still attends to adolescent issues and parental wishes. He or she is attempting to negotiate a compromise among parental wishes, social demands, and personal capabilities. A foreclosure person exhibits commitments, despite not having experienced a crisis. Such a person’s attitudes and goals rigidly reflect those of the parents. Finally, the identity diffusion individual may or may not have experienced a crisis. The hallmark of such a person is lack of commitment and lack of concern regarding occupation, ideology, and sexuality. Marcia (1966, p. 553) provides the following examples of responses to a question about how willing undergraduate male respondents would be to give up a stated career goal if something better came along:

Identity achievement: “Well, I might, but I doubt it. I can’t see what ‘something better’ would be for me.”

Moratorium: “I guess if I knew for sure I could answer that better. It would have to be something in the general area, something related.”

Foreclosure: “Not very willing. It’s what I have always wanted to do. The folks are happy with it and so am I.”

Identity diffusion: “Oh sure. If something better came along, I’d change just like that.”
Researchers have identified various correlates of differences in identity status. Slugoski et al. (1984) found that achievement and moratorium subjects exhibited more cognitive complexity than foreclosure and diffusion subjects. Subjects in these latter, lower statuses tended to be more rigid, concrete, and impulsive. Similarly, high identity status subjects were more open, more cooperative, and more at ease with controversial topics. Foreclosure subjects, in contrast, tended to use antagonism or acquiescence in their interactions, presumably as a means of protecting themselves from contrary points of view. Other research presents a similar picture of the cognitive style characteristics of foreclosure individuals (e.g., Blustein & Phillips, 1990; Cella, DeWolfe, & Fitzgibbon, 1987; Marcia, 1967; Read, Adams, & Dobson, 1984; Schenkel & Marcia, 1972). Consistent with the Slugoski et al. (1984) findings, Waterman (1982; see also 1985) reported that foreclosure individuals exhibit the closest relationships with parents, and identify diffusion individuals exhibit the greatest distance from parents.

Finally, research using Marcia's instrument and several other measures generally is consistent with Marcia's suggestions regarding the developmental course of ego identity formation (e.g., Adams & Fitch, 1982; Constantinople, 1969; Waterman, Geary, & Waterman, 1974). Anomalies in the sequence, however, as well as concerns about conceptual bases, have led Cote and Levine (1988) to a critique of Marcia's model, both as an Eriksonian model and as a general model of identity development (see Waterman, 1988, for a rebuttal).

Orlofsky (e.g., 1976, 1978; Orlofsky, Marcia & Lesser, 1973) has offered an interview-based analysis of intimacy statuses, similar to that provided by Marcia for identity. Orlofsky's interviews concern the presence and depth of relationships with friends of the same sex and the opposite sex. Using this information, individuals are designated as intimate, preintimate, stereotyped, pseudointimate (a subtype of stereotyped), or isolated. As examples of these statuses, consider the following two definitions: "The intimate individual works at developing mutual personal relationships and has several close friends with whom he discusses both his and their personal matters. He has an intimate relationship with one or more girl friends. . . . The isolate subject is characterized by marked constriction of life space, with the absence of any enduring personal relationships" (Orlofsky et al., 1973, p. 213). These intimacy distinctions have proven useful in a variety of studies (e.g., Kahn, Zimmerman, Csikszentmihalyi, & Getzels, 1985; Levitz-Jones & Orlofsky, 1985).

McAdams (e.g., McAdams, 1993; McAdams & de St. Aubin, 1992; McAdams, de St. Aubin, & Logan, 1993; Van de Water & McAdams, 1989) has developed a model of generativity, defined as "the personal and societal goal of providing for the next generation" (McAdams, 1994, p. 679). He suggests that cultural demand and inner desire promote a concern for the next genera-
tion during adulthood. This concern, coupled with a belief that human goodness and worthwhileness will lead to advancement in future generations, leads to a generative commitment. The commitment may manifest itself in any of a variety of types of generative action. McAdams and his students report evidence that generative concern, commitment, and action are positively associated, as predicted by the model. Perhaps most interestingly, McAdams suggests that adults narrate a generativity script for themselves. That is, they weave a story relating how their own attempts to be generative fit into the society of which they are a part. Note how very consistent this model is with Erikson's own "dove-tailing" of the individual and his or her society, as well as with Allport's enduring query, "how shall a psychological life history be written?" (see Chapter 7).

Stage theories such as those offered by Freud and Erikson often are criticized as culture bound. Although this criticism can be applied to Erikson only with some sense of irony, given his anthropologically sophisticated investigations of the Sioux and Yukon American Indian tribes, as well as the "American identity" (1950, 1963), several studies have reported variation in Eriksonian constructs across cultural groups (e.g., McClain, 1975; Ochse & Plug, 1986).

Ochse and Plug developed a self-report questionnaire to measure the personality components that Erikson suggests accrue during the first seven stages. This questionnaire was given to a diverse sample of white and black men and women at the University of South Africa. The white women solved their identity crisis earlier, and they manifested a higher degree of intimacy than the white men. Indications of a negative resolution of the identity crisis among black women in the 25–39 age group were attributed to their lack of opportunity to develop intimacy. Healthy psychosocial development was related to a feeling of well-being in the white subjects, but the relationship between well-being and the personality components was weaker in the black cohorts. Ochse and Plug concluded that "there are indications that in black men a sense of identity develops only late in adulthood. It is also suggested that black women experience (strongly related) feelings of lack of self-definition, lack of intimacy, and lack of well-being in middle adulthood and that a (relatively negative) resolution of the identity crisis may occur at this time" (1986, p. 1249). They caution, however, that their results for black subjects are weakened by small sample sizes and psychometric considerations.

Ochse and Plug's findings generally are consistent with a recent longitudinal study by Whitbourne, Zuschlag, Elliot, and Waterman (1992). These authors observed changes in stage scores that reflected "aging," but also the effects of "particular historical, social, and cultural" realities. As a consequence, they wrote, "all psychosocial issues can reach ascendancy at any particular time in the individual's life, depending on unique factors specific to that individual's
biological, psychological, or social trajectories” (p. 270). That is, the normative diagonal path through Erikson's epigenetic chart (see Figure 5.2 earlier in this chapter) will not apply to all individuals. This conclusion is consistent with recent work emphasizing the impact of the “nonshared environment” (see Chapter 8). This represents a modification of Erikson's model, of course, but it also reiterates Erikson's point that “anatomy, history, and personality are our combined destiny.”

Erikson's current status as a thinker, scholar, teacher, and writer is a very prestigious one not only within the academic and professional circles with which he is associated but also in the world at large. Erikson's name is as familiar as those of Piaget and Skinner. Unlike his mentor, Freud, and unlike another Harvard professor, B. F. Skinner, Erikson is not a controversial figure. His writings are singularly free of adverse criticisms of other viewpoints—in fact, they have a strong ecumenical flavor—nor have his views been subjected to very much adverse criticism. There is something very charismatic about the man and his writings that affect many people.

Erikson's reputation among psychologists derives almost entirely from his account of psychosocial development throughout the span of life from infancy to senility, in particular his concepts of identity and identity crisis. Psychologists, by and large, prefer Erikson's stages to Freud's psychosexual stages. But Erikson's reputation does not rest solely upon his theoretical formulations. He is also greatly admired for his acute observations and sensible interpretations, for the literary merits of his writings, and for his deep compassion for everything human.

Erikson has been criticized for his overly optimistic view of humans, just as Freud has been criticized for his pessimistic view. Although the terms optimism and pessimism deserve no place in the evaluation of a scientific viewpoint, since whatever is is despite our feelings, Erikson answered this criticism by pointing out that "for each psychosocial step I posit a crisis and a specific conflict denoting . . . a lifelong . . . anxiety . . ." (1975, p. 259). But then he went on to draw the conclusion that without anxiety, conflict, and crisis there would be no human strengths.

Erikson has been reproached for watering down Freudian theory by concentrating on the strengths of the ego, the rational, and the conscious at the expense of the id, the irrational, and the unconscious. Even if this reproach were justified, it is really not pertinent. The mere fact that Erikson may diverge significantly from Freud, a fact Erikson himself would deny, does not justify a repudiation of Erikson's views. Freud's theories are not the ultimate measures of truth, nor did he ever contend they were. Erikson's formulations regarding
psychosocial development must be evaluated in terms of the evidence, pro and con, and not in terms of their deviation from or agreement with any other theory.

A more subtle type of allegation charges Erikson with supporting the status quo when he says the individual must learn to conform or adjust to the institutions of the society in which he or she grows up. Actually, Erikson says that people must find their identity within the potentials (for stability or change) of their society, while their development must mesh with the requirements of society or suffer the consequences.

Whether Erikson is a conservative and a traditionalist has no bearing upon the validity of his ideas. It is interesting, however, that Erikson chose to exemplify his psychosocial developmental scheme by a close examination of the lives of two men, Luther and Gandhi, who were hardly to be called conformists since they radically changed the societies in which they lived. Moreover, in his personal life, Erikson took a strong stand against social injustice, notably in the University of California loyalty oath controversy. The reader may also be interested in reading the conversations between Erikson and the radical Black Panther leader, Huey Newton (K. T. Erikson, 1973).

A criticism with more merit than the foregoing ones focuses on the quality of the empirical foundations upon which the theory is based. No one can question the tremendous variety of observational data Erikson assembled. He was for years a psychoanalyst in private practice as well as on the staff of numerous hospitals and clinics. He observed the play of normal children under standardized conditions. He made firsthand observations of two Indian cultures. And he explored in detail the lives of two historical figures. As an artist as well as a scientist, Erikson had a trained eye.

Despite these qualities, however, description based upon personal observation, although constituting the raw data of any scientific undertaking, is not sufficient. It is well recognized—indeed Erikson recognized it himself—that observation can be very subjective. A person may choose to see what he or she wants to see. Nor does agreement among a lot of observers, known technically as consensual validation, constitute proof. The history of science offers many examples of the pitfalls of consensual validation.

Observation and description should lead one to measurement and controlled experimentation, and this Erikson did not do. Marcia’s work provides a beginning, and Erikson is, of course, not alone in this regard. Few theories of personality are supported by a solid foundation of quantitative and experimental data. Much of what Erikson has written appears to have face validity; that is, it seems to ring true to the average reader. Who can deny the reality of identity crisis and confusion during adolescence, for example? Moreover, Erikson’s formulations provide a rich source of hypotheses that can be and are being quantified and tested experimentally. This, in itself, is a major accomplishment.
Emphasis on Personality Structure

The personality theorists described in this section of the book share a central concern with the structure of personality. Dynamics and development also receive attention, but the defining characteristic of the members of this family of theories is the quest for a taxonomy—a systematic set of characteristics that can be used to summarize an individual’s personality. Raymond Cattell, as befits his background in chemistry, has been explicit in his attempt to develop a “periodic table” of personality elements. Henry Murray also employed a chemistry analog, working toward a conceptual framework for person characteristics and situational forces that would permit psychologists to formulate “behavioral compounds.” Hans Eysenck has developed a more generalized model for personality, but his focus remains clearly on conceptualizing behavioral tendencies that allow us to predict reactions to various stimulus events. Gordon Allport was unique in his attempt to capture the personality and “psychological life history” of the individual. Despite his focus on idiosyncrasy, with the consequent impossibility of any general taxonomy, his approach is predicated on identification of the personality structure of the individual.

One caveat is in order here. The focus on personality structure adopted by these theories has led some observers to conclude that they ignore the situation as a determinant of behavior. That is not the case. Each of these theorists, in his own way, adopts an interactionist approach: Behavior is viewed as a joint function of person characteristics and situational features.

Given their emphasis on personality structure, it is not surprising that all five of these theorists also have been heavily concerned with the measurement
of personality. Each has been influential in his own way in developing personality tests as well as influencing their development by others. A final attribute shared by these theorists is a biological anchoring for the study of personality. Eysenck has been the most explicit in this respect, but the other three theorists also recognize the determinative role of physiology and distinguish between biological and acquired motives.

Table 2 provides a dimensional comparison of these theorists.

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<table>
<thead>
<tr>
<th>Section</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION AND CONTEXT</td>
<td>Genetic–Maturational Determinants</td>
</tr>
<tr>
<td>PERSONAL HISTORY</td>
<td>Learning</td>
</tr>
<tr>
<td>THE STRUCTURE OF PERSONALITY</td>
<td>Sociocultural Determinants</td>
</tr>
<tr>
<td>Definition of Personality</td>
<td>Uniqueness</td>
</tr>
<tr>
<td>Proceedings and Serials</td>
<td>Unconscious Processes</td>
</tr>
<tr>
<td>Serial Programs and Schedules</td>
<td>The Socialization Process</td>
</tr>
<tr>
<td>Abilities and Achievements</td>
<td>CHARACTERISTIC RESEARCH AND RESEARCH METHODS</td>
</tr>
<tr>
<td>Establishments of Personality</td>
<td>Intensive Study of Small Numbers of Normal Subjects</td>
</tr>
<tr>
<td>THE DYNAMICS OF PERSONALITY</td>
<td>The Diagnostic Council</td>
</tr>
<tr>
<td>Need</td>
<td>Instruments of Personality Measurement</td>
</tr>
<tr>
<td>Press</td>
<td>Representative Studies</td>
</tr>
<tr>
<td>Tension Reduction</td>
<td>CURRENT RESEARCH</td>
</tr>
<tr>
<td>Thema</td>
<td>McClelland and Social Motives</td>
</tr>
<tr>
<td>Need Integrate</td>
<td>Interactionism</td>
</tr>
<tr>
<td>Unity-Thema</td>
<td>“Where Is the Person?”</td>
</tr>
<tr>
<td>Regnant Processes</td>
<td>Psychobiography</td>
</tr>
<tr>
<td>Vector–Value Scheme</td>
<td>CURRENT STATUS AND EVALUATION</td>
</tr>
<tr>
<td>THE DEVELOPMENT OF PERSONALITY</td>
<td></td>
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<tr>
<td>Infantile Complexes</td>
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INTRODUCTION
AND CONTEXT

Unique among personality theorists is the sophistication in biological science, clinical practice, and academic psychology that Henry A. Murray brought to his theoretical efforts. As a rich integrative force for these diverse talents, Murray possessed a brilliant writing style nurtured by a deep and enduring interest in literature and the humanities. The theory that evolved from these sources shows a considerable respect for the determinant importance of biological factors, a full appreciation for the individual complexity of the human organism, and an interest in representing behavior in such a manner that controlled investigation is a natural outcome of these formulations. In at least four respects, Murray represents a turning point in the study of personality: He carried depth psychology from the clinic to the university. In the process, he developed a clear vision of the shape that research on personality should take. He recognized the importance of developing a taxonomy for motivation. And he emphasized the necessity of conceptualizing behavior as an interaction of individual and environmental forces. In part because of these emphases, Murray was "an anomaly among academic psychologists, and controversy surrounded his career" (Triplet, 1992, p. 299).

The focus of this theory is upon individuals in all their complexity. This point of view is highlighted by the term "personology," which Murray and collaborators (1938) introduced as a label for his own efforts and those of others who were primarily concerned with a full understanding of the individual case. He emphasized consistently the organic quality of behavior, indicating that a single segment of behavior is not to be understood in isolation from the rest of the functioning person. In contrast to many other theorists who share this belief, Murray was perfectly willing to engage in the abstraction necessary to permit various kinds of specialized study, always insisting that the task of reconstruction must be engaged in after analysis is completed. A further contrast to some holistic theorists is his "field" orientation. Murray insisted that the environmental context of behavior must be thoroughly understood and analyzed before an adequate account of individual behavior is possible. Murray placed general emphasis upon the importance of environmental determinants, and more distinctively, he developed an elaborate set of concepts designed to represent those environmental forces.

The past, or history, of the individual is fully as important in Murray's view as the present individual and his or her environment. His theory shares with psychoanalysis the assumption that events taking place in infancy and childhood are crucial determinants of adult behavior. A further similarity between this position and psychoanalysis lies in the considerable importance attributed to unconscious motivation and the deep interest displayed in the subjective or free, verbal report of the individual, including imaginative productions.

In many ways the most distinctive feature of this theory is its highly differentiated and carefully specified treatment of motivation. Murray's scheme of motivational concepts has seen wide usage and has been of great influence.
A further unusual feature of the theory is the consistent emphasis upon the coexisting and functionally linked physiological processes that accompany all psychological processes. His concept of "regnancy," which we shall discuss later, serves to keep the theorist continuously oriented toward the brain as the locus of personality and all its component parts. Murray often emphasized the importance of detailed description as a necessary prelude to complicated theoretical formulation and investigation. Consistent with this point of view is his deep interest in taxonomy and the exhaustive classifications that he established for many aspects of behavior.

Murray made serious efforts to effect a compromise between the often conflicting demands of clinical complexity and investigative economy. He devised means of representing, at least in part, the tremendous diversity of human behavior. At the same time he focused upon the task of constructing operations for assessing variables that occupy a central role in this theoretical scheme. This twofold emphasis led naturally to narrowing the gap between clinical practice and the psychological laboratory.

We have now seen the broad outlines of Murray's personology, but what of the man who constructed this theory? Henry Murray was born in New York City on May 13, 1893, and received his education at Groton School and Harvard College, securing his A.B. in 1915 with a major in history. Murray was an indifferent student up to this point, joking that at Harvard he "majored in the three Rs—Rum, Rowing, and Romanticism" (Robinson, 1992, p. 27). His initial interest in psychology was squelched by the first lecture in Hugo Munsterberg's introductory class: "At college a bud of interest in psychology was nipped by the chill of Professor Munsterberg's approach. In the middle of his second lecture I began looking for the nearest exit" (Murray, 1940, p. 152). Following graduation from Harvard he enrolled in the Columbia College of Physicians and Surgeons where he graduated at the head of his class in 1919. In 1920 he received an M.A. in biology from Columbia and served briefly as an instructor in physiology at Harvard University. Following this, he served a two-year surgical internship at Presbyterian Hospital in New York. He then joined the staff of the Rockefeller Institute for Medical Research in New York City where as an assistant he carried on embryological research for two years. After came a period of study at Cambridge University where he conducted biochemical research that led to his securing a Ph.D. in biochemistry from Cambridge in 1927. By the time he received his Ph.D., Murray had published twenty-one articles in major medical or biochemistry journals (Anderson, 1988). Thus, in a striking parallel to Freud's early career, Murray was well on his way to a successful research career in biological science. Murray turned instead to psychology, but not for the practical reasons that had propelled Freud.
The impetus for this conversion was Carl Jung's *Psychological types*, which Murray chanced upon in a bookstore on the day in 1923 when it became available in the United States. Murray immersed himself in the book and in other work by Jung and Freud. Two other pivotal events occurred soon thereafter. Murray met Christiana Morgan, with whom he developed an intense lifelong relationship (see Robinson, 1992; see also Douglas, 1993, for a different perspective on Christiana Morgan), and he was exposed to Melville's *Moby Dick*. Murray became so involved in depth psychology that he wrote to Jung in 1924, requesting an opportunity to visit. In 1925, he spent three weeks in Zurich with Jung during his Easter vacation from Cambridge. Murray’s interest in psychology was confirmed by this meeting with Jung, "the first full-blooded, spherical . . . intelligence I had ever met:

*We talked for hours, sailing down the lake and smoking before the hearth of his Faustian retreat. “The great floodgates of the wonder-world swung open,” and I saw things that my philosophy had never dreamt of. Within a month a score of bi-horned problems were resolved, and I went off decided on depth psychology. I had experienced the unconscious, something not to be drawn out of books.* (Murray, 1940, p. 153)

Thus, deeply interested in psychology, Murray returned to this country and the Rockefeller Institute where he remained for one year as an associate. In 1927 he accepted an invitation to come to Harvard University as an instructor in psychology. This unconventional choice of an unusual man, untrained in academic psychology, by a distinguished, academic department was arranged by Morton Prince, who had just founded the Harvard Psychological Clinic. The clinic was endowed with the explicit provision that it be devoted to the study and teaching of abnormal and dynamic psychology. Prince, searching for a young and promising scholar to guide the future of the clinic, selected Murray. In 1928 Murray was made an assistant professor and director of the Psychological Clinic, and in 1937 he was made an associate professor. This was a difficult decision, as influential professors Edwin Boring and Karl Lashley objected strongly to Murray's endorsement of psychoanalysis and his divergent methodology. As Triplet (1992, p. 305) notes, "Murray’s position was complicated by the fact that he stood on the fringe of a discipline that was itself on the fringe of acceptance." Murray was one of the founding members of the Boston Psychoanalytic Society and by 1935 had completed his training in psychoanalysis under Franz Alexander and Hans Sachs. A fascinating account of his training analysis and his attitudes toward psychoanalysis is contained in a symposium concerning psychologists and psychoanalysis (Murray, 1940).

During the roughly fifteen years that transpired before war interrupted, the Harvard Psychological Clinic, under the intellectual and spiritual leadership of Henry Murray, was the scene of an intensely creative theoretical and empiri-
cal enterprise. Murray gathered about him a group of able young students whose joint efforts to formulate and investigate the human personality were exceedingly fruitful. The *Explorations in personality* volume (1938) contains a partial record of the generativeness of this era, but the most important outcomes were carried away in the form of values, conceptions, and intentions by individuals such as Donald W. MacKinnon, Saul Rosenzweig, R. Nevitt Sanford, Silvan S. Tomkins, and Robert W. White. Here at the Clinic, for the first time, psychoanalytic theory was given a serious academic audience and earnest efforts were made to devise means of translating the brilliant clinical insights of Freud into experimental operations that would permit some degree of empirical confirmation or rejection. Not only did Murray create a sense of excitement and imminent discovery among his own students, but the Clinic also opened its doors to mature scholars from a variety of fields (Erik Homburger Erikson, Cora DuBois, Walter Dyk, H. Scudder McKeel) so that there was a marked interdisciplinary aura to the enterprise.

In 1943 this era came to a close as Murray left Harvard to join the Army Medical Corps. As a major, and subsequently lieutenant colonel, he established and directed an assessment service for the Office of Strategic Services. His organization was given the difficult task of screening candidates for complex, secret, and dangerous missions. The activities of this group have been summarized in *Assessment of men* (Office of Strategic Service, Assessment Staff, 1948). His work with the Army led to his being awarded the Legion of Merit in 1946. In 1947 he returned to Harvard on a part-time basis as a lecturer on clinical psychology in the newly formed Department of Social Relations. In 1950 he was appointed professor of clinical psychology. He established the Psychological Clinic Annex at Harvard University in 1949 where he and a few colleagues and graduate students conducted studies of personality including the collection of 88 copious case histories. Murray became emeritus professor in 1962. He has been awarded the Distinguished Scientific Contribution Award of the American Psychological Association as well as the Gold Medal Award of the American Psychological Foundation for a lifetime of contribution to the field. Henry Murray died of pneumonia on June 23, 1988, at the age of 95 (see Smith & Anderson, 1989).

In addition to revising and expanding his theoretical views, Murray paid attention to some of the broader problems of contemporary life, including abolition of war and the creation of a world state (Murray, 1960a, 1961, 1962b). Murray was an ardent champion of the power of creative imagination tempered by reason for solving any problem besetting humans. He has been sharply critical of psychology for projecting a negative image of humans and for its "malignant narcissism." Murray stood firmly for a humanistic, optimisitic psychology.

Murray's medical and biological research and training contributed to the deep respect he consistently showed for the importance of physical and biolog-
cal factors in behavior. His experience in medical diagnosis had an obvious outcome in his belief that personality should ideally be assessed by a team of specialists and that in this assessment the subject's statement about him—or herself should be given serious audience. His interest in the taxonomy or classification of behavior, as well as his conviction that the careful study of individual cases is essential to future psychological progress, is also highly congruent with his medical background. His detailed awareness of mythology (1960b) and of the great literary creations of our own and past eras, and particularly his expert knowledge of Melville and his works, provided him with an inexhaustible source of ideas concerning humans and their potentialities for good and evil. The exquisite mind of Alfred North Whitehead provided a model of logical and synthetic thought, while the truculent but brilliant Lawrence J. Henderson served as a model of rigor and critical orientation. His debt to these men and to numerous others, including several generations of students, is amply acknowledged in four very personal documents (1940, 1959, 1967, 1968a) and in a volume of essays written in honor of Murray (White, 1963b). From such a complex lineage it is no wonder that his theory is an elaborate and many-sided structure.

It is clear to all who have known him that Henry Murray's talent and devotion to the study of the human personality are only partially revealed in his published works. His casual remarks and free-ranging speculations concerning an endless variety of topics, which were so integral a part of lunches at the Psychological Clinic, have provided fruitful research ideas for dozens of his students and colleagues. Unfortunately, not all of these messages fell on fertile ground, and one can only regret that the spoken word has not been preserved to enrich the written record. Murray's tendency to reveal only occasional fruits of his intellect is clearly demonstrated in the publications that have stemmed from his twenty-five years of intensive study of Herman Melville. These years of dedicated scholarship have earned him a reputation among students of Melville without parallel, and yet he published only a handful of papers dealing with this engrossing writer. One is a brilliant analysis of the psychological meaning of Moby Dick (Murray, 1951c), another is an introduction to and penetrating analysis of Pierre (Murray, 1949a), one of Melville's most intriguing and baffling novels.

Granted the inadequacy of the written record, we find that Murray's psychological theorizing and research are best represented in Explorations in personality (1938). This book summarizes the thought and research of the Psychological Clinic staff at the end of its first decade of existence. A partial record of some of the subsequent research is contained in A clinical study of sentiments (1945), which was written with his long-time collaborator Christiana Morgan, and in Studies of stressful interpersonal disputations (1963). The major changes that his theoretical convictions have undergone during the subsequent years are best represented in a chapter written jointly with Clyde Kluckhohn

**THE STRUCTURE OF PERSONALITY**

The nature of personality and its acquisitions and attainments occupied a considerable portion of Murray's theoretical attention. His views on the structure of personality were heavily influenced by psychoanalytic theory, and yet in many respects they are strikingly differentiated from an orthodox Freudian view. Murray was wary of the word "structure" because of its connotations of permanence, regularity, and lawfulness. He recognized that personality is usually in a state of flux. Here we shall consider Murray's definition of personality and the concepts he elaborated in the attempt to represent the nature of personality.

**Definition of Personality**

Although Murray proposed many definitions of personality at different times, the main components of these definitions may be summarized as follows:

1. An individual's personality is an abstraction formulated by the theorist and not merely a description of the individual's behavior.

2. An individual's personality refers to a series of events that ideally span the person's lifetime: "The history of the personality is the personality."
3. A definition of personality should reflect the enduring and recurring elements of behavior as well as the novel and unique.

4. Personality is the organizing or governing agent of the individual. Its functions are to integrate the conflicts and constraints to which the individual is exposed, to satisfy the individual's needs, and to make plans for the attainment of future goals.

5. Personality is located in the brain: "No brain, no personality."

Thus, Murray's attempts at a definition of personality make clear that he was strongly oriented toward a view that gives adequate weight to the history of the organism, to the organizing function of personality, to the recurrent and novel features of the individual's behavior, to the abstract or conceptual nature of personality, and to the physiological processes underlying the psychological.

The basic data of the psychologist are proceedings, which are subject–object interactions or subject–subject interactions, of sufficient duration to include the significant elements of any given behavioral sequence. In Murray's words,

"proceedings are the things which we observe, and try to represent with models, and to explain, the things which we attempt to predict, the facts against which we test the adequacy of our formulations. (Murray, 1951b, pp. 269–270)"

Although in certain settings it is possible to define a proceeding exactly, for example, a verbal response and its reply, it is usually possible to provide only a very general definition. In this spirit Murray suggested that "ideally, the duration of a proceeding is determined by (1) the initiation, and by (2) the completion, of a dynamically significant pattern of behavior" (Murray, 1951b, p. 269).

This conception of the basic unit of the psychologist as consisting of proceedings reflects Murray's conviction that behavior is inextricably caught in a time dimension. Thus, the proceeding is a compromise between the practical limitations imposed by the intellect and techniques of the investigator and the empirical given that behavior exists in a time dimension. Murray suggested that proceedings can be classified in terms of whether they are internal (daydreaming, problem solving, planning in solitude) or external (interacting with persons or objects in the environment). External proceedings have two aspects: a subjective experiential aspect and an objective behavioral aspect.

For many purposes the representation of behavior in terms of proceedings is perfectly adequate. However, under some circumstances it is necessary to
include in a single unit or formulation behavior taking place over a longer period of time. This longer functional unit of behavior is referred to as a serial:

A directionally organized intermittent succession of proceedings may be called a serial. Thus, a serial (such as friendship, a marriage, a career in business) is a relatively long functional unit which can be formulated only roughly. One must obtain records of critical proceedings along its course and note such indices of development as changes of disposition, increase of knowledge, increase of ability, improvement in the quality of the work accomplished, and so forth. No one proceeding in the serial can be understood without reference to those which have led up to it and without reference to the actor’s aims and expectations, his design for the future. (Murray, 1951b, p. 272)

Thus, representation of behavior in terms of serials is made necessary because certain proceedings are so intimately related to one another that it is impossible to study them separately without destroying their full meaning.

A very important function for the individual is served by serial programs. These are orderly arrangements of subgoals that stretch into the future perhaps for months or years and that, if all goes well, will lead eventually to some desired end state. Thus, the individual aspires to the goal of becoming a medical doctor but intervening between the present situation and this goal are years of study and special training. If he or she develops a set of subgoals, each of which plays a part in bringing the person closer to their medical degree, this would be referred to as a serial program.

Likewise of importance are schedules that represent devices for reducing conflict among competing needs and goal objects by arranging for expression of these tendencies at different times. By means of a schedule, the individual may give a maximum of expression to his or her various aims. If one is efficient at constructing schedules, one can greatly diminish the quantity and intensity of one’s conflicts.

Murray ultimately subsumed serial programs and schedules under the term ordination, which includes the process of plan making as well as the outcome of the process—an established program or schedule. Ordination is a higher mental process on the same level as cognition. The aim of cognition is a complete conceptual understanding of the environment, but once the external situation has been sufficiently understood, the process of ordination asserts itself in order to arrange policymaking and planning of strategy and tactics. This discussion demonstrates a remarkable anticipation of contemporary work on personality and cognition. Nancy Cantor (1990), for example, described how individuals interpret life tasks in terms of accessible schemas,
leading them to develop cognitive strategies for solving the problems that life presents.

In contrast to many personality psychologists, Murray showed a consistent interest in ability and achievement and considered these qualities an important part of the personality. These components of the individual serve a central function in mediating between dispositions to action and the end results toward which these dispositions are oriented. In virtually all of his personality research subjects have been appraised in terms of a variety of different areas of ability and achievement: physical, mechanical, leadership, social, economic, erotic, and intellectual.

Even if we accept personality as an ever-changing phenomenon, there are still certain stabilities or structures that appear over time and are crucial to understanding behavior. In representing these mental structures, Murray borrowed the terms ego, id, and superego from psychoanalysis but introduced certain distinctive elements in his development of these concepts.

Murray agreed with Freud in conceiving of the id as the repository of primitive and unacceptable impulses. Here is the origin of energy, the source of all innate motives, the unseeing and unsocialized self. More than this, insisted Murray, the id includes impulses that are acceptable to the self and society. Not only does the id contain impulses toward both good and evil but the strength of these tendencies varies between individuals. Thus, the task facing different individuals in controlling or directing their id tendencies is by no means of equal difficulty: “Some ‘egos’ are sitting in the saddle of a docile Shetland pony, others are astride a wild bronco of the plains” (Murray & Kluckhohn, 1953, p. 26).

Murray’s reconceptualization of the id substantially alters Freud’s model of id–ego dynamics. As Murray puts it, “it seems best to think of the id as consisting of all the basic energies, emotions, and needs (value-vectors) of the personality, some of which are wholly acceptable and some wholly unacceptable, but most of which are acceptable when expressed in a culturally approved form, towards a culturally approved object, in a culturally approved place, at a culturally approved time. Thus, the function of the ego is not so much to suppress instinctual needs as to govern them by moderating their intensities and determining the modes and times of their fulfillment” (Murray & Kluckhohn, 1953, p. 24). The parallel to Erikson’s transformation of Freudian drives into “drive fragments” is striking. As a consequence, the ego is not solely an inhibitor and repressor. Not only must the ego hold back or repress certain impulses or motives but more importantly it must arrange, schedule, and control the manner in which other motives are to appear. The ego, consis-
tent with psychoanalytic theory, is viewed as the central organizer and integrator of behavior. Part of this organization, however, is intended to facilitate or promote the expression of certain id impulses. The strength and effectiveness of the ego is an important determinant of the individual’s adjustment.

The superego in Murray’s theory, as in Freud’s, is considered to be a cultural implant. It is an internalized subsystem that acts within the individual to regulate behavior in much the same manner that agents outside the individual once acted. These agents, typically the parents but also one’s peers, teachers, public personalities, and fictional characters, act as representatives of the culture so that internalizing their prescriptions represents a move in the direction of internalizing cultural prescriptions. In contrast to Freud, the superego develops in strata, ranging from crude infantile representations to a rational ordering of ethical principles. Therefore, conflict may exist within the superego itself.

Intimately related to the superego is the ego-ideal, which consists of an idealized picture of the self—an aspired self, or a set of personal ambitions toward which the individual strives. The ego-ideal may be entirely divorced from the superego, as in the case of the individual who aspires to be a master criminal, or it may be closely related, so that the individual moves toward personal ambitions in a manner conforming exactly with the sanctions of society. If the superego is dominant and the ego-ideal is suppressed, the person may attempt to serve “God’s will” or the “welfare of the society” at the expense of giving up all personal ambition.

It is important to note that Murray’s conception of the superego and ego-ideal provided more latitude for alteration and development in the years subsequent to childhood than does the orthodox psychoanalytic view. In normal development the relation between these three institutions changes so that where once the id ruled supreme, the superego and eventually the ego come to have determinant roles. In the happiest of instances a benign superego and a strong and ingenious ego combine to permit adequate expression of id impulses under circumstances that are culturally approved.

Murray’s redefinition of the Freudian structural triumvirate of id, ego, and superego thus provided an escape from Freud’s pessimistic scenario of eternal conflict. Murray did, however, remain firmly committed to Freud’s advocacy of depth psychology, sexuality, fantasy, defense mechanisms, and the necessity of considering nonrational bases of behavior. He also embraced the notion of childhood determinism. Freud, he wrote, “kept my first commandment: he began at the beginning” (Murray, 1959, p. 13). His own family dynamics led Murray to reject Freud’s characterization of the father as a terrifying and omnipotent rival for the affections of a cherished mother. In addition, Murray’s list of needs is a clear indication that he regarded Freud’s motivational system as too limited. He wrote that Freud’s division of the instincts into Eros and Thanatos was “irrational, sentimental, and inadequately differentiated” (Mur-
ray, 1967, p. 304). Further, his elaboration of the ego-ideal has much in common with Erik Erikson’s model, with Gordon Allport’s construct of proprium, and with contemporary cognitive approaches. Finally, it is important to note that Murray believed Freud gave short shrift to systematic research, social factors, and cultural differences (Murray, 1940). In summary, then, Murray embraced Freud’s call for attention to unconscious forces and childhood events as determinants of behavior. This acceptance formed the base on which he erected his own scaffold for a system of personality.

In a later revision of his theory, Murray (1959) stressed the more positive establishments of the personality. There are, he believed, formative and constructive processes that are not just useful for survival or as defenses against anxiety but that have their own energies, goals, and fulfillments. A person needs to be creative and imaginative, to compose and construct if he or she is to remain psychologically healthy. Creative imagination may, in fact, be the strongest feature of a personality and the one that is often given the least opportunity to express itself.

It is in the representation of human striving, seeking, desiring, wishing, and willing that Murray’s contributions to psychological theory have been most distinctive. One might fairly say that his position is primarily a motivational psychology. This focusing upon the motivational process is perfectly congruent with Murray’s conviction that the study of a person’s directional tendencies holds the key to understanding human behavior: “the most important thing to discover about an individual... is the superordinate directionality (or directionalities) of his activities, whether mental, verbal, or physical” (Murray 1951b, p. 276). Murray’s interest in directionality led to a complex and carefully delineated system of motivational constructs. His taxonomic interests are clearly revealed here in the patient and absorbed classifying of the elements of human behavior in terms of their underlying determinants or motives.

Murray was certainly not the first person to place heavy emphasis upon the importance of motivational analysis. However, his formulations possess several distinctive elements. While the prevailing tides in psychology have flowed in the direction of simplicity and a small number of concepts, Murray insisted that an adequate understanding of human motivation must rest upon a system that employs a sufficiently large number of variables to reflect, at least partially, the tremendous complexity of human motives in the raw. He also made serious efforts to provide empirical definitions for his variables that, if imperfect, at least far exceed the operational effectiveness of most of the preceding schemes in the field of human motivation. The result of these efforts is a set of concepts that makes a bold attempt to bridge the gap between clinical description and the demands of empirical research.
In considering Murray's theory of motivation we shall start with a discussion of the \textit{need} concept, which from the beginning has been the focus of his conceptual efforts. We follow this with a discussion of such related concepts as \textit{press}, \textit{tension reduction}, \textit{thema}, \textit{need integrate}, \textit{unity-thema}, and \textit{regnancy}. Finally, we shall turn to his related \textit{value} and \textit{vector} concepts that represent a more recent turn in his theorizing.

Although the concept of need has been widely used in psychology, no other theorist has subjected the concept to so careful an analysis or provided such a complete taxonomy of needs as has Murray. The detail of Murray's analysis of this concept is suggested by his definition:

\begin{quote}
A need is a construct (a convenient fiction or hypothetical concept) which stands for a force \ldots in the brain region, a force which organizes perception, apperception, intellection, conation and action in such a way as to transform in a certain direction an existing, unsatisfying situation. A need is sometimes provoked directly by internal processes of a certain kind \ldots but, more frequently (when in a state of readiness) by the occurrence of one of a few commonly effective press [environmental forces]. \ldots Thus, it manifests itself by leading the organism to search for or to avoid encountering or, when encountered, to attend and respond to certain kinds of press. \ldots Each need is characteristically accompanied by a particular feeling or emotion and tends to use certain modes \ldots to further its trend. It may be weak or intense, momentary or enduring. But usually it persists and gives rise to a certain course of overt behavior (or fantasy), which \ldots changes the initiating circumstance in such a way as to bring about an end situation which stills (appeases or satisfies) the organism. (Murray, 1938, pp. 123–124)
\end{quote}

We find from this definition that the concept of need, as was true for the concept of personality, is granted an abstract or hypothetical status but is nevertheless linked to underlying physiological processes in the brain. It is also conceived that needs may be either internally aroused or set into action as a result of external stimulation. In either case the need produces activity on the part of the organism and maintains this activity until the organism–environment situation has been altered so as to reduce the need. Some needs are accompanied by particular emotions or feelings, and they are frequently associated with particular instrumental acts that are effective in producing the desired end state.

Murray stated that the existence of a need can be inferred on the basis of (1) the effect or end result of the behavior, (2) the particular pattern or mode of behavior involved, (3) the selective attention and response to a particu-
lar class of stimulus objects, (4) the expression of a particular emotion or affect, and (5) the expression of satisfaction when a particular effect is achieved or disappointment when the effect is not achieved (1938, p. 124). Subjective reports regarding feelings, intentions, and goals provide additional criteria. Given the general definition and the above criteria for inferring or classifying needs, Murray used the intensive study of a small number of subjects to arrive at a tentative list of twenty needs. Although this list has been subjected to considerable modification and elaboration, the original twenty needs remain highly representative. These variables were presented in *Explorations in personality* (1938) with an outline of pertinent facts concerning each need, including questionnaire items for measuring the need, accompanying emotions, and illustrations of the need. The twenty needs are briefly listed and defined in Table 6.1.

**Types of Needs.** Thus far, we have seen how Murray defines need, we have examined the criteria he provides for their identification, and we have seen a typical list of needs. In addition to this, it is important to consider the basis for distinguishing between different types of needs. First of all, there is the distinction between primary and secondary needs. The primary, or viscerogenic, needs are linked to characteristic organic events and typically refer to physical satisfactions. Illustrative of these are the needs for air, water, food, sex, lactation, urination, and defecation. The secondary, or psychogenic, needs are presumably derived from the primary needs and are characterized by a lack of focal connection with any specific organic processes or physical satisfactions. Illustrative of these are the needs for acquisition, construction, achievement, recognition, exhibition, dominance, autonomy, and deference.

Second, we have the distinction between overt needs and covert needs, that is, manifest needs and latent needs. Here Murray was differentiating between those needs that are permitted more or less direct and immediate expression and those that are generally restrained, inhibited, or repressed. One might say that overt needs typically express themselves in motor behavior while covert needs usually belong to the world of fantasy or dreams. The existence of covert needs is in large part the outcome of the development of internalized structures (superego) that define proper or acceptable conduct. Certain needs cannot be given free expression without violating the conventions or standards that have been taken over from society by means of the parents, and these needs often operate at a covert level.

Third, there are focal needs and diffuse needs. Some needs are closely linked to limited classes of environmental objects whereas others are so generalized as to be applicable in almost any environmental setting. Murray pointed out that unless there is some unusual fixation a need is always subject to change in the objects toward which it is directed and the manner in which these are approached. That is, the sphere of environmental events to which
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<tr>
<th>Need</th>
<th>Brief Definition</th>
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<tbody>
<tr>
<td>Abasement</td>
<td>To submit passively to external force. To accept injury, blame, criticism, punishment. To surrender. To become resigned to fate. To admit inferiority, error, wrongdoing, or defeat. To confess and atone. To blame, belittle, or mutilate the self. To seek and enjoy pain, punishment, illness, and misfortune.</td>
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<tr>
<td>Achievement</td>
<td>To accomplish something difficult. To master, manipulate, or organize physical objects, human beings, or ideas. To do this as rapidly and as independently as possible. To overcome obstacles and attain a high standard. To excel oneself. To rival and surpass others. To increase self-regard by the successful exercise of talent.</td>
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<tr>
<td>Affiliation</td>
<td>To draw near and enjoyably cooperate or reciprocate with an allied other (an other who resembles the subject or who likes the subject). To please and win affection of a cathected object. To adhere and remain loyal to a friend.</td>
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<tr>
<td>Aggression</td>
<td>To overcome opposition forcefully. To fight. To revenge an injury. To attack, injure, or kill another. To oppose forcefully or punish another.</td>
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<tr>
<td>Autonomy</td>
<td>To get free, shake off restraint, break out of confinement. To resist coercion and restriction. To avoid or quit activities prescribed by domineering authorities. To be independent and free to act according to impulse. To be unattached, irresponsible. To defy convention.</td>
</tr>
<tr>
<td>Counteraction</td>
<td>To master or make up for a failure by restriving. To obliterate a humiliation by resumed action. To overcome weaknesses, to repress fear. To efface a dishonor by action. To search for obstacles and difficulties to overcome. To maintain self-respect and pride on a high level.</td>
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<tr>
<td>Defendane</td>
<td>To defend the self against assault, criticism, and blame. To conceal or justify a misdeed, failure, or humiliation. To vindicate the ego.</td>
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<tr>
<td>Deferece</td>
<td>To admire and support a superior. To praise, honor, or eulogize. To yield eagerly to the influence of an allied other. To emulate and exemplar. To conform to custom.</td>
</tr>
<tr>
<td>Dominance</td>
<td>To control one's human environment. To influence or direct the behavior of others by suggestion, seduction, persuasion, or command. To dissuade, restrain, or prohibit.</td>
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<tr>
<td>Exhibition</td>
<td>To make an impression. To be seen and heard. To excite, amaze, fascinate, entertain, shock, intrigue, amuse, or entice others.</td>
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<tr>
<td>Harmavoidance</td>
<td>To avoid pain, physical injury, illness, and death. To escape from a dangerous situation. To take precautionary measures.</td>
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<tr>
<td>Infavoidance</td>
<td>To avoid humiliation. To quit embarrassing situations or to avoid conditions that may lead to belittlement: the scorn, derision, or indifference of others. To refrain from action because of fear of failure.</td>
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<tr>
<td>Nurturance</td>
<td>To give sympathy and gratify the needs of a helpless object; an infant or any object that is weak, disabled, tired, inexperienced, infirm, defeated, humiliated, lonely, dejected, sick, mentally confused. To assist an object in danger. To feed, help, support, console, protect, comfort, nurse, heal.</td>
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<tr>
<td>Order</td>
<td>To put things in order. To achieve cleanliness, arrangement, organization, balance, neatness, tidiness, and precision.</td>
</tr>
</tbody>
</table>
the need is relevant may be broadened or narrowed, and the instrumental acts linked to the need may be increased or decreased. If the need is firmly attached to an unsuitable object, this is called a fixation and is customarily considered pathological. However, as Murray indicated, the inability of the need to show any enduring object preference, jumping from object to object, may be just as pathological as a fixation.

Fourth, there are proactive needs and reactive needs. The proactive need is one that is largely determined from within, one that becomes “spontaneously kinetic” as the result of something in the person rather than something in the environment. Reactive needs, on the other hand, are activated as a result of, or in response to, some environmental event. The distinction here is largely that between a response elicited by appropriate stimulation and a response produced in the absence of any important stimulus variation. Murray used these concepts also to describe interaction between two or more persons where usually one individual can be identified as the proactor (initiates the interaction, asks the questions, in general provides the stimulus to which the other must respond) and another individual can be identified as the reactor (reacts to the stimuli provided by the proactor).

Fifth, there is the distinction between process activity, modal needs, and effect needs. American psychologists with their conventional emphasis upon function and utility have consistently emphasized effect needs—needs that lead to some desired state or end result. Murray, however, has insisted upon
the equal importance of process activity and modal needs—tendencies to perform certain acts for the sake of the performance itself. The random, uncoordinated, nonfunctional operation of various processes (vision, hearing, thought, speech, and so forth) that occurs from birth on is called process activity. This is "sheer function pleasure," doing for the sake of doing. Moda needs, on the other hand, involve doing something with a certain degree of excellence or quality. It is still the activity that is sought and enjoyed, but it is now rewarding only when it is performed with a certain degree of perfection.

**Interrelation of Needs.** It is evident that needs do not operate in complete isolation from each other, and the nature of this interaction or mutual influence is of crucial theoretical importance. Murray accepted the fact that there exists a hierarchy of needs with certain tendencies taking precedence over others. The concept of prepotency is used to refer to needs that "become regnant with the greatest urgency if they are not satisfied" (Murray, 1951a, p. 452). Thus, in situations where two or more needs are aroused simultaneously and motivate incompatible responses, it is the prepotent need (such as pain, hunger, thirst) that ordinarily will be translated into action as prepotent needs cannot be postponed. A minimal satisfaction of such needs is necessary before other needs can operate. In his investigation of personality Murray habitually employed a set of concepts to represent conflict involving important needs. Thus, it is customary in his research to secure estimates for each subject of the intensity of conflict in certain key areas, for example, autonomy versus compliance, achievement versus pleasure.

Under certain circumstances multiple needs may be gratified by a single course of action. In instances where the outcome of different needs is behaviorally the same, Murray spoke of fusion of needs. Another important kind of relation among needs is referred to by the concept of subsidiation. A subsidiary need is one that operates in the service of another; for instance, the individual may show aggressive needs, but these may be serving only to facilitate acquisitive needs. In any instance where the operation of one need is merely instrumental to the gratification of another, we speak of the first need as subsidiary to the second. Tracing chains of subsidiation can be of great value in revealing the dominant or root motives of the individual.

**Levels of Analysis.** It is important to recognize that Murray's need represents a generalized construct. He drew a distinction between need and aim, where aim represents the specific goal adopted by the person as an expression of the need. Murray (1951b) used the example of a general need for dominance and a specific aim of being elected the mayor of a city. Murray (1938, p. 127) previously had written, "When it is stated that an individual has a strong need for Aggression, let us say, it means merely that signs of this need have recurred with relative frequency, in the past. It is an abstract statement which require..."
amplification" because it does not indicate how or toward what objects the need will be expressed. It also omits, as we shall see shortly, the critical role of the environmental press.

Murray also employed Freud's concept of cathexis to refer to the power of an object to evoke a positive or negative need in a person. He claimed that "a personality is largely revealed in the objects that it cathects. In this fashion a reasonably adequate portrait of the social personality may be composed" (1938, p. 106). This allowed Murray to resolve a dilemma that has confounded many students and theorists of personality. That is, should the focus be on specific individual characteristics or general constructs. Murray wrote:

The problem is to generalize for scientific purposes the nature of the cathected objects; for it does not seem that we can deal with concrete entities in their full particularity. It can have no scientific meaning to say that an S likes Bill Snooks, or enjoys the works of Fred Fudge, or has joined the Gamma club, or belongs to the Eleventh Hour Adventists. Though to the gentlemen involved with the S in these associations it may be a matter of concern. Our own opinion is that it is important to know that there is some object cathected, but the object, as such, can have no scientific status until it is analysed and formulated as a compound of psychologically relevant attributes. The theory of press, we venture to hope, is a step in this direction. (1938, pp. 107-108)

We have now examined the manner in which Murray chose to represent motivation of the individual. However, these personal motivations are intimately linked with events taking place outside of the individual, and it remains for us to scrutinize the manner in which Murray proposed to represent these significant environmental happenings.

Just as the concept of "need" represents the significant determinants of behavior within the person, so the concept of "press" represents the effective or significant determinants of behavior in the environment. In simplest terms a press is a property or attribute of an environmental object or person that facilitates or impedes the efforts of the individual to reach a given goal. Press are linked to persons or objects that have direct implications for the efforts of the individual to satisfy their need strivings: "The press of an object is what it can do to the subject or for the subject—the power that it has to affect the well-being of the subject in one way or another. The cathexis of an object, on the other hand, is what it can make the subject do" (1938, p. 121). By representing the environment in terms of press, the investigator hopes to extract and classify the significant portions of the world in which the individual lives. Clearly we know a great deal more about what an individual is likely to do if
we have not only a picture of his or her motives or directional tendencies but also a picture of the way in which the person views or interprets their environment. It is this latter function that the press concepts are designed to fulfill.

Murray developed various lists of press for particular purposes. Representative of these is the classification contained in Table 6.2, which was designed to represent significant childhood events or influences. In practice these press are not only identified as operating in a given individual’s experience but they are also assigned a quantitative rating to indicate their strength or importance in the individual’s life.

It is important to distinguish between the significance of environmental objects as they are perceived or interpreted by the individual (beta press) and the properties of those environmental objects as they exist in reality or as

| Table 6.2 |
| Abbreviated list of press |
|---|---|
| 1. Family insupport |
| Cultural discord |
| Family discord |
| Capricious discipline |
| Parental separation |
| Absence of parent: father, mother |
| Parental illness: father, mother |
| Death of parent: father, mother |
| Inferior parent: father, mother |
| Dissimilar parent: father, mother |
| Poverty |
| Unsettled home |
| 2. Danger or misfortune |
| Physical insupport, height |
| Water |
| Aloneness, darkness |
| Inclement weather, lightning |
| Fire |
| Accident |
| Animal |
| 3. Lack or loss |
| Of nourishment |
| Of possessions |
| Of companionship |
| Of variety |
| 4. Retention, withholding objects |
| 5. Rejection, uncern, and scorn |
| 6. Rival, competing contemporary |
| 7. Birth of sibling |
| 8. Aggression |
| Maltreatment by elder male, elder female |
| Maltreatment by contemporaries |
| Quarrelsome contemporaries |
| 9. Dominance, coercion, and prohibition |
| Discipline |
| Religious training |
| 10. Nurturance, indulgence |
| 11. Succorance, demands for tenderness |
| 12. Deference, praise, recognition |
| 13. Affiliation, friendships |
| 14. Sex |
| Exposure |
| Seduction: homosexual, heterosexual |
| Parental intercourse |
| 15. Deception or betrayal |
| 16. Inferiority |
| Physical |
| Social |
| Intellectual |

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*Adapted from Murray, 1938, pp. 291–292.
objective inquiry discloses them (*alpha press*). The individual’s behavior is most closely correlated with the beta press, but it is nevertheless important to discover situations in which there is a wide discrepancy between the beta press to which the individual is reacting and the alpha press that actually exist.

We have already seen that Murray conceived of the individual as set into action by a complex set of motives. Further, he granted that when a need is aroused the individual is in a state of tension, and satisfaction of the need involves reduction of the tension. Finally, the organism will learn to attend to objects and perform acts that it has found in the past to be associated with tension reduction.

Although this conventional formulation met with Murray’s approval, he contended that it is an incomplete picture. Not only does the individual learn to respond in such a manner as to reduce tension and thus experience satisfaction, but also he or she learns to respond in such a manner as to develop tension so that it can later be reduced, thereby enhancing the amount of pleasure. An example of increasing tension in order to derive greater satisfaction from the activity is that of engaging in foreplay prior to sexual consummation. Another good example is Zuckerman’s sensation seeking, a motive we will examine in Chapter 9.

One should note that this formulation applies only to effect needs. In process activity and modal needs the satisfaction is intrinsic to the activity and may be just as intense at the beginning or middle as at the end.

Murray accepted the proposition that people act in such a way as to *intend* the increase of satisfaction and decrease of tension. However, this is only an intention or belief on the actor’s part. It does not always turn out that the act that the person believes will reduce tension and lead to satisfaction is successful in attaining this goal. Moreover, humans are not motivated to increase satisfaction *in general*; it is always a specific tension relevant to a particular need they are attempting to reduce. Satisfaction is thus largely an outcome or result of need states and their behavioral consequences.

A *thema* is simply a molar and interactive behavioral unit. It includes the instigating situation (press) and the need that is operating. Thus, it deals with the interaction between needs and press and permits a more global and less segmental view of behavior. By means of this concept, the theorist can represent the situations that instigate or lead to the operation of particular needs as well as the outcome or resultants of the operation of these needs.

*Themas* vary from simple formulations of a single subject–object interaction to more general and cruder formulations of longer transactions. They also include formulations that represent the combination of a number of simple
themes (serial themes). The theme as an analytic unit is a natural outcome of Murray’s conviction that interpersonal relations should be formulated as a dyadic unit. That is, the theorist not only must represent the subject who is the focus of interest but also must represent fully the nature of the person with whom the subject is interacting. The theorist must show an equal concern for the details of both subject and object to predict concrete social interactions between two people.

It is important to recognize that Murray used thema both to define single behavioral episodes, which he regarded as basic molar units for psychology, and to characterize individuals. Consider two of Murray’s examples of episodes. First, an individual who is snubbed by another might respond in kind. This would be coded as rejection press, triggering rejection need in the individual. Second, a person might make renewed efforts to succeed following failure. This would be conceptualized as achievement need following a failure outcome or press. Either episode might be momentary, or it might recur as a characteristic response by the person to a particular press. Murray believed that “the biography of a man may be portrayed abstractly as an historic route of themas.” For an individual displays a tendency to react in a similar way to similar situations, and increasingly so with age. Thus there is sameness (consistency) as well as change” (Murray, 1938, p. 43). Note that Murray’s depiction of the individual is an interactionist one; that is, what matters is the individual’s characteristic reaction to particular press, not a free-floating behavioral tendency.

Although needs are not necessarily linked to specific objects in the environment, it often happens that with experience the individual comes to associate particular objects with certain needs. Likewise, particular modes of response, or means of approaching or avoiding these objects, may be acquired and associated with the need. When this integration of the need and the image or thought of the environmental object, as well as instrumental acts, has taken place, Murray speaks of a need integrate. A need integrate is a well-established "thematic disposition"—a need for a certain kind of interaction with a certain kind of person or object. Under circumstances where a need integrate exists, the arousal of the need will ordinarily lead the person to seek in an appropriate way the environmental object corresponding to the image that was a part of the need integrate. As Murray (1938, p. 110) put it, "It is an internal constellation which establishes a channel through which a need is realized. Compared to it the concept of need is highly abstract."

The unity-thema is essentially the single pattern of related needs and press, derived from infantile experience, that gives meaning and coherence to the
largest portion of the individual's behavior. It operates largely as an unconscious force. It is not always possible to discover a unity-thema, although one can usually arrive at a developmental formulation that sheds light upon all or most of the individual's behavior and without which it would not be possible to bring much order to behavior. Murray referred to a person's unity-thema as the "key to his unique nature" and suggested:

A unity-thema is a compound of interrelated—collaborating or conflicting—dominant needs that are linked to press to which the individual was exposed on one or more particular occasions, gratifying or traumatic, in early childhood. The thema may stand for a primary infantile experience or a subsequent reaction formation to that experience. But, whatever its nature and genesis, it repeats itself in many forms during later life. (1938, pp. 604-605)

A regnant process is the physiological accompaniment of a dominant psychological process. We have already seen in Murray's definition of personality, as well as in our discussion of the need concept, that he placed great emphasis upon the importance of the physiological or neurological processes that underlie the phenomena of interest to the psychologist. This clear intention of locating or referring all psychological processes to brain function led to the development of a specific concept (regnancy) designed to keep this brain-personality identity in the forefront of the theorist's attention. In defining this concept, Murray wrote:

It may prove convenient to refer to the mutually dependent processes that constitute dominant configurations in the brain as regnant processes; and, further, to designate the totality of such processes occurring during a single moment (a unitary temporal segment of brain processes) as a regnancy. . . . To a certain extent the regnant need dominates the organism. (1938, p. 45)

Murray also made clear that all conscious processes are regnant but that not all regnant processes are conscious. Thus, consciousness is just one property of a dominant psychological process, and this may or may not be present in a given instance.

One of the shortcomings of the concepts of need and press as they have been elaborated above is the fact that they do not show sufficient respect for the embeddedness of behavior, for the extent to which given needs are linked with specific press and other needs. Murray made efforts to represent more
adequately this interaction among the determinants of behavior. He reasoned that needs always operate in the service of some value or with the intent of bringing about some end state, and therefore, this value should be made a part of the analysis of motives:

Since observation and experience testify to the fact that aggression, as well as every other kind of action, has an effect (function) which can be best defined in terms of some valued entity (its construction, conservation, expression, or reproduction), the naming of the valued entity in conjunction with the named activity should contribute a good deal to our understanding of the dynamics of behavior. (1951b, p. 288)

In this scheme Murray proposed that behavioral tendencies be represented in terms of vectors that represent broad "physical or psychological directions of activity." The values that the vectors serve are represented by a series of value concepts. Although the scheme was not completely worked out, Murray provided tentative lists of values and vectors. The vectors consist of rejection, reception, acquisition, construction, conservation, expression, transmission, expulsion, destruction, defendance, and avoidance. The values consist of body (physical well-being), property (useful objects, wealth), authority (decision-making power), affiliation (interpersonal affection), knowledge (facts and theories, science, history), aesthetic form (beauty, art), and ideology (system of values, philosophy, religion). In practice it is intended that these vectors and values be arranged in a matrix of intersecting rows and columns so that each cell in the matrix will represent behavior that corresponds to a particular vector in the service of a particular value (see Figure 6.1).

THE DEVELOPMENT OF PERSONALITY

We have examined the elaborate set of concepts developed by Murray to represent the dispositions or striving of the individual, and we have also viewed the concepts with which he proposed to represent significant environmental events. Thus, it is now possible to represent the individual at any point in time as a complex integrate of needs and press or vectors and values, as well as personality structures, abilities, achievements, and sentiments. However, we have also learned that the "history of the organism is the organism," and this clearly indicates that representing the individual at a single point in time is not sufficient. The longitudinal study of the individual is a matter of prime importance, and Murray had a good deal to say about the path of psychological development.

The variables we have already considered can, of course, be applied at any point in development. In addition to these concepts, however, Murray elaborated and refined the psychoanalytic conception of "complex" so as to
**Figure 6.1**

An interpretation of Murray’s vector–value system. Column 6 indicates the forms that a person’s action tendency, or vector, of expression might take. Row E suggests how this person might pursue the goal (value) of knowledge, using all his or her action tendencies. (From Murray, 1951, as adapted by Hall, Lindzey, Loehlin, & Manosevitz, 1985, p. 323.)

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represent a particularly important set of early childhood experiences. Although Murray’s treatment of development is heavily flavored by psychoanalytic theorizing, he introduced novel dimensions into his use of these conceptions. He also was particularly inventive in devising means of measuring some of the important variables.

In discussing development we shall begin with a consideration of the infantile complexes and follow this with a brief summary of Murray’s position in regard to several theoretical issues, including genetic–maturational determi-
nants, learning, sociocultural determinants, uniqueness of the individual, the role of unconscious factors, and the socialization process.

Murray (1938) described at great length the press of childhood and resulting needs and cathexes. He also noted that our recall of such events hinges on possession of language; that is, we can only recall that which has been verbalized (we will discuss a similar assumption by George Kelly in Chapter 9). Although events from the preverbal period are not recallable, Murray considered them to be "in many cases as determining as, if not more determining than, later events" (1938, p. 361). The preverbal status of these events presents an empirical dilemma, because the usual methods of appraisal or measurement are inappropriate. The investigator must depend upon external observation of the child and vague reconstructions the individual can make after language has developed. Utilization of these two sources of data has led to the isolation of certain areas of experience as possessing particular importance for the development of the child and subsequently the adult. Murray suggested that these are

five highly enjoyable conditions or activities, each of which is terminated, frustrated or limited (at some point in development) by external forces: (1) the secure, passive and dependent existence within the womb (rudely interrupted by the painful experience of birth); (2) the sensuous enjoyment of sucking good nourishment from the mother's breast (or from a bottle) while lying safely and dependently in her arms (brought to a halt by weaning); (3) the free enjoyment of the pleasurable sensations accompanying defecation (restricted by toilet training); (4) the pleasant sense impressions accompanying urination . . . ; and (5) the thrilling excitations that arise from genital friction (prohibited by threats of punishment). (1938, pp. 361–362)

All of these areas have been indicated by the psychoanalyst as posing special problems for the growing child. Murray's contributions here represent an elaboration and clarification of the orthodox Freudian views.

In cases where the effects of these infantile experiences upon later behavior are clear and extensive, we speak of a complex. Actually it is presumed that all individuals have "complexes" of varying severity, and it is only in extreme cases that this implies abnormality. In Murray's terms a complex is "an enduring integrate (derived from one of the above-mentioned enjoyed conditions) that determines (unconsciously) the course of later development" (1938, p. 363).

Murray defined and provided rough specification for the measurement of five complexes: claustrophobic, oral, anal, urethral, and castration. Each represents
the outcome of happenings involving one of the five areas of pleasurable experience outlined above.

The claustral complexes represent residuals of the uterine or prenatal experience of the individual. This area of experience has been dealt with by analysts, including Freud and Rank. Murray brought together and systematized these ideas, elaborated upon them, and added a suitable label. He suggested that under this general heading there are three specific types of complex:

1) a complex constellated about the wish to reinstate the conditions similar to those prevailing before birth; 2) a complex that centres about the anxiety of insupport and helplessness, and 3) a complex that is anxiously directed against suffocation and confinement. (1938, p. 363)

Having provided a general specification of the complexes, Murray proceeded to provide detailed symptoms or criteria in terms of which each of the three types of claustral complex may be identified. The simple claustral complex (reinstate of uterine conditions) is characterized by cathectic for claustra (womblike enclosures), nurturant or motherly objects, death, the past, and resistance to change, needs for passivity, harmavoidance, seclusion, and succorance. Thus, the overall picture is of a passive, dependent person who is oriented toward the past and generally resistant to novelty or change. The fear of insupport complex manifests itself in fear of open spaces, falling, drowning, earthquake, fire, and family insupport. The egression complex is concerned with escaping or departing and displays itself in cathectic for open spaces and fresh air, need to move and travel, cathectic for change, claustrophobia, and a strong need for autonomy. Thus, the individual who displays this complex is in most respects the opposite of the person displaying the simple claustral complex.

The oral complexes represent derivatives of early feeding experiences. Again we find that Murray proposed three specific subcomplexes, all of which involve the mouth but each of which implies a distinctive kind of activity. The oral succorance complex involves oral activity in combination with passive and dependent tendencies. The existence of this complex can be inferred from oral automatisms such as sucking; cathectic for oral objects such as the nipple, breast, or thumb; compulsive eating and drinking; need for passivity and succorance; cathectic for words, nurturant objects; and inhibited aggressive needs. The oral aggression complex combines oral activity with aggression and is manifested in oral automatisms such as biting; cathectic for solid oral objects (meat, bones); strong aggressive needs; ambivalence toward authority figures; projection of oral aggression (seeing the environment as full of biting aggressive objects); need for harmavoidance; phobia for biting objects; and stuttering. The oral rejection complex involves spitting out and disgust over oral activities and objects. More specifically it is revealed in a negative cathectic for certain
foods, low need for food, fear of oral infection or injury, need to reject, need for seclusion and autonomy, and dislike for nurturant objects.

The anal complexes are derived from events associated with the act of defecating and bowel training. Murray suggested, following Freud and Abraham, that there are two specific complexes here, one concerned primarily with the tendency to expel and the other with the tendency to retain. The anal rejection complex includes diarrhea and cathexis for feces and further involves need for aggression, particularly involving disorder and dirtying or smearing; it is associated with the anal theory of birth, the need for autonomy, and anal sexuality. The anal retention complex involves an underlying cathexis for feces, but this is concealed behind an apparent disgust, prudishness, and negative reaction to defecation. This complex also is associated with the anal theory of birth and anal sexuality as well as the need for autonomy, although in this instance the autonomy is displayed through resistance to suggestion rather than seeking for independence or freedom. There is a strong need for order and cleanliness and also a need to retain possessions. This complex, of course, restates the famous Freudian trilogy of “parsimony, cleanliness, and obstinacy” that were suggested as typifying the “anal character.”

Originally Murray (1938) considered the urethral complex of rather minor importance. He indicated initially that the complex involved bedwetting, urethral soiling, and urethral erotism. Postwar research convinced him of the central importance for many individuals of this area of experience, and he subsequently provided a further description of the complex as well as a series of empirical devices for assessing it. He also suggested that the syndrome be called the Icarus complex after the mythological figure who flew too near the sun against his father’s advice, with the result that his artificial wings melted and he plunged to his death. Murray (1955) published a detailed case history of an American Icarus. In his final formulations he indicated that the individual who is an Icarian typically displays such qualities as cathexis for fire, a history of enuresis, a craving for immortality, strong narcissism, and a lofty ambition that dissolves in the face of failure.

The castration complex is also given less attention in Murray’s early writing than the first three complexes. He suggested that the complex should be given a more limited meaning or significance than that commonly assigned to it by the psychoanalysts:

*To us it seems better to confine the term castration complex to its literal meaning: anxiety evoked by the fantasy that the penis might be cut off. This complex occurs often enough, but it does not seem possible that it is the root of all neurotic anxiety. It usually comes as a resultant of the fantasies associated with infantile masturbation. (1938, p. 385)*

Any one of these complexes may persist throughout a person’s life in the form of character traits, that is, characteristic ways of behaving.
In a late formulation of his views, Murray (1968b) ascribed an important role to genetic and maturational factors in the development of personality. He conceived of genetic-maturational processes as being responsible for programming a succession of eras throughout an individual's life. During the first era—that of childhood, adolescence, and young adulthood—new structural compositions emerge and multiply. The middle years are marked by conservative recompositions of the already emerged structures and functions. In the final era, senescence, the capacity for forming new compositions and recompositions decreases and the atrophy of existing forms and functions increases. Within each period, there are numerous smaller programs of behavioral and experiential events that run off under the guidance of genetically controlled maturational processes.

Murray attributed these developments to metabolic processes. In the first era, anabolism outdistances catabolism; in the second, the two are about equal; and in the third, catabolism is greater than anabolism. Murray favored a metabolic model because "it conforms with a conception of reality that is not expressible in terms of spatial structures of matter as such but in terms of the interdependent, operating properties of matter—that is, in terms of process, time, and energy" (1968b, p. 9). Moreover, it is a model that provides for progression, creativity, and self-actualization, which are not accounted for by a purely psychoanalytic formulation.

Genetic factors cannot be overlooked in discussing learning since Murray believed they are responsible for the presence of pleasure (hedonic) and displeasure (anhedonic) centers in the brain. Learning consists of discovering what generates pleasure and what generates distress for the individual. These hedonic and anhedonic generators may be classified in several ways. They may be retrospective (memories of past experiences that were delightful or distressful), spective (current experiences), or prospective (anticipations of future pleasures or pains). Current generators may be classified according to whether they are located predominantly in the person, in the environment, or in an interpersonal transaction. These generators may be further subdivided. For example, generators in the person may be located in the body, in some emotional center of the brain, in some type of psychological process, or in the judgments of conscience.

Murray specifically rejected the concept of habit as being of primary importance in personality development. Instead of being a creature of habit, the individual is continually looking for new ways to express himself or herself, eager for new forms of stimulation, new ventures, and new accomplishments, and capable of being transformed by spiritual insights (Murray, 1968b, p. 12).

Murray, in marked contrast to most theorists who have drawn heavily from psychoanalytic theory, deliberately assigned a major role in development to...
environmental factors. We have already seen that in distinction to most students of motivation he developed an elaborate set of concepts (press) designed to represent the environment of the individual. He did so partly on the basis of Darwin's theory that the group more than the individual is the evolutionary unit. Survival of the fittest applies to rival groups. Accordingly, Murray wrote, "This theory of group evolution helps us to understand why man is a social creature, and why as a social creature he is both humane and brutal" (1959, p. 46). Further, he made frequent reference to the fact that the path of development cannot be adequately understood without a full picture of the social setting in which the process evolves. Consistently, his concepts of "proceeding" and "thema" imply an interactionist belief—a conviction that full understanding of behavior will follow only when both subject and object are adequately represented. All of these considerations make clear that Murray accepted and accentuated the importance of a "field" view of behavior.

In spite of his attention to general categories of analysis, Murray always maintained the essential uniqueness of each person, and even of each behavioral event, as a self-evident fact. His respect for naturalistic observation and his creative and intuitive literary talents made it easy for him to grasp and express compellingly the individuality and elusive complexity of each subject or event. In his words:

Every proceeding leaves behind it some trace of its occurrence—a new fact, the germ of an idea, a re-evaluation of something, a more affectionate attachment to some person, a slight improvement of skill, a renewal of hope, another reason for despondency. Thus, slowly, by scarcely perceptible gradations—though sometimes suddenly by a leap forward or a slide backward—the person changes from day to day. Since his familiar associates also change, it can be said that every time he meets with one of them, both are different. In short, every proceeding is in some respects unique. (Murray & Kluckhohn, 1953, p. 10).

Among academic psychologists Murray was one of the first to accept the insidious and pervasive role of unconscious determinants of behavior (Murray, 1936). As we have observed, in his first major theoretical statement (1938) he made clear that not all regnant processes have conscious correlates. Naturally enough, those that do not determine behavior without the individual's awareness. Not only is the individual unaware of certain tendencies that influence behavior but, more important, some of these tendencies are actively defended against or warded off from consciousness. Thus, Murray not only accepted the
role of unconscious determinants of behavior but also recognized the operation of the Freudian mechanisms of repression and resistance.

Murray suggested that the human personality is a compromise between the individual's own impulses and the demands and interests of other people. These demands of other people are represented collectively by the institutions and cultural patterns to which the individual is exposed, and the process whereby his or her own impulses are compromised by these forces is referred to as the socialization process. Conflicts between the individual and the approved patterns of the social milieu are customarily solved by means of the individual conforming to the group patterns in some manner. Only occasionally and in unusual individuals is it possible for the person to bring about a change in the cultural patterns that will ease the conflict with his or her own impulses. For the most part it is the personality that is more malleable and therefore the conflict is usually reduced by altering the person.

An essential element in achieving the goals of socialization is the development of an adequate superego. As we have already seen, by internalizing aspects of the authority figures to whom one has been exposed, the person develops an internal structure that serves to reward and punish one when one is behaving appropriately or inappropriately in terms of the culture pattern as interpreted by these authority figures. This implies that the parents, as the most important authority figures, are the chief agents of the socialization process. The effectiveness of the parents in rewarding approved and punishing disapproved patterns of behavior will largely determine the success of this developmental process. An important component of the parents' role as socializer is the effectiveness with which they develop a mutually affectionate relationship with the child so that mere approval or disapproval can serve as significantly motivating conditions in controlling the child's behavior.

Socialization is not without its negative qualities. An individual can be oversocialized, and conceivably an entire society may be exposed to socialization processes that are debilitating rather than preparatory for a fruitful life. As Murray suggested, a human is fundamentally an animal, and to the extent that socialization denies this fundamental, biological nature, it may destroy the creative spontaneity and vigor essential to the most important kinds of human advances.

We have pointed out that Murray's research was distinguished primarily by its originality. This very fact makes it singularly difficult to characterize in a representative fashion the investigations he has inspired and conducted. Before turning to the difficult task of selecting representative investigations to summa-
rize, let us examine very briefly several distinctive qualities of Murray's general approach to personality research. The interested reader will find several papers in which Murray outlined his conception of how personality research should be pursued (Murray, 1947, 1949b, 1963).

The large-scale study of human behavior, in which findings consist of group tendencies or overall relations that may characterize very poorly any single individual within the group, represents a limited avenue to understanding human behavior. Murray was convinced, with the wisdom of the naturalist and clinician, that an adequate understanding of behavior must follow a complete and detailed study of individual subjects. Just as case study has provided indispensable assistance in the growth and development of medical science, so the future of psychology is linked to the willingness of investigators to take the time and effort to understand thoroughly individual cases. Group relations are important only when accompanied by a careful inquiry into the deviations within the group and conditions that cause or accompany these deviations. To report a finding that characterizes 80 percent of a specified group is of little value unless some explanation can be provided for the failure of the other 20 percent to fit into this pattern. Murray's consistent emphasis on this point was one of his principal contributions to research methods.

If we are interested in the individual subject and also concerned with reasons for subjects representing exceptions to general relationships, it is clear that we must secure a very large amount of information concerning each subject. Thus, it was inevitable that Murray's position led him to the intensive study of his subjects. This, of course, has the natural result of reducing the number of subjects who can be studied at any one time and the total number of studies that can be carried out by any one investigator in a given number of years.

A further distinctive quality of his research has been its emphasis upon the study of normal individuals in natural settings. In general, the intensive study of individual cases has been reserved for the clinical setting where the pathology of the patients has made them a subject of particular interest or else the demands of diagnostic or therapeutic expediency have necessitated extensive information. Thus, Murray's choice of the normal subject as the focus of his research provided a natural complement to the case histories available from psychiatric settings.

Murray (1958) believed that the ultimate concern of the personologist is to explain and predict the individual's activities in everyday life. For that reason, he or she should not be content to limit predictions to the subculture of the laboratory or try to understand the individual merely by validating one test against the other.
He was also one of the pioneers in interdisciplinary co-operation in personality research. The Harvard Psychological Clinic staff habitually included representatives of psychiatry, psychology, anthropology, and other disciplines in an era when this was anything but commonplace.

Murray placed great emphasis upon the importance of the observer or the psychologist as an instrument in psychological research. Although we may use rating scales, category sets, or psychological tests to appraise personality, still, at the base of all these instruments is the sensitive observation of the investigator or clinician. Because of the root status of the observer, Murray was convinced that more attention should be paid to his or her frailties and more serious efforts directed at improving their powers of observation. These considerations led him to refer to the psychologist as the most important "instrument of precision" in psychological research.

One evident means of placing checks upon, and improving the quality of, observation is to have multiple observers all examining the same data from a different perspective. Thus, using a number of investigators to study the same individual or individuals offers unique rewards in the form of canceling out limitations posed by the biases of particular observers or the limitations offered by specialized sets of data. Not only is the end result of such group observation presumably superior to individual observation but the members of the group should sharpen and improve their powers of observation as a result of the corrective function of the observations of others.

These considerations led Murray to devise the diagnostic council, which involves many observers all studying the same subjects from different points of view with the opportunity for a final discussion and synthesis of the information secured from these different vantage points. After a period of individual observation during which each investigator studies the subjects through his or her own specialized techniques, there is a conference for each subject. At this time every investigator presents his or her data and interpretation with a full opportunity for the observations and interpretations of other observers to support or suggest modifications in the report. A single investigator has primary responsibility for assembling and presenting the synthesis of each case, but each member of the council is given an unlimited opportunity for contributing to this final product.

No one has made more significant contributions to personality assessment than Murray. He devised a large number of ingenious devices for the measurement of personality, only a small number of which have been systematically exploited. The volumes Explorations in personality and Assessment of men provide ample illustration of the ingenuity and diversity of the instruments he devised or was
influential in developing. One of these, the Thematic Apperception Test, has become, next to the Rorschach Test, the most widely used projective technique in current use (Lindzey, 1961; Murstein, 1963; Zubin, Eron, & Schumer, 1965; see Kaplan & Saccuzzo, 1993, for a recent review). In addition, Murray's system of needs has been the basis for several other widely used personality inventories. Most notable among these are the Edwards Personal Preference Schedule (Edwards, 1954, 1959), the Personality Research Form (Jackson, 1967), and the Jackson Personality Inventory (Jackson, 1976a,b).

Almost all of Murray's instruments have been congruent with his fundamental conviction that an ultimate understanding of human behavior will derive not from the study of lower organisms or the study of humans under highly restricted conditions but rather from the complex study of individual behavior. That is, Murray argued for the collection of rich and multiform data that can be expected to reflect a wide range of behavioral tendencies and capacities. He was convinced that one of the natural advantages of the psychologist is the fact that he or she deals with a talking organism and that this should be capitalized upon fully. In contrast to the biologist, the zoologist, or the physicist, the psychologist deals with a subject who can tell a great deal about internal processes that operate, about external events that are attended to, and about the major determinants of behavior. It is true that these reports must be assessed carefully and cannot always be taken at their face value, but nevertheless they represent a crucial beginning in the attempt to unravel the secrets of human behavior.

Given this interest in subjectivity, it is quite natural that Murray should have pioneered in developing personality instruments that explore the full mental content of the subject. His instruments typically do not limit the response alternatives of the subject by means of predetermined categories but rather they permit and encourage a full and subjective exposition on the part of the subject. Imagination and fantasy are permitted full participation by these techniques. They provide the investigator with a fullness of data that is at the same time richly promising and complexly discouraging.

Murray and his collaborators at the Psychological Clinic conducted extensive research. Murray began Explorations in personality with a commitment to adopting "the life history of a single man as a unit" for investigation (1938, p. 3). One of Murray's clear legacies has been the commitment among many of his students to study personality "the long way," by attending in depth to individual lives (e.g., White, 1963b, 1975, 1981). His research agenda has been carried forward by former students, such as Donald MacKinnon at the Institute for Personality Assessment and Research (IPAR) at Berkeley. In addition, as noted earlier in this chapter, Murray's research tradition is recog-
nized in the Henry A. Murray Lectures in Personality at Michigan State University and in the series of volumes generated by those lectures.

Three examples of Murray's research deserve mention. First, Chapter 6 in Explorations in personality contains over 200 pages of research reports by Murray and his collaborators. The research reported there includes interviews about childhood and sexual development, questionnaires to measure needs and special abilities, correlations between Murray's needs and hypnotizability, levels of aspiration, Rosenzweig's experimental studies on repression and reaction to frustration, emotionality and galvanic skin response, and Erikson's studies of college males in dramatic play situations. This work deserves further study by the interested student, both because of its inherent interest and historical significance and because it illustrates the breadth and creativity of Murray's approach to personality.

In Murray's second major book, The assessment of men (Office of Strategic Services Assessment Staff, 1948), he described assessment procedures he and his staff had employed at the United States Office of Strategic Services during World War II. Most of those procedures represented attempts to understand the personalities of candidates being screened for secret, overseas assignments. This work was noteworthy for its multidimensional, pragmatic orientation. The assessments entailed self-report tests, interviews, observations, and situational tests. For example, applicants' "leadership" skills ostensibly were measured by how effectively they directed several helpers in a construction task. The "helpers," however, had been directed to obstruct the project in a variety of ways, and the entire exercise actually was designed to measure reactions to frustration. Like the earlier experimental work at Harvard, these assessment practices foreshadow a number of contemporary research and assessment strategies.

Finally, Murray's most interesting research project would not qualify as research for many psychologists, but it provides a penetrating insight into Murray's conceptualization of personality. This is the paper In nomine diaboli (1951c), in which he presents a psychological interpretation of Melville's Moby Dick.

The bulk of the paper is devoted to developing and documenting several hypotheses concerning the significance of characters within this story. The first hypothesis states in simplest terms that Captain Ahab represents Satan or the Devil and his forces of evil. In psychological terms Ahab represents the primitive and largely evil forces of the id. This hypothesis is supported with characteristic care and attention to detail in a series of passages typified by the following:

That it was Melville's intention to beget Ahab in Satan's image can hardly be doubted. He told Hawthorne that his book had been broiled in hellfire and secretly baptized not in the name of God but in the name of the
Devil. He named his tragic hero after the Old Testament ruler who “did more to provoke the Lord God of Israel to anger than all the Kings of Israel that were before him.” King Ahab’s accuser, the prophet Elijah, is also resurrected to play his original role, though very briefly, in Melville’s testament. We are told that Captain Ahab is an “ungodly, god-like” man who is spiritually outside Christendom. He is a well of blasphemy and defiance, of scorn and mockery for the gods—“cricket-players and pugilists” in his eyes. Rumor has it that he once spat in the holy goblet on the altar of the Catholic Church at Santa. “I never saw him kneel,” says Stubb. He is an “anaconda of an old man.” His self-assertive sadism is the linked antithesis of the masochistic submission preached by Father Mapple. (Murray, 1951c, pp. 441–442)

The second hypothesis is that Moby Dick is the antithesis of the unbridled forces of evil—the superego. As such, the whale represents not only the moral forces within the individual but also the conventional institutions of Melville’s society:

Stated in psychological concepts, Ahab is captain of the culturally repressed dispositions of human nature, that part of personality which psychoanalysts have termed the “Id.” If this is true, his opponent, the White Whale, can be none other than the internal institution which is responsible for these repressions, namely the Freudian Superego. This then is my second hypothesis: Moby Dick is a veritable spouting, breaching, sounding whale, a whale who, because of his whiteness, his mighty bulk and beauty, and because of one instinctive act that happened to dismember his assailant, has received the projection of Captain Ahab’s Presbyterian conscience, and so may be said to embody the Old Testament Calvinistic conception of an affrighting Deity and his strict commandments, the derivative puritan ethic of nineteenth-century America, and the society that defended this ethic. Also, and most specifically, he symbolizes the zealous parents whose righteous sermonizings and corrections drove the prohibitions in so hard that a serious young man could hardly reach outside the barrier, except possibly far away among some tolerant, gracious Polynesian peoples. The emphasis should be placed upon that unconscious (and hence inscrutable) wall of inhibition which imprisoned the puritan’s thrusting passions. “How can the prisoner reach outside,” cries Ahab, “except by thrusting through the wall? To me, the White Whale is that wall, shoved near to me. . . . I see in him outrageous strength, with an inscrutable malice sinewing it.” As a symbol of a sounding, breaching, white-dark unconquerable, New England conscience what could be better than a sounding, breaching, white-dark, unconquerable sperm whale? (pp. 443–444)
These then are the major revelations of Murray's analysis. To secure an adequate impression of the strength and beauty of Murray's interpretations, it is necessary to refer to the original article.

Again, some may question whether this is in fact psychological research. Certainly there is no control group, no distribution of numbers, no index of reliability, no statistical analysis. In spite of these ritual violations, however, Murray has asked an interesting psychological question and has arrayed evidence that bears upon this question. Further, in the process of presenting the question and his findings, he employed assumptions concerning human behavior that are an integral part of the theory we have just expounded. Most important of all is the fact that these passages contain speculations and generalizations concerning human behavior that are almost certain to have a generative effect upon the reader. There are few experimentalists within psychology who could not profit from exposure to the kinds of ideas so vividly and provocatively presented in this paper.

Murray's approach to personality inspired a great deal of research. In this respect, the heuristic value of his theory has been substantial. In this section we consider research programs that are derivatives of Murray's model.

The research program most directly associated with Murray is David McClelland's study of the need for achievement. The connection with Murray actually exists at three levels. First, the motive to achieve was one of the original needs identified by Murray, who defined it as a drive to overcome obstacles and obtain high standards. Second, McClelland believes that we are not directly aware of our basic motives. As a consequence, he embraced Murray's proposal that we measure needs as they exist in a person's fantasies, not in his or her behavior or self-reports. Third, following on this last point, McClelland has employed a modified version of Murray's Thematic Apperception Test (TAT) to measure achievement motivation.

The TAT was developed (Morgan & Murray, 1935) out of Murray's belief that many of the basic human motives exist outside of conscious awareness. This clearly presents a major measurement problem. How can we expect a person to tell us how much of a tendency he or she possesses if the person is not aware of the existence of that motive? This is the classic dilemma for depth psychology. Murray's solution was to develop the TAT in accord with what has come to be known as the projective hypothesis. If we present a person with an ambiguous picture and then ask what is in the picture, the response must be a reflection of what is important to the person or the themes the person uses to organize the world. Murray went so far as to describe the
TAT as an "x-ray picture of the inner self." The TAT contains a set of ambiguous pictures to which a person responds as an exercise in imagination. The test taker is shown a picture, then asked to tell a story describing who the characters in the picture are, what they are thinking and feeling, what led up to the scene, and what the outcome will be. Murray's basic scoring assumption was that the hero or central character in the story represents the person telling the story and that the hero's needs, press, and theme in fact characterize the person telling the story (see Lindsey, 1952, 1959, 1961, for evaluations of the TAT).

McClelland modified the TAT to measure need for achievement (NACH). He and his co-workers (McClelland, Atkinson, Clark, & Lowell, 1953) developed a reliable scoring procedure for quantifying the NACH imagery in stories told to TAT-type pictures. The NACH is defined by the desire to do better than others, and the central scoring category was whether a character in the story a person told wanted to perform better than someone else, meet some internal standard of excellence, do something unique, or become involved in a long-term project.

The correlates of high NACH identified by McClelland have been as innovative as his measurement procedure. Going far beyond the psychologist's usual laboratory research, McClelland (1961) has argued that entire societies may differ in levels of NACH. In an ingenious procedure, he has applied his scoring scheme for the TAT to code the NACH imagery in elementary school textbooks in various countries. The resulting imagery levels were found to be correlated with an index of economic growth. McClelland's collaborators also have found relationships between the achievement imagery in English literature and coal imports through London between 1550 and 1800, as well as between the NACH levels in children's readers and fluctuations in the number of U.S. patents issued between 1810 and 1950.

McClelland also has pursued such connections at the level of the individual. That is, he has argued that individuals high in NACH take moderate risks, have high aspirations, and assume personal responsibility for their performance. These characteristics should predispose people for success in business endeavors (McClelland, 1985), and there is some evidence that high NACH is associated with business productivity. For example, Wainer and Rubin (1969) found that the leaders of more successful research and development companies had higher NACH levels than the leaders of similar, less successful companies. McClelland and Boyatzis (1982) reported that NACH levels measured at the time future managers were hired by American Telephone and Telegraph (AT&T) were associated with promotion up to level 3 in the company after sixteen years. Promotion beyond this point, however, was not associated with NACH levels. McClelland suggested that in a large hierarchical company like AT&T, NACH only contributed to promotion up to a point. At the highest levels, a different motive, the power motive, might be most important.
If achievement motivation indicates a person’s desire to do better, then power motivation indicates a person’s desire to have an impact on others and to feel strong. Winter (1973) developed a coding system for power imagery in TAT stories. Using this system, Winter (1987) analyzed the power motivation in the inaugural addresses of American presidents. The two presidents with the highest power motivation were Harry Truman and John Kennedy. Most interestingly, Winter found significant positive correlations between power motivation scores and ratings of “presidential greatness,” number of historically significant decisions made, and likelihood of leading the United States into war. In a more mundane arena, McAdams, Rothman, and Lichter (1982) reported a tendency for higher power-motive scores among people who typically adopt leadership roles and/or achieve positions of high influence.

There also are fascinating relationships between power motivation and two facets of our personal lives, romantic relationships and physical health. Strikingly, sex differences exist in the former domain. Stewart and Rubin (1976) reported marked instability in romantic relationships among men high in need for power. McAdams (1984) also found an association between high power motivation in men and greater dissatisfaction in marriage and dating relationships, less stability in dating, and higher levels of divorce. In women, however, power motivation has been positively associated with marital satisfaction (Veroff, 1982). The proposed relationship with health is complicated (McClelland, 1979), and few studies have been reported. McClelland and Jemmot (1980) did find that students with high power motivation, high self-control, and a high number of power/achievement stresses reported more physical illnesses, and more severe illnesses, than other students.

We turn now to three recent trends in personality research. Although none of these trends was initiated directly by Henry Murray, each is linked to and entirely consistent with his model.

As we shall see in the following chapter on Gordon Allport, one of the seminal events in the last three decades of research on personality occurred in 1968, when Walter Mischel published *Personality and assessment*. Mischel argued that there existed scant evidence for the utility of global traits of personality as predictors of behaviors. One apparent reason for this paucity of support, Mischel concluded, was the reality that behavior tends to be *situationally specific*: that is, our behavior is largely under the control of the particular characteristics of the situation we are in, rather than any general personality traits we carry with us. As a consequence, we act in a consistent manner (e.g., aggressively or helpfully) across different situations because we perceive those situations to be equivalent, not because we possess a general personality characteristic (i.e., aggression or helpfulness).
The great value of Mischel's position was the fact that it was an empirical challenge. He was not interested in theoretical arguments about the merits of the different approaches; he would only be persuaded by data indicating cross-situational consistency of behavior or predictive utility of personality traits. As we shall see in the next chapter, there were a number of responses to Mischel. One of the central of these responses entailed the advocacy of an interactionist approach: Behavior should be conceptualized and investigated as a joint function of characteristics of the situation and attributes of the person (see, for example, Endler and Magnusson, 1976a,b; Magnusson & Endler, 1977a,b; Ozer, 1986).

Interactionism meant many things to many people. Endler (1981) distinguished between mechanistic interactionism and reciprocal interactionism. Mechanistic interactionism has a statistical definition. It occurs when the effect of a personality variable depends on the level of a situational variable (or when the effect of a situational variable depends on the level of a personality variable). For example, Leonard (1975) investigated whether the similarity between two people is associated with how much they like one another. He found that people high in self-esteem like their partner more when the partner is similar, but people low in self-esteem like their partner more when the partner is dissimilar. In other words, self-esteem (a personality attribute) interacts with similarity (a situational characteristic) in determining attraction (see Blass, 1984, for other good examples). Alternatively, such a circumstance may be described by saying that self-esteem serves as a moderator variable for the relationship between similarity and attraction. Bowers (1973) reviewed a series of studies on the relative importance of persons, situations, and interactions in accounting for behavior. In fourteen of eighteen comparisons, he found that the person-situation interaction accounts for more of the behavioral variance than either the person variable or the situation alone.

Reciprocal interactionism, by contrast, suggests that the person, the situation, and the behavior have a reciprocal influence on one another (this clearly anticipates a position that Albert Bandura will call reciprocal determinism; see Chapter 14). According to this approach, it is impossible to consider persons and situations as separate causes of behavior, because they are interdependent. The key point for the student to recognize in this context is that reciprocal interactionism is not new. It is a clear expression of the approach that Henry Murray was advocating when he proposed that behavior be analyzed in terms of need-press combinations, or thema. That is not to suggest that there is anything wrong with reciprocal interactionism. Murray's identification of commensurate dimensions for need and press, however, provides a vehicle for reciprocal interactionism that has not been sufficiently appreciated.
In an influential paper published in 1971, Rae Carlson lamented that “current methodological practices are incapable of approaching questions of real importance in personality” (p. 203). Furthermore, she wrote, “the present impoverishment of personality research is distressing because it suggests that the goal of studying whole persons has been abandoned” (p. 207). This was Carlson’s own critique, but she also clearly was echoing Murray’s position from thirty-three years earlier.

Carlson was following Murray’s lead in another respect as well. She quoted Kluckhohn and Murray’s (1949, p. 35) statement that every man is “like all other men, like some other men, and like no other man.” Carlson agreed with Murray that these three approaches are best regarded as complementary, and she used them to consider all articles published in the *Journal of Personality* and the *Journal of Personality and Social Psychology* during 1968. Of the 226 articles reviewed, 57 percent disregarded subject variables and treated subjects like “all other men” while 43 percent considered group differences (e.g., high versus low anxiety or male versus female) in a “like some other men” approach. To Carlson’s dismay, “not a single published study attempted even minimal inquiry into the organization of personality variables within the individual” (1971, p. 209). Her conclusion was that adherence to conventional research strategies has led to “the abandonment of the field of normal personality as a primary scientific enterprise” (p. 210). Carlson summarized her review by quoting Murray’s observation that the basic reason why personality research has been misleading or trivial is that researchers have failed to collect enough pertinent information about the subjects.

Carlson (1984) replicated her study on 113 studies published during 1982 in the *Journal of Personality and Social Psychology*. Her conclusion was no more sanguine this time. No more than 7 percent of the studies met any of what she regarded as the three most important criteria for a personality study: focus on the individual, attempt to study a subject for at least two months, and use of biographic materials or personal documents. According to Carlson, researchers continue with “a misconception of the task. Personality is not equivalent to ‘personality variables’ or to ‘individual differences.’ Even the most elegant studies of part processes fail to yield knowledge of the development and dynamic organization of personality, as we have known at least since *Explorations in personality*” (1984, p. 1308; but see Kenrick, 1986, for a trenchant rebuttal). Murray’s legacy persists.

Recent developments in the subdiscipline of psychobiography represent the clearest response to Carlson’s pleas to rediscover the person in personality research. The original psychobiography was Sigmund Freud’s study of Leonardo da Vinci (1910a; see Elms, 1988, for an analysis), but much has happened since
then. Runyan's (1982) seminal book, *Life histories and psychobiography*, provided much of the impetus for current work in this field. Runyan also has provided recent overviews of the history of psychobiography (1988, 1990), and McAdams's (1988) introduction to the *Journal of Personality* special issue on "Psychobiography and life narratives" provides a good introduction to the field. While some psychobiography has explicitly employed Murray's concept of theme (e.g., Alexander, 1988), other work has employed social motives (Winter & Carlson, 1988), Erik Erikson's theory of personality development (Stewart, Franz, & Layton, 1988), and Tompkins's (1979, 1987) script theory (e.g., Alexander, 1990; Carlson, 1988).

Substantial progress also has been made on the methodology of psychobiography. Runyan (1988) divides the process of understanding an individual life into eight steps ranging from the evidence, such as diaries and letters, and its examination through a consideration of "social, political, psychological, and historical factors." He argues that the impetus for a new psychobiography can come from a development in any one of these eight steps, and he illustrates this sequence with a study of King George III.

Alexander (1988, p. 266) describes a series of guidelines for studying "the important means-ends sequences that characterize the imagery of individual people." As this quote suggests, Alexander links his work to that of Murray and to Allport's use of personal documents (see Chapter 7). He suggests that one can either "let the data reveal itself" or "ask the data a question." The former approach entails identifying what material is most salient. Following Freud's psychoanalytic method, Alexander suggests that psychobiographers attend to material that is noteworthy by virtue of its primacy, frequency, uniqueness, negation, emphasis, omission, error, isolation, or incompleteness. Alexander's second approach focuses on a particular concern about the subject, such as his or her level of introversion or attitude toward success. Noting each incident relevant to the concern in the available material on the subject, then coding and counting types of sequences, outcomes, and affects, provides an indication of the circumstances in the subject's life when introversion or success does or does not occur.

Regardless of the particular approach adopted, psychobiography offers a vehicle both for putting the person back in personality research and for implementing Murray's concern with individual life histories. McAdams (1990), for example, has provided an introduction to personality theories that adopts the person as the unit of study. Elsewhere, McAdams (1988, p. 1) nicely summarizes this point: "Once again, it is okay to study the 'whole person.' Better, contemporary personologists insist, as did pioneers like Gordon Allport and Henry Murray, that such an endeavor is the personologist's raison d'être."
We have already seen that Murray's theoretical conceptions underwent a constant process of reexamination and modification. Even in the face of this constant flux, however, certain elements stand firm. At no time did his deep interest in the motivational process waver or did he show any inclination to desert his descriptive and taxonomic activities. Similarly, his theory has always emphasized the importance of unconscious sources of motivation and has throughout stressed the relation of psychological process to brain process.

Murray's formulations have been found useful not only by his students but also by many other investigators and clinicians interested in studying personality. His concepts of need and press have had a wide usage, particularly among clinicians and investigators who have used the Thematic Apperception Test. Few persons who have been concerned with the details of classifying human behavior have failed to gain something from the several important classifications that Murray proposed. As we have indicated, his influence upon the current methods or procedures for assessing personality has been profound. Both in the development of specific instruments and in the presentation of a point of view, his work has had a great deal to do with contemporary developments in this area. Fully as important as these substantive contributions has been Murray's capacity to intrigue, excite, and inspire his students and colleagues. The enthusiasm and conviction with which he imbued his students is undoubtedly responsible to a considerable extent for the fact that they have played such an important role in the development of personality research.

Which features of his theoretical position have been of most influence? Perhaps the most distinctive component of Murray's position, as suggested earlier, is the careful and sensitive treatment of the motivational process. There has been a strong tendency on the part of recent personality theorists to deal with motivation through one of two rather simple paths. The first path assigns all behavior to a remarkably small number of cardinal motives so that everything can be viewed as stemming from these master motives. The second path assumes that the number of motives is legion and that each individual is driven by motives that are so complex and so uniquely different from those of other individuals that it is not possible to specify motives that can be usefully applied to more than one person. This alternative denies the utility of any attempt at a general classification of motives. Murray's position is clearly between these easy extremes. He granted the complexity of human motivation and firmly stated his conviction that the process cannot be represented adequately in terms of two, three, four, or five general motives. However, he insisted that there are motives of sufficient generality that they can be used fruitfully to represent the behavior of all or most individuals within specified groups. Thus, he faced realistically the task of developing a set of constructs that will do justice to the complexity of human behavior but at the same time will be carefully specified so that they can be used repeatedly by different
investigators. The result, as we have seen, is a classification of motives that is probably more widely useful than any other comparable classification.

Murray’s theory and his research have played a crucial role in promoting a more serious interest in psychoanalytic theory on the part of academic psychologists. In the era when Murray first came to the Harvard Psychological Clinic psychoanalysis was largely an alien and a trespasser within the domain of psychology. The subsequent years have found Freud firmly ensconced as one of the intellectual giants of our field, and this shift is in no small part attributable to the importance of Murray’s example.

As we have seen, his theory possesses the unique feature of a simultaneous emphasis upon the importance of the past of the organism and the present context within which behavior takes place. In a psychological world where most theorists have self-consciously developed a preoccupation with the contemporary field, or else have turned to the past of the organism as the sole key to understanding behavior, it is decidedly healthy to have one position where both of these classes of determinants are given their due. His interest in the field or environment within which behavior takes place led to the distinctive system of press concepts that permits the investigator to represent the perceived environment as well as the objective environment. It is one thing to speak generally of the importance of the environment and quite another thing to undertake the grim and exacting task of specifying categories in terms of which the significant aspects of the environment can be represented. Murray is one of a remarkably small number of theorists who have undertaken this task.

The negative aspects of Murray’s theory are in many respects the mirror image of the positive. To a considerable extent the main criticisms of the theory are closely related to the originality, the incorporativeness, and the complexity of the theory. We have already agreed that the most serious allegation that can be leveled against any theory is the charge that it does not lead to research. The critic may maintain that in Murray’s system there is definitely a set of concepts and a related set of empirical definitions, but there is no set of explicitly stated psychological assumptions linked to these concepts in such a manner as to produce testable consequences.

In defense of the theory, it must be admitted that its assumptions and concepts do provide a general point of view concerning behavior that clearly has a lot to do with the specific manner in which particular research problems are approached. Further, the defined variables are applicable to most or many such problems. One may claim with considerable justice that these functions are about all that most personality theories are equipped to do at present.

Some critics have felt that the theory is so broadly incorporative as to lose the power or vigor that would attach to a more limited and specialized point of view. Thus, the very qualities that make the theory complex and at the same time protect it against many of the usual criticisms that are raised against personality theories might combine to reduce the effectiveness of the
theory as a compelling point of view. It is as though the theory says so much that no single thing is said with a salience and conviction that makes it stand out from the rest of the theory or that makes the theory itself stand out from others.

In spite of the breadth and diversity of Murray's theoretical formulations, it is clear that he devoted more of his attention to the motivational process than to the learning process. This has led some critics to believe that Murray's theory suffers from an inability to account for the manner in which motives become transformed and develop. Although his classification of motives is uniquely useful, and his methods for measuring motivation of central importance, he had relatively little to say concerning the exact process whereby these motives develop.

Murray's patience and skill as a taxonomist led him to create so many fine distinctions and detailed classifications that some observers feel he has been unnecessarily complex in his approach to the study of behavior. It is certainly true that the number of different categories he developed coupled with his tendency to change or modify these frequently and his further tendency to introduce new terms for describing these concepts produce considerable confusion in the casual reader. While one may maintain that the task of a taxonomist is to represent reality accurately and not necessarily to make the reader happy, it must be admitted that many of Murray's variables have not seen extensive and prolonged application to empirical data.

In general, Murray's writings and his research are not fashionable within the existing psychological world. There was too much of the poet and too little of the positivist in his make-up. He was at home with his imagination, he was willing to speculate freely about issues that offer no immediate possibility for empirical translation, and he was willing to make his unbridled speculations public. None of these are qualities that lead to immediate acceptance on the part of the professionals who are still sensitive concerning their suspended position between the natural sciences and the humanities. There is a strong tendency for the experimentalist to dismiss as mere subjectivity the problems and issues raised by contemporaries who do not choose to be bound by manipulable method and technique. Thus, understandably, many investigators have considered Murray's writings irreverent in the respect they show for experimental technique and distressing in the complex considerations they introduce as necessary for an adequate understanding of human behavior. Was Henry Murray a psychologist? Triplet's (1992, p. 305) answer—"By today's standards, the answer to this question is probably no"—may represent a consensus view. But we strongly disagree. Whether one employs easy objective measures (e.g., academic appointments, publications in refereed psychological journals, awards and honors for contributions to psychology, and citations in significant publications) or more problematic and important indices (such as number and
quality of students and associates). Murray was not only a psychologist but one of the most influential psychologists of this century.

In any final appraisal of Murray's contributions one must combine the theory, the man, and his research. There can be no doubt that this combination has introduced a note of vivid originality into an area of research sorely in need of such qualities. In the long run one of the great enemies of empirical and theoretical progress is the fixation upon stable but trivial events, and there has been no more ruthless critic of trivial investigation and formulation in personality research than Henry Murray. His message was clear: “Superficiality is the great sin of American personology” (Murray, 1981, p. 311).
Five decades ago most of the best minds in psychology were pushing relentlessly toward increasing rigor and quantification or else were earnestly seeking to track unconscious motives to their hidden lair. In the very midst of these
trends Gordon Allport serenely pursued his own way, advocating the importance of the qualitative study of the individual case and emphasizing conscious motivation. This reluctance to swim with contemporary currents of thought has resulted at times in Allport's formulations seeming archaic or old fashioned, but on other occasions he has appeared to be the champion of new and outrageously radical ideas. In spite of his iconoclasms, he represents, perhaps better than any other contemporary theorist, the synthesis of traditional psychological thought and personality theory.

His systematic position represents a distillation and elaboration of ideas that are in part derived from such highly reputable sources as Gestalt psychology, William Stern, William James, and William McDougall. From Gestalt theory and Stern has come a distaste of the customary analytic techniques of natural science and a deep interest in the uniqueness of the individual, as well as the congruence of his or her behavior. James is reflected not only in Allport's brilliant writing style, wide-ranging, relatively humanistic orientation toward human behavior, and an interest in the self but also in certain doubts concerning the ultimate power of psychological methods to represent adequately and to understand completely the enigma of human behavior. Similar to McDougall's position is Allport's heavy emphasis upon the importance of motivational variables, his ready acceptance of the important role played by genetic or constitutional factors, and his prominent use of "ego" concepts. In addition to these focal influences, it is clear from Allport's writings that he deeply respected the message of the past and he consistently showed a full awareness of and sympathy for the classical problems that psychologists in and out of the laboratory have struggled with during the past century.

Allport, one of four sons of a physician, was born in Indiana in 1897 but grew up in Cleveland, where he received his early education in public schools. He completed his undergraduate work at Harvard University at the same time that his older brother Floyd was a graduate student in psychology at the same university. After securing an A.B. in 1919 with a major in economics and philosophy, Allport spent a year at Robert College in Istanbul teaching sociology and English. He then returned to Harvard and completed the requirements for the Ph.D. in psychology in 1922. During the next two years he studied in Berlin, Hamburg, and Cambridge, England. This extensive experience in foreign academic settings must have played some part in developing the stout interest in international affairs that has been so evident in Allport's activities during his long career. It also led to Allport serving for a decade or more as one of the chief interpreters of German psychology in America. Returning from Europe he accepted an appointment as instructor in the Department of Social Ethics at Harvard University. Again there seems to be a continuity between this first
American teaching appointment and Allport’s persistent concern with problems imbued with social and ethical implications. At the end of two years he accepted an appointment as assistant professor of psychology at Dartmouth College but was invited to return to Harvard in 1930 where he remained until his death October 9, 1967, one month before his seventieth birthday. The year prior to his death he was appointed the first Richard Cabot Professor of Social Ethics. Allport was one of the central figures in the interdisciplinary movement that led to the formation of the Department of Social Relations at Harvard University, in an attempt to effect a partial integration of psychology, sociology, and anthropology. (For a brief autobiography see Allport, 1967).

Against the background of these many years of college teaching it should come as no surprise that in much of his professional writing Allport displayed a deliberate didactic intent. In contrast to most technical writers, whose primary goal appears to be the construction of irrefutable statements that defy the efforts of the critic to find a tooth-hold, Allport seemed much more interested in expressing issues in a salient, provocative fashion. This sometimes led to overstatement or else to focusing upon a particular issue to the relative exclusion of other pertinent questions. Thus, it might be said that Allport is one of the most hotly criticized of psychological theorists, but in the same breath it should be mentioned that questions Allport raised have usually become matters of general concern to psychologists.

During his career Allport received virtually every professional honor that psychologists have to offer. He was elected president of the American Psychological Association, president of the Eastern Psychological Association, and president of the Society for the Psychological Study of Social Issues. In 1963 he was awarded the gold medal of the American Psychological Foundation, and in 1964 he received the award of the American Psychological Association for distinguished scientific contributions. The breadth and diversity of his scholarly work are clearly evident in the dozen books and the innumerable monographs, articles, forewords, and reviews he wrote, often in collaboration with other psychologists. He was also the coauthor of two widely used tests, The A-S reaction study and A study of values. (Many of these publications are listed in the bibliography. The complete list of his writings will be found in The person in psychology, 1968.)

How can we characterize Allport’s theoretical convictions? To begin with, his writings reveal an unceasing attempt to do justice to the complexity and uniqueness of individual human behavior. In spite of the dazzling complexity of the individual, the main trends in a person’s nature display an underlying congruence or unity. Furthermore, for the normal individual at least, conscious determinants of behavior are of overwhelming importance. The congruence of behavior and the importance of conscious motives led Allport naturally to an emphasis upon those phenomena often represented under the terms self and ego. Consistent with this emphasis upon rational factors is Allport’s conviction
that the individual is more a creature of the present than the past. His concept of "functional autonomy," to be discussed later, represents a deliberate attempt to free the theorist or investigator from unnecessary preoccupation with the history of the organism. In broad terms, his is a view of humans in which positive, conscious elements of motivation are emphasized, and behavior is seen as internally consistent and determined by contemporary factors.

For Allport there is a discontinuity between normal and abnormal, child and adult, animal and human. Theories such as psychoanalysis may be highly effective as representations of disordered or abnormal behavior; however, they are of little utility in any attempt to account for normal behavior. In similar vein, theories that provide a perfectly adequate conceptualization of the infant or young child are not adequate as representations of adult behavior. Allport consistently opposed extensive borrowing from the natural sciences. He believed that methods of study and theoretical models that have proved useful in the physical sciences may only be misleading in the study of complex human behavior. This conviction is most clearly revealed in a discussion (Allport, 1947) of the various kinds of models currently popular in psychological theorizing. He considered the mechanical model, the animal model, and the model of the child and concluded that none of these provides an adequate base from which to construct a useful theory of human behavior. Consistent with this distrust of borrowing was his belief that premature emphasis upon the importance of operationism, a detailed concern for specifying the measurement operations implied by each empirical concept, can serve to impede progress in psychology. Positivism that leads to the conception of an empty organism he found "merely absurd." He was equally contemptuous of "intemperate empiricism" and was severely critical of factor-analytic studies of personality for this reason.

Allport's emphases on rationality, unity of the personality, and discontinuities, as well as his repudiation of any mechanistic, natural science approach, starkly illustrate his departure from Freud. In many respects, his is the first non-Freudian model of personality. The contrast will become even sharper when we encounter his rejection of childhood determinism in favor of future goals and present concerns, as well as his focus on the psychologically mature individual. For Allport, it was more a matter of our all being mature to some extent, rather than all being neurotic to some extent.

Allport told a story about himself to illustrate how foreign Freudian depth psychology was to him. Allport was returning to the United States in 1920 when he stopped in Vienna to visit his brother Fayette. As he tells it:

With a callow forwardness characteristic of age twenty-two, I wrote to Freud announcing that I was in Vienna and implied that no doubt he would be glad to make my acquaintance. I received a kind reply in his own handwriting inviting me to come to his office at a certain time. Soon
after I had entered the famous red burlap room with pictures of dreams on the wall, he summoned me to his inner office. He did not speak to me but sat in expectant silence, for me to state my mission. I was not prepared for silence and had to think fast to find a suitable conversational gambit. I told him of an episode on the tram car on my way to his office. A small boy about four years of age had displayed a conspicuous dirt phobia. He kept saying to his mother, "I don't want to sit there... don't let that dirty man sit beside me." To him everything was schmutzig [filthy]. His mother was a well-starched Hausfrau, so dominant and purposive looking that I thought the cause and effect apparent.

When I finished my story Freud fixed his kindly therapeutic eyes upon me and said, "And was that little boy you?" Flabbergasted and feeling a bit guilty, I contrived to change the subject. While Freud's misunderstanding of my motivation was amusing, it also started a deep train of thought. I realized that he was accustomed to neurotic defenses and that my manifest motivation (a sort of rude curiosity and youthful ambition) escaped him... This experience taught me that depth psychology, for all its merits, may plunge too deep, and that psychologists would do well to give full recognition to manifest motives before probing the unconscious. (1967, pp 7–8)

Interestingly enough, a number of writers have suggested that Allport, a meticulous man, was like that little boy!

The application of psychological method and findings in an "action setting," where an effort is made to bring about the amelioration of some undesirable social condition, represented a deep and enduring interest for Allport. For many years he struggled against encapsulating psychology within the walls of the laboratory, and his work in the fields of prejudice and international relations are among the more fruitful examples of the application of psychology to social issues. It is interesting to note that with many other theorists who have emphasized strongly the uniqueness and individuality of human behavior there is an underlying pessimism on Allport's part concerning the ultimate power of psychological method and theory to unravel the mystery of human behavior. The enigma posed by the complex individual is too great to be completely understood through the earth-bound methods and conceptions of the psychologist. Thus, although Allport accepted the importance and inevitability of an experimental approach to psychological problems, he maintained reservations concerning the eventual success of this effort.

As we have indicated, a basic consistency of viewpoint is to be found in Allport's writing. However, he himself did not claim to be a systematist. He asserted that his work was oriented always toward empirical problems rather than toward the achievement of theoretical or methodological unity. He argued for an open personality theory rather than a closed or partially closed one.
Allport considered himself to be a systematic pluralist working toward a systematic eclecticism: "A pluralist in psychology is a thinker who will not exclude any attribute of human nature that seems important in its own right" (1964, p. 75). In 1966, Allport proposed an epistemological position for research in personality that he labeled "heuristic realism." This position "accepts the common-sense assumption that persons are real beings, that each has a real neuropsychic organization, and that our job is to comprehend this organization as well as we can" (1966, p. 8). To him personality was a riddle to be solved in the most adequate way possible with the tools available in the middle of the twentieth century. He adopted the same approach to the other problems he set for himself: rumor, radio, prejudice, the psychology of religion, the nature of attitudes, and other topics of human interest. To all these problem areas he applied concepts in an eclectic and pluralistic manner, striving for what to him seemed the most adequate account that can be achieved in our present state of knowledge. Thus, questions of the formal adequacy of his theory were of no great significance to him.

In the preceding chapters we have usually considered separately the structure of personality and the dynamics of personality. However, in the case of Allport's theory, this distinction seems largely inapplicable. Personality structure is primarily represented in terms of traits, and, at the same time, behavior is motivated or driven by traits. Thus, structure and dynamics are, for the most part, one and the same.

Allport published two major formulations of his viewpoint—the first in Personality: A psychological interpretation (1937); the second in Pattern and growth in personality (1961). Between 1937 and 1961, Allport made a number of conceptual and terminological changes in his theory. The present account is based upon his 1961 volume whenever that differs from the 1937 book and upon articles he published subsequent to 1961 that further modified or elaborated his theory.

Gordon Allport's eclecticism is nowhere better reflected than in the rich variety of concepts he was willing to accept as playing some useful role in the description of human behavior. He considered concepts as segmental as specific reflexes and as broad as cardinal traits or the proprium (self) to possess some importance in understanding behavior, and he saw the processes referred to by these concepts as operating within the organism in a hierarchical fashion so that the more general usually takes precedence over the more specific. In the most detailed statements of his theory, Allport (1937, 1961) suggested that each of the following concepts possesses some utility: conditioned reflex, habit, trait, self, and personality.
Although all of the above concepts are acknowledged and conceded a certain importance, the major emphasis of the theory is upon traits, with attitudes and intentions given an almost equivalent status. Indeed, Allport’s theory is often referred to as a trait psychology. Within this theory, traits occupy the position of the major motivational construct. What the need was to Murray and the instinct to Freud, the trait was to Allport. Before proceeding to a more detailed consideration of the trait concept, let us examine Allport’s definition of personality.

For Allport definitions were not matters to be treated lightly. Before arriving at his own definition of personality he listed and discussed half a hundred proposals by various authorities in the field (1937). He classified these in terms of whether they refer to (1) etymology or early history of the term; (2) theological meanings; (3) philosophical meanings; (4) juristic meanings; (5) sociological meanings; (6) external appearance; and (7) psychological meanings. After this detailed summary and critique, Allport attempted to combine the best elements of the previous definitions while avoiding their major shortcomings. First, he suggested that one might briefly define personality as “what a man really is.” However, he agreed that this is too abbreviated to be very helpful and proceeded to a better known definition: “Personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment” (1937, p. 48).

Certain aspects of this definition merit special emphasis. The term “dynamic organization” emphasizes the fact that personality is constantly developing and changing, although at the same time there is an organization or system that binds together and relates the various components of personality. The term “psychophysical” reminds the reader that personality is “neither exclusively mental or exclusively neural. The organization entails the operation of both body and mind, inextricably fused into a personal unity” (1937, p. 48). The word “determine” makes clear that personality is made up of determining tendencies that play an active role in the individual’s behavior: “Personality is something and does something . . . . It is what lies behind specific acts and within the individual” (1937, p. 48).

What has been said thus far makes it clear that for Allport personality was not merely a construct of the observer or something that exists only when there is another person to react to it. Far from this, personality has a real existence involving neural or physiological concomitants. The care and detail with which Allport developed his definition of personality are reflected in the frequency with which other theorists and investigators have borrowed from it.

Although the terms personality and character have often been used interchangeably, Allport showed that traditionally the word character has implied some code of behavior in terms of which individuals or their acts are appraised. Thus, in describing an individual’s character the word “good” or “bad” is often
employed. Allport suggested that character is an ethical concept and stated that "we prefer to define character as personality evaluated, and personality as character devaluated" (1961, p. 32).

Temperament and personality have also frequently been confused. However, here again there is a clear basis for distinguishing between them in terms of common usage. Temperament ordinarily refers to those dispositions that are closely linked to biological or physiological determinants and that consequently show relatively little modification with development. The role of heredity is naturally somewhat greater here than in the case of some other aspects of personality. Temperament is the raw material along with intelligence and physique out of which personality is fashioned.

Given these important distinctions, it is now possible to consider those concepts that are more uniquely a part of Allport's theory.

In his 1937 statement, Allport differentiated between individual and common traits but included both of them under a single definition. This resulted in some confusion and ambiguity, so in 1961 Allport made some terminological alterations and provided separate definitions for what he had formerly called individual and common traits. The term trait was reserved for common traits, and a new term, personal disposition, was introduced to take the place of individual trait. Allport also referred to personal dispositions as morphogenic traits.

A trait is defined as a "neuropsychic structure having the capacity to render many stimuli functionally equivalent, and to initiate and guide equivalent (meaningfully consistent) forms of adaptive and expressive behavior" (1961, p.347). A personal disposition or morphogenic trait is defined as a "generalized neuropsychic structure (peculiar to the individual) with the capacity to render many stimuli functionally equivalent, and to initiate and guide consistent (equivalent) forms of adaptive and stylistic behavior" (1961, p. 373).

It will be observed that the only real difference between these two definitions is that traits, unlike personal dispositions, are not designated as being peculiar to the individual. The implication is that a trait may be shared by a number of individuals. Nevertheless, a trait is just as much within an individual as a disposition is. Both are neuropsychic structures, both have the capacity to render many stimuli functionally equivalent, and both guide consistent forms of behavior.

One may wonder then why it is necessary to have two definitions. The answer lies in the implications for empirical research. With the concept of common traits, one may make what Allport calls comparative studies of the same trait as expressed in different individuals or groups of individuals. With the concept of personal dispositions, the investigator may study a person and determine what Allport calls that person's "unique patterned individuality."
One approach falls within the tradition of psychometrically oriented differential psychology, the other within the tradition of clinical psychology. In Allport’s own research and that of his students both approaches have been employed. Although traits and dispositions really exist in the person, they cannot be observed directly but have to be inferred from behavior. Allport writes:

* A specific act is always the product of many determinants, not only of lasting sets, but of momentary pressures in the person and in the situation. It is only the repeated occurrence of acts having the same significance (equivalence of response) following upon a definable range of stimuli having the same personal significance (equivalence of stimuli) that makes necessary the inference of traits and personal dispositions. These tendencies are not at all times active, but are persistent even when latent, and have relatively low thresholds of arousal. (1961, p. 374)

The above quotation suggests two important points about Allport’s trait model. First, traits are loose “tendencies,” each expression of which is slightly different because it occurs in the face of different “determining conditions.” Second, traits are inferred from behavior, not directly observed. We make such inferences based on the frequency with which a person exhibits a certain type of behavior, the range of situations in which that behavior is exhibited, and the intensity of the behavior when exhibited. For example, one might infer that a person is sarcastic if he or she frequently makes sarcastic comments or makes such comments in classroom discussions, social encounters, and political discussion and/or if one or more comments made by the person are extremely sarcastic.

Allport (1961) provided the example of a “superpatriot” named McCarley who has a phobia against communism as one of his leading traits. Figure 7.1 illustrates Allport’s conception of this trait. Notice how the trait is a generic label for the linkage between a set of equivalent stimuli and a set of equivalent responses. McCarley’s communist phobia is not free-floating and pervasive; rather, it only emerges in the face of certain stimuli and is only expressed through a constrained set of responses. This formulation is closely linked to George Kelly’s (Chapter 10) “range of convenience”; Personality tendencies are only relevant to certain events. Figure 7.1 also is similar to what Skinner (Chapter 12) will term stimulus generalization and response generalization; that is, a behavior reinforced in one situation spreads to similar situations and to similar responses. The difference, of course, is that Allport regarded the connection itself as important, and he explained the groupings in terms of the “equivalence of meaning” (1961, p. 323) of the elements. Allport went on to explain that “transfer effects” (or “cross-situational consistency,” as it has been termed more recently), where a given behavior occurs in several settings, occur not because of objectively “identical elements” in the two settings, but because of the perceived equivalence of meaning.
Figure 7.1
Generality of a trait. The range of a trait is determined by the equivalence of stimuli that arouse it and by the equivalence of responses that it provokes. (Reprinted with permission from Allport, 1961, p. 322).

It is necessary not only to indicate what trait and disposition refer to but also to distinguish them from related concepts. Habits are also determining tendencies but traits or dispositions are more general both in the situations appropriate to them and in the responses to which they lead. Actually, the trait, to a considerable extent, represents the outcome of combining or integrating two or more habits. Somewhat more difficult is the distinction between trait or disposition and attitude. An attitude is also a predisposition; it too may be unique; it may initiate or guide behavior; and it is the product of genetic factors and learning. Nevertheless, there remain certain distinctions between the concepts. First, the attitude is linked to a specific object or class of objects while the trait or disposition is not. Thus, the generality of the trait is almost always greater than that of the attitude. In fact, as the number of objects increases to which the attitude refers, it comes to resemble a trait or disposition more and more. The attitude may vary in generality from highly specific to the relatively general, while the trait or disposition must always be general. Second, the attitude usually implies evaluation (acceptance or rejection) of the object toward which it is directed while the trait does not. In summarizing this, Allport suggested:

Both attitude and trait are indispensable concepts in psychology. Between them they cover the principal types of disposition with which the psychology of personality deals. In passing, however, we should point out that since attitude has to do with people's orientations to definite facets of the environment (including people, culture, and society), it is the favored concept in social psychology. In the field of personality, however, we are interested in the structure of the person, and hence trait becomes the favored concept. (1961, p. 348)
Finally, Allport distinguished between traits (or personal dispositions) and types in terms of the extent to which they are tailored to the individual. A person can be said to possess a trait but not a type. Types are idealized constructions of the observer, and the individual can be fitted to them, but only at the loss of his or her distinctive identity. The personal disposition can represent the uniqueness of the person whereas the type must conceal it. Thus, for Allport, types represent artificial distinctions that bear no close resemblance to reality, and traits are true reflections of what actually exists. Allport acknowledged, however, that the postulation of types may stimulate research although the end of such research is the specification of complex traits.

**Cardinal, Central, and Secondary Dispositions.** As we have indicated, personal dispositions represent generalized predispositions to behavior. There remains the question of whether all dispositions possess roughly the same degree of generality, and if not, how to distinguish between the varying degrees. Allport suggested a distinction between cardinal, central, and secondary personal dispositions. A *cardinal disposition* is so general that almost every act of a person who possesses one seems traceable to its influence. This variety of disposition is relatively unusual and not to be observed in many people. More typical are the *central dispositions*, which represent tendencies highly characteristic of the individual, are often called into play, and are very easy to infer. Allport suggested that the number of central dispositions by which a personality can be fairly accurately known is surprisingly few—perhaps five to ten. The *secondary disposition* is more limited in its occurrence, less crucial to a description of the personality, and more focalized in the responses it leads to, as well as the stimuli to which it is appropriate.

Allport discussed other crucial questions regarding traits and dispositions. Do they serve to guide or direct behavior only, or do they also have a role in initiating or instigating behavior? There is no simple answer to this question. Some traits are clearly more impelling, have a more crucial motivational role, than others. Thus, among traits there is considerable variation in the extent to which they exert driving influences upon the individual. Further, we may reason that in one sense there is always a previous stimulation that is related to the activation of the trait; for example, an external stimulus or an internal state of some sort must always precede the operation of the trait. However, it is clear that most traits are not pallid reflectors of external stimuli. In fact, the individual actively seeks stimuli that make appropriate the operation of the trait. The person with a marked disposition toward sociability does not wait for a suitable situation in which to express this trait; rather he or she creates situations in which to interact with people.

A further consideration is the *independence of traits* (dispositions). To what extent do they exist as systems of behavior that operate without regard
for other systems? Is the operation of a particular trait always conditioned by and relative to other traits and their state? Allport argued that the trait is identifiable not by its rigid independence but rather by its focal quality. Thus, it tends to have a center around which its influence operates, but the behavior it leads to is clearly influenced simultaneously by other traits. There is no sharp boundary that delimits one trait from another. This intertwining of the various traits also accounts in part for the fact that it is not possible to devise completely satisfactory methods for classifying traits.

It is clear that the inferences involved in identifying a trait imply consistency. Thus, by definition, a disposition is known only by virtue of certain regularities or consistencies in the manner in which an individual behaves. Allport was quick to point out that his theory of traits does not necessitate a complete consistency. The mere fact that there are multiple, overlapping traits simultaneously active suggests that apparent inconsistencies in the organism’s behavior may be expected relatively frequently. Further, the fact that dispositions are uniquely and individually organized implies that they may include elements that would appear inconsistent when viewed from a normative or external viewpoint. Thus, we may observe apparent inconsistency in behavior that actually reflects a uniquely organized internal consistency. It is less the observance of exact correspondence or consistency in behavior that is implied by Allport’s theory than it is the existence of a subtle congruence that unites, frequently in a fashion difficult to detect, the various behavioral manifestations of the individual. It is not implied that every (or any) personality is perfectly integrated. Dissociation and repression may exist in every life. But there is ordinarily more consistency than the customary methods of psychological investigation are equipped to discover.

An interesting and useful outgrowth of Allport’s interest in traits is his painstaking categorization of roughly eighteen thousand terms taken from an unabridged dictionary. In collaboration with Odbert (1936) these terms were classified primarily in terms of whether they represented authentic traits of personality, present activities (temporary states), or evaluative terms. Eighteen thousand terms obviously are unmanageable as a taxonomy of personality. In addition, Allport was not interested in developing a set of common traits to be applied across individuals. Interestingly, these terms, plus the underlying assumption that the ways in which individuals can differ will be indexed in the language of the culture, provided the bases for Raymond Cattell and others to develop formal taxonomies (see Chapter 8).

More important than all of the searching into the past or the history of the organism is the simple question of what the individual intends or is striving for in the future. The hopes, wishes, ambitions, aspirations, and plans of the person are all represented under this general heading of intention, and here one
of the characteristic differences between Allport and most other contemporary personality theorists is manifested. It is the contention of this theory that what the individual is trying to do (and by and large it is accepted that the person can tell us what he or she is trying to do) is the most important key to how the person will behave in the present. Whereas other theorists turned to the past for the key that would unlock the riddle of present behavior, Allport turned to the intended future. In this respect, he showed a strong similarity to certain views of Alfred Adler and Carl Jung, although there is no reason to believe that there was any direct influence from these sources.

The Proprium

Although Allport has been called an “ego” or even a “self” psychologist, this characterization is only partially accurate. In 1943 (The ego in contemporary psychology) and again in 1955 (Becoming: Basic considerations for a psychology of personality) he reviewed the many meanings of ego and of self in psychological writings. In his earlier basic text (1937) he largely avoided the problems raised by these concepts; but he finally came to ask directly the crucial question, “Is the concept of self necessary?” His answer was guarded. Anxious to avoid the confusion and special connotations of these terms, he proposed that all of the self- or ego-functions that have been described be called proprie functions of the personality. These (including bodily sense, self-identity, self-esteem, self-extension, sense of selfhood, rational thinking, self-image, proprie strivings, cognitive style, and the function of knowing) are all true and vital portions of personality. They have in common a phenomenal warmth and a “sense of importance.” Together they might be said to comprise “the proprium.” It is in this region of personality that we find the root of the consistency that marks attitudes, intentions, and evaluations. The proprium is not innate but develops in time.

Allport identified seven aspects in the development of the proprium or selfhood (1961, Chapter 6). During the first three years, three of these aspects make their appearance: a sense of bodily self, a sense of continuing self-identity, and self-esteem or pride. Between the ages of four and six, two other aspects appear: The extension of self and a self-image. Sometime between six and twelve, the child develops the self-awareness that it can cope with its problems by means of reason and thought. During adolescence, intentions, long-range purposes, and distant goals emerge. These are called proprie strivings. These seven aspects of selfhood constitute the proprium.

By approaching the riddle of the self in this manner, Allport hoped to avoid the question-begging position of many theorists to whom the self or ego is like a homunculus, a “man within the breast” who does the organizing, pulls the strings, and administers the personality system. He admitted the importance of all psychological functions that have been ascribed to self and ego but wished at all costs to avoid the factotum or “agent” type of theory. To him,
self and ego may be used as adjectives to indicate the propriate functions within the total sphere of personality (many functions are not propriate but merely “opportunistic”) but he believed that neither term needs to be used as a substantive. There is no ego or self that acts as an entity distinct from the remainder of personality. The sense of self is present “whenever personal states are viewed as ‘peculiarly mine’” (1961, p. 137). A final indication of the importance of the proprium is the role Allport assigned to it in organizing the mature generic conscience. The childhood must conscience is viewed in very Freudian terms as the internalization of parental and cultural rules. Gradually, as the self-image emerges and propriate strivings develop, this must conscience evolves into a generic should conscience governed not by external prohibitions or fear of punishment but by the positive structure of the propriate strivings. As in a number of other models (e.g., Carl Rogers and Albert Bandura), maturity for Allport entails an increasing reliance on personal or internal standards of behavior.

In approaching the complex and controversial problem of human motivation, Allport specified what he felt were the requirements for an adequate theory. First, such a theory will acknowledge the contemporaneity of human motives. Whatever it is that moves us to think or act moves us now. Second, it will be a pluralistic theory, allowing for motives of many types. Allport definitely was not a reductionist who sought to reduce all motives to a few organic drives. Third, it will invest cognitive processes such as planning and intention, with dynamic force. And finally the theory will allow for the concrete uniqueness of motives within an individual (1961, Chapter 10).

Such a theory, Allport believed, is contained in the concept of functional autonomy. This is easily the most controversial of the concepts introduced by Allport. In many respects it stands at the center of his system, for a number of the distinctive features of his theory derive quite naturally from this position. The principle simply states that a given activity or form of behavior may become an end or goal in itself, in spite of the fact that it was originally engaged in for some other reason. Any behavior, complex or simple, although it may originally have derived from organic or segmental tensions, may be capable of sustaining itself indefinitely in the absence of any biological reinforcement. The formal statement of the concept is as follows: “Functional autonomy regards adult motives as varied, and as self-sustaining contemporary systems, growing out of antecedent systems, but functionally independent of them” (1961, p. 227).

The reader should carefully distinguish the principle of functional autonomy from the common notion that a given behavior may be continued for a motive different from the one originally giving rise to the behavior; for example, the hunter initially hunts in order to eat, but when there is ample food, the hunter
hunts to express inborn aggression. This formulation still refers the behavior back to a more primitive or preexisting motive, which is just what Allport wished to avoid. Functional antonymy implies that the hunter would continue to hunt even in the absence of all instrumental significance, that is, even if there were no aggression or other more basic needs served by this act. A hunter may simply "like" hunting.

In presenting this view, Allport (1937, 1961) indicated that it echoes certain earlier formulations; for example, Woodworth's (1918) well-known dictum that mechanisms may be transformed into drives, Stern's (1935) assertion that phenomotives may become genomotives, and Tolman's (1935) suggestion that "means-objects" may "set up in their own right." One might suggest that such formulations as Harlow et al.'s (1950) "manipulation drive" and "partial irreversibility" as proposed by Solomon and Wynne (1954) are intended to account for phenomena quite similar to those that played an important role in leading to the concept of functional autonomy.

In justification of the concept, Allport pointed to observations from a number of areas, all of which suggest a tendency on the part of an organism to persist in a particular response even though the original reason for engaging in the response is no longer present. He pointed to the circularity of child behavior and of neurotic behavior among adults, the repetitive elements in the Zeigarnik effect (the observation that incompleted tasks tend to be remembered better than completed tasks), the frequently observed temporal regularities or rhythms in the behavior of both animals and humans, the motivating power of acquired interests and values that appear to have no anchoring in fundamental motives. There is also some evidence drawn from comparative psychology. A study by Olson (1929) revealed that when an irritant was placed on the ears of rats they scratched continuously in an attempt to remove the foreign substance. Moreover, long after the irritant was removed and when there was no longer any evidence of skin irritation, they continued to scratch and with no apparent reduction in rate. Thus, the scratch began as a functional attempt to cope with a physical state, but with sufficient repetition it appeared to become an integral part of the organism's behavior in spite of the fact that it no longer served a biological function. Some of the important research conducted by Selye (1952) and his collaborators suggests similarly that adaptive responses may set up in their own right even to the detriment of the organism. Similar to this are studies by Anderson (1941a–d) of what he called "externalization of drive." In these studies rats were taught to navigate runways at high rates of speed under strong hunger drive and rewarded with food at the end of the runway. After a very large number of reinforced trials, the rats did not appear to show ordinary extinction of the response when placed in the same situation under low drive or in a satiated state; that is, even though they were no longer hungry, they continued to travel through the runways at the same rapid rate. Thus, we again have the spectacle of an organism performing an act for clear biological
reasons, and yet when these reasons are removed, the behavior continues without apparent interruption. Anderson would reason that this phenomenon results from the fact that aspects of the stimulus situation have been conditioned to provide secondary reward; Allport would say, according to the principle of functional autonomy, that the behavior is continued simply because it had been repeated so often that it became an end or motive in itself, a part of the rat's "style of life."

Following Allport's original statement of this principle (1937), he was vigorously attacked by Bertocci (1940), who raised several serious questions. First of all, asked Bertocci, is it in fact true that any form of behavior if repeated often enough will become autonomous? Are there no limits or conditions to be placed on this generalization? Second, if any form of behavior is potentially capable of becoming an enduring motive, what is to prevent the individual from developing a kind of psychological anarchy in which conflicting and antithetical motives are built into the organism and tear the individual asunder?

Such questions led Allport to clarify and expand his position. He recognized two levels of functional autonomy; one he called perseverative, the other appropriate. Perseverative functional autonomy includes addictions, circular mechanisms, repetitious acts, and routines. Their perseveration is accounted for in such terms as delayed extinction, self-maintaining circuits in the nervous system, partial reinforcement, and the coexistence of multiple determinants. Appropriate functional autonomy refers to acquired interests, values, sentiments, intentions, master motives, personal dispositions, self-image, and life style. Allport admitted that it is not easy to explain how this type of functional autonomy comes about.

He offered three principles to account for the origins of appropriate functional autonomy. First is the principle of organizing the energy level. Allport suggested that healthy people need activities to absorb the energy left over after their opportunistic needs have been gratified: "There must be motives to consume one's available energies; and if existing motives do not suffice, new ones will develop" (1961, p. 250). Second, Allport cited Robert White (see Chapter 5) and Abraham Maslow (see Chapter 11) in support of the principles of mastery and competence. These principles suggest that motives that lead to feelings of competence tend to become self-sustaining. Finally, the principle of appropriate patterning suggests that those motives most consistent with or expressive of the self become autonomous. In other words: "the self-structure demands it." For example:

A young man intends to become a physician, a man of the world, a politician, or a hermit. None of these ambitions is innate. They are all acquired interests. We contend they do not exist now because of remote reinforcements. Rather, they exist because a self-image, gradually formed, demands this particular motivational focus. (1961, p. 252)
Allport rejected the positions that the “self” explains properite functional autonomy, because it implies that some “little man within the breast” shapes one’s motives. Allport took a strong stand against explanations in terms of a separate self because it smacks too much of the idea of a “soul” that guides a person’s destiny.

What then is responsible for properite motives and for their organization into a coherent and consistent pattern? Allport’s answer was that it is the essential nature of humans for motives to change and grow in the course of life and for them to become unified. Readers may find in this answer an echo of Jung’s unity archetype.

The fact that the proprium is a developmental phenomenon, derived from primitive states and past experience, does seem to imply a direct link with the past, in spite of functional autonomy. As the forms of behavior that will become autonomous are determined by an organization that owes much to the past of the organism, it appears that the past retains a central role. In the end, however, the most important issue here seems to be whether or not mature, adult motivations retain a functional tie to their origins in infancy or biology. Whatever ambiguity may exist concerning the exact status of the concept of functional autonomy, it is clear that Allport argued strongly that for most adult motives there is no longer any functional relation to the historical roots of the motive.

A further question that is often asked of this principle is whether all adult motives are functionally autonomous. Allport said not. There are drives such as hunger, breathing, and elimination, reflex actions, constitutional equipment such as bodily strength, habits that are not motivational at all but are merely instrumental acts, infantilisms and fixations, some neuroses and psychoses, and sublimations. Moreover, many adult activities need continuing primary reinforcement for their perseveration. However, the extent to which an individual’s motivations are autonomous is a measure of the maturity of the individual.

Clearly the most important question that can be asked of any concept is what it will do for the person who utilizes it. The consequences of functional autonomy are clear, and it is in terms of these that psychologists should decide whether they wish to embrace the concept or not. Most important is the fact that it permits a relative divorce from the past of the organism. If the ongoing motives do not depend completely upon more basic or primary motives for their continuance, then the investigator may legitimately turn away from the past of the individual and focus upon the present and the future. The history of the individual becomes a matter of relative indifference if he or she is at present driven by desires and intentions independent of what motivated the individual at earlier periods. A further significant consequence of this principle is that it makes more or less inevitable the great, dazzling, unique individuality that is so much emphasized in Allport’s theory. If potentially any form of instrumental behavior can become an end in itself, we know that there is
sufficient heterogeneity of behavior and environmental demand to lead to a bewildering complexity and uniqueness in motives. Insofar as the individual's adult motivational structure is freed from whatever communality may have existed at birth, we can expect that the motives of different individuals will show little similarity.

Having decomposed psychological humans into a set of traits and dispositions, of attitudes and habits, of values, intentions, and motives, one is faced with the task of putting Humpty Dumpty together again. Allport, while acknowledging that this is a very difficult task, sought a solution with his usual doggedness and perspicacity. There are, in fact, a number of unifying concepts. In early infancy there is a high degree of dynamical unity that gradually gives way to differentiation. Differentiation is then offset by the learned process of integration. Allport called this "the dialectic of dividing and uniting." Homeostatic mechanisms with which the organism is furnished preserve unity, or at least equilibrium, of a fundamental though static nongrowth kind. The mobilization of energies for carrying out an integrated course of conduct (the principle of convergence) is a form of unification, although it is usually transient and focalized. Cardinal dispositions by definition confer unity on the personality, as does the recognition that traits and dispositions are interdependent: "They interlace like a tapestry." While acknowledging the contribution that each of these principles makes to the unification of personality, Allport ascribed the chief unifying role to the appropriate functions.

Thus far we have seen what personality is composed of and have examined in broad terms the dispositions that set behavior in action. In this section we are concerned with the way in which these structures emerge and the differences in the manner in which the individual is represented at various developmental stages. It is already clear from our discussion of functional autonomy that this theory proposes important changes between infancy and adulthood.

Let us begin with the individual at birth. Where Allport was a radical when dealing with adult behavior, he was an arch-conservative when discussing infant behavior. In fact, until the child has lived the first two or three years of its life, Allport's formulations have little in the way of surprise value. It is only with the development of self-identity that things begin to assume a new and unexpected appearance. This is getting ahead of our story, however; let us return to the neonate as seen by this theory.
Allport considered the newborn infant almost altogether a creature of heredity, primitive drive, and reflex existence. It has not yet developed those distinctive attributes that will appear later as a result of transactions with the environment. Significantly, Allport did not consider the neonate to possess a personality. At birth the infant is innately endowed with certain physique and temperament potentialities, although fulfillment of these must wait upon growth and maturation. In addition, it is able to respond with some highly specific reflexes, such as sucking and swallowing, to rather clearly delimited kinds of stimulation. Finally, it displays mass action or gross undifferentiated responses in which most or all of the individual's muscular apparatus seems to be involved.

Given this equipment, how is the child set into action or motivated? Initially, Allport assumed that there exists a general stream of activity that is the original source of motivated behavior. At this point in development, the child is largely a creature of segmental tensions and pleasure–pain feelings. A biological model of behavior or a theory that rests heavily upon the importance of reward, the law of effect, or the pleasure principle, is perfectly acceptable as a guide for the earliest years of life. Thus, motivated by the need to minimize pain and to maximize pleasure and with these conditions determined largely by the reduction of visceral, segmental tensions, the child proceeds to develop.

In spite of the fact that the individual at birth lacks the distinctive qualities that later will go to make up its personality, this state is altered very early and in a gradual manner. Even in the first year of life, Allport considered that the infant begins to show distinctive qualities, for example, differences in motility and emotional expression, that tend to persist and merge into the more mature modes of adjustment learned later. Thus, some of the infant's behavior is recognizable as a forerunner of subsequent patterns of personality. Allport concluded that at least by the second half of the first year the infant is definitely beginning to show distinctive qualities that presumably represent enduring personality attributes. Nonetheless, he maintained that "in a sense the first year is the least important year for personality assuming that serious injuries to health do not occur" (1961, p. 78).

The process of development takes place along multiple lines. A wide variety of mechanisms or principles is considered appropriate by Allport to describe the changes that take place between infancy and adulthood. He discussed specifically differentiation, integration, maturation, imitation, learning, functional autonomy, and extension of self. He even accepted the explanatory role of psychoanalytic mechanisms and trauma, although these processes do not have a central theoretical role in what he called normal personality.

In respect to learning theory, Allport was completely eclectic. He held that all the myriad observations that investigators have made, all the conclusions
they have reached, and all the resulting theories of learning are probably true in a sense and to a degree. Thus, conditioning, reinforcement theory, and habit hierarchy are valid principles, especially when applied to animal, infant, and opportunistic learning. They are inadequate to account for appropriate learning, which requires such principles as identification, closure, cognitive insight, self-image, and subsidiation to active ego-systems. Allport himself made no systematic contribution to the theory of learning. Rather he proposed functional autonomy as a basic fact in human motivation that must eventually be accounted for in terms of principles of learning that have not yet been adequately coordinated into a sufficiently broad theoretical scheme. Perhaps his chief contribution to the subject was his sharp criticism of theories of learning (for example, Allport, 1946) that claim more universal validity than he would concede.

Thus, we have an organism that at birth is a creature of biology, transformed into an individual who operates in terms of a growing ego, a widening trait structure, and a kernel of future goals and aspirations. Crucial to this transformation is, of course, the role played by functional autonomy. This principle makes clear that what is initially a mere means to a biological goal may become an autonomous motive that directs behavior with all the power of an innately endowed drive. In large part because of this discontinuity between the early and the later motivational structure of the individual, we have essentially two theories of personality. The one, a biological or tension reduction model, is adequate at birth and becomes gradually less adequate until, with growing awareness of the self, the individual develops motives that bear no close relation to those that had previously motivated behavior. At this point a reorientation is necessary if we are to represent the individuals adequately.

We now have, in the mature individual, a person whose major determinants of behavior are a set of organized and congruent traits. These traits have arisen in a variety of means from the sparse motivational equipment that characterized the newborn infant. The exact path of development for these tendencies is of no special interest because they are no longer, according to the principle of functional autonomy, deriving their motive power from primitive sources, whatever they may have been. As Allport put it: "What drives behavior, drives now," and we need not know the history of the drive to understand its operation. To a considerable extent the functioning of these traits is conscious and rational. Normal individuals know, as a rule, what they are doing and why they do it. Their behavior fits into a congruent pattern and at the core of this pattern lie the functions Allport termed appropriate. A full understanding of the adult cannot be secured without a picture of his or her goals and aspirations. Their most important motives are not echoes of the past but rather beckonings
from the future. In most cases, we will know more about what a person will do if we know their conscious plans than if we know their repressed memories. Allport granted that the picture we have just outlined is somewhat idealized. Not all adults achieve full maturity. There are grown individuals whose motivations still smack of the nursery. Not all adults seem to guide their behavior in terms of clear, rational principles. However, the extent to which they avoid unconscious motivations and the degree to which their traits are independent of childish origins represent measures of their normality and maturity. It is only in the seriously disturbed individual that we find adults acting without knowing why they act, whose behavior is more closely linked to events that took place in childhood than to events taking place in the here and now or in the future.

In contrast to most personality theorists, the bulk of whose interest is focused on the negative side of the adjustment register, Allport considered at some length the qualities that make for more than an “adequate” or “normal” adjustment (1961, Chapter 12). The mature personality must possess first of all an extension of the self. That is, his or her life must not be tied narrowly to a set of activities that are closely linked to their own immediate needs and duties. The person should be able to participate in and enjoy a wide variety of different activities. Satisfactions and frustrations should be many and diverse, rather than few and stereotyped. An important part of this extension of the self involves projection into the future—planning, hoping. For maturity, the individual must also be able to relate him- or herself warmly to others in both intimate and nonintimate contacts and possess a fundamental emotional security and an acceptance of self. He or she should be realistically oriented both with respect to oneself (self-objectification) and with respect to outer reality. Two main components of self-objectification are humor and insight. It is clear that what we mean by insight is the capacity of the individual to understand him- or herself, although it is not clear just how to secure an adequate standard against which to compare the individual’s beliefs. A sense of humor implies not only the capacity to find enjoyment and laughter in the customary places but also an ability to maintain positive relations to oneself and loved objects, at the same time being able to see incongruities and absurdities connected with them. Finally, maturity implies that the individual possess a unifying philosophy of life. Although individuals should be able to be objective and even amused about the ordinary events in their lives, there should nevertheless be an underlying thread of complete seriousness that gives purpose and meaning to every thing they do. Religion represents one of the most important sources of unifying philosophies, although this is by no means the only source of such integrating themes. Allport’s commitment to these criteria is well represented in the following quotation: “We maintain that some kind of continual growth and development into the stage of maturity is what fully fashioned human beings seek. We suggest that the goals of psychotherapy should be
framed in these terms, and that specifically the six criteria of maturity we have described be accepted as the objectives of all counselors, parents, and therapists who would help others along life’s road” (1961, p. 305).

In considering Allport’s research, it is important to distinguish between that which has some direct bearing upon his theoretical convictions and that which has grown out of other orientations such as his concern with “action” research, for example, prejudice (Allport, 1954, 1968) and religion (Allport, 1950b, 1968). Likewise his use and development of methods of measuring personality as exemplified by the A-S reaction study and A study of values was dictated only in part by his theoretical convictions. In spite of his pleas for “idiographic” methods and studies, much of his own work has been “nomothetic.” In this section we shall begin with a consideration of the distinction between idio-
graphic and nomothetic, follow this with a discussion of direct and indirect methods of measuring personality, and finally discuss studies of expressive behavior and a study of an individual case as the best examples of investigations that mirror central aspects of his theoretical position.

Allport emphasized that the investigator may choose to study behavior in terms of general principles, universal variables, and a large number of subjects or may elect to focus on the individual case using methods and variables that are adequate to the uniqueness of each person. In labeling these two approaches to the study of behavior, Allport borrowed the terms idio-
graphic (individual) and nomothetic (universal) from the German philosopher Windelband. Later, however, Allport (1962) suggested substituting new terms, morphogenic for idio-
graphic and dimensional for nomothetic. He argued that there is a place in psychology for both approaches, but the emphasis, particularly in American psychology, has been so overwhelmingly upon nomothetic methods that a drastic reorientation is called for. This reorientation is particularly urgent as the morphogenic approach will lead to better prediction and understanding. In fact, it is only by knowing the person as a person that we can predict what he or she will do in any given situation.

This emphasis upon the morphogenic approach is a logical outgrowth of several features of Allport’s theoretical position. First of all, his emphasis upon the uniqueness of each person placed a heavy obligation upon the investiga-
tor to select methods of study that will not conceal and blur this individuality. Second, and closely related, is the emphasis upon the importance of personal dispositions (individual traits) as the primary determinants of behavior. If these dispositions are the “real” units of personality, and if they are characteristic of
only a single person, then clearly the most effective approach to the study of behavior will be a method of studying the individual.

Allport recognized the importance of developing valid methods of studying the individual case, but it is to be noted that he and others made only a beginning in evolving such methods. As we have observed before, in Allport's own work he more frequently used dimensional methods than morphogenetic ones.

The use of matching techniques employed by Allport and Vernon (1933) in their studies of expressive behavior is one method that preserves the patterned individuality of each subject. Two other methods, structural analysis and content analysis, were used by Allport (1965) and his students in investigating the traits of a woman from letters she wrote. Allport (1962) called attention to morphogenetic approaches devised by other investigators. These include Q methodology (Stephenson, 1953), individualized questionnaires (Shapiro, 1961), self-anchoring scales (Kilpatrick & Cantril, 1960), the role construct repertory test (Kelly, 1955), and inverse factor analysis. Allport's interest in personal documents (1942) is of course intimately related to this emphasis upon the morphogenetic approach to behavior.

In a powerful rebuttal, Holt (1962) challenged a number of Allport's key points. We consider three of those points here. First, Holt rejected Allport's contention that personology should be "an art, devoted to word portraits that seek to evoke in the reader the thrill of recognition, the gratifying (if perhaps illusory) feeling of understanding unique individuals" in favor of the position that it should be "a science, which enables us to study these same persons in all their uniqueness and to derive from such study general propositions about the structure, development, and other significant aspects of personality" (1962, p. 389). Second, Holt pointed out the logical impossibility of describing individual traits. Creating a unique word for each trait would lead to a "complete Babel" in which communication and science are impossible. The alternative, using a unique set of existing words, is in fact a concealed version of the nomothetic approach. It is impossible "to capture the full richness of reality." Scientific concepts entail abstraction, and they can never fit reality perfectly. Finally, Holt embraced determinism as a necessary assumption for scientific work. Scientific study of the individual (be it the individual hurricane, star, or person) is possible, and individual cases are completely lawful: "It is just difficult to know what the laws are from a study of one case, no matter how thorough" (1962, p. 396).

It seems fair to say, in summary, that Allport, consistent with his theoretical position, strongly urged psychologists to devote more of their time and energy to the study of the individual case than has been their custom. Allport emphasized that the central obligation for a psychological researcher is to bring his or her insights, no matter how derived, "back to the individual." This emphasis
has met with considerable favor on the part of contemporary psychologists, so that what was once a deviant position is today widely accepted.

Beginning in the 1930s psychology witnessed an unprecedented expansion in and development of indirect methods of assessing personality. The main impact of psychoanalytic theory was felt in academic psychology during this period and naturally led to an increased interest in instruments that seemed sensitive to unconscious motives and conflicts. In the face of this trend, projective techniques became enormously popular, while techniques of self-report, including the interview and questionnaire, waned in their popularity. Allport was not entirely sympathetic with this trend. He wrote:

At no point do these [projective] methods ask the subject what his interests are, what he wants to do, or what he is trying to do. Nor do the methods ask directly concerning the subject's relation to his parents or to authority figures. They infer this relationship entirely by assumed identification. So popular is this indirect, undercover approach to motivation that many clinicians and many university centers spend far more time on this type of diagnostic method than on any other. ... It is probably true that most psychologists prefer to assess a person's needs and conflicts by going the long way around. The argument, of course, is that everyone, even a neurotic, will accommodate himself fairly well to the demands placed upon him by reality. Only in an unstructured projective situation will he reveal his anxieties and unmasked needs. ... this uncompromising statement ... seems to mark the culmination of a century-long era of irrationalism, and therefore of distrust. Has the subject no right to believed? ... This prevailing atmosphere of theory has engendered a kind of contempt for the "psychic surface" of life. The individual's conscious report is rejected as untrustworthy, and the contemporary thrust of his motives is disregarded in favor of a backward tracing of his conduct to earlier formative stages. The individual loses his right to believed. And while he is busy leading his life in the present with a forward thrust into the future, most psychologists have become busy tracing it backward into the past. ... It is not the well-integrated subject, aware of his motivations, who reveals himself in projective testing. It is rather the neurotic personality, whose facade belies the repressed fears and hostilities within. Such a subject is caught off guard by projective devices; but the well-adjusted subject gives no significantly different response. (1953, pp. 108-110)

Allport's position on this issue is altogether consistent with the importance he attributed to conscious, rational determinants of behavior. His conviction
that the normal individual behaves in terms of known, reasonable motives led him to the assertion that projective techniques have a unique contribution to make only in the case of the neurotic or disturbed individual, where the importance of unconscious motives may, in fact, be considerable. Allport maintained that direct and indirect methods will give a consistent picture in the case of the normal individual, whereas there may be considerable discrepancy between direct and indirect methods for the seriously maladjusted individual. He reasoned that

*a normal, well-adjusted individual with strong goal-directedness may on projective tests do one of two things: 1) either give material identical with that of conscious report—in which case the projective method is not needed; or 2) give no evidence whatever of his dominant motives. (1953, p. 111)*

Allport concluded that indirect methods may reveal important unconscious determinants of behavior, but only if compared with the yield of direct methods. It follows that indirect methods should not be used except in conjunction with direct methods. For the normal person direct methods give a much fuller and more useful picture of the motivational structure of the subject than does the indirect method. Not to be overlooked in a comparison of these methods is the vastly greater efficiency and simplicity of the direct methods.

Allport's construction and use of questionnaire methods was consistent with the point of view we have just outlined. On the other hand, his stress upon the use of personal documents as an approach to personality and his studies of expressive behavior represent contributions to the indirect assessment of personality.

Beginning in the early 1930s Allport and his collaborators carried out a series of investigations concerned with demonstrating the significance and consistency of expressive behavior. In defining this area of study, Allport distinguished between two components that are present in every human response. First, there is the adaptive or coping component, which is primarily concerned with the functional value of the act, the effect that it produces, or the end to which it leads. Second, there is the expressive component, which refers to the manner or style in which the act is performed. Millions of individuals perform the same adaptive acts, but no two individuals carry out these acts with exactly the same flavor or style. Considering the emphasis in Allport’s theory upon the individual and unique elements in behavior, it seems fitting that he was deeply interested in expressive behavior—the personal or idiosyncratic component that appears in even the most stereotyped responses.
Not only does Allport's theory seem to lead naturally to an interest in expressive behavior; it also promises that the study of this aspect of behavior will be of general significance. If all of the individual's behavior is congruent and interrelated, then even the most trivial of individual acts must be related to central aspects of the individual's make-up. Consequently, we may study the inconspicuous expressive acts in order to obtain information about the most central aspects of behavior. In comparing expressive and adaptive components, Allport stated:

The expressive portion of conduct results, then, from deep-lying determinants, functioning, as a rule, unconsciously and without effort. The adaptive portion, on the other hand, is a more limited system, circumscribed by the purpose of the moment, closely dependent upon the stimulus and upon voluntary effort or upon habits of skill. The reason for a present act of conduct is to be sought in the present desires and intentions of the individual (though these in turn may arise from deep-lying personal traits and interests); but the style of execution is always guided directly and without interference by deep and lasting personal dispositions. (1937, p. 466)

Thus, Allport, in consonance with his theory, studied expressive aspects of behavior as a means of securing ready access to important sources of motivation and conflict in the individual.

The style of behavior is not determined solely by personality factors. Allport accepted the role of sociocultural determinants, temporary states or moods, organic conditions, and other variables. The contributions of these multiple factors do not lessen the importance of expressive behavior as a source of evidence concerning personality; they serve only to make somewhat more complex the empirical task of the investigator or diagnostician. Expressive behavior may be classified in terms of the type of act involved, for example, facial expression, gait, voice, and handwriting. Allport argued that one should not attend to any one type of expressive behavior exclusively, since all are of significance and add to our knowledge of the individual.

The most extensive of Allport's investigations in this area was carried out in collaboration with Philip E. Vernon (Allport & Vernon, 1933) and was aimed particularly at the problem of consistency of expressive movement. In one part of this investigation, a group of twenty-five subjects of rather heterogeneous composition was studied in three different sessions, each session separated by a period of about four weeks. During each session, the subject responded to a large number of different tests providing measures of speed of reading and counting; speed of walking and strolling; length of stride; estimation of familiar sizes and distances; estimation of weights; strength of handshake; speed and pressure of finger, hand, and leg tapping; drawing squares, circles,
and other figures; various handwriting measures; muscular tension, and so forth. In addition, observer ratings were secured for various measures, such as voice intensity, speech fluency, amount of movement during natural speech, and neatness of appearance. It is obvious that the investigators had an extremely large number of derived measures that they were able to use in their analysis.

Allport and Vernon began by examining the repeat reliability (consistency of measure on two different occasions) of the various expressive measures. In general, these reliabilities appeared to be reasonably high, the intercorrelations being roughly equivalent to repeat reliabilities for conventional psychological measuring instruments. In the face of this consistency, the authors concluded: "Single habits of gesture, as we have measured them, are stable characteristics of the individuals in our experimental group" (1933, p. 98). Next they examined the relation between scores for the same tasks performed by different muscle groups, left and right side of the body, arms and legs, and so forth, and found about an equal amount of consistency. This finding is of considerable importance, as it tends to suggest a general or central integrating factor that produces a consistent style no matter what peripheral manifestation is chosen.

The major variables from all of the tasks then were intercorrelated. The first impression gained from the matrix of correlations was that the intercorrelations were more often positive than would be expected by chance. Thus, the initial evidence suggested that there is some generality underlying the individual scores. The data did not permit application of conventional factor analysis, so the investigators performed a kind of cluster analysis in which they identified groups of correlations or factors consisting of those variables that showed significant intercorrelations. They concerned themselves not only with the statistical significance but also with the psychological meaningfulness of the cluster in question.

In the end three group factors accounted for most of the intercorrelations observed. The first of these was called the "areal group factor" and included such variables as area of total writing, area of blackboard figures, area of foot squares, overestimation of angles, and length of self-rating checks. This appears to be a kind of "motor expansiveness." The second cluster was called the "centrifugal group factor" and included such variables as overestimation of distance from body with legs, extent of cubes, verbal speed, underestimation of weights, and underestimation of distances toward the body with hands. Allport and Vernon were less content with this factor than with the previous one, but they conclude: "The group factor is based chiefly on the centrifugal-centripetal measures. . . . Thus the group factor may be interpreted as a general 'outward-tendency,' freedom and 'extroversion' of expressive movement, the reverse of shut-in, restrained, and pedantic motility" (1933, p. 112). The third cluster was called the "group factor of emphasis" and included
such measures as voice intensity, movement during speech, writing pressure, tapping pressure, overestimation of angles, pressure of resting hand. The investigators concluded that this is a relatively heterogeneous factor but that a common factor of emphasis seems to underlie most of the measures. They suggested: "Mere physical pressure or tension would seem to be significant only as part of a wider and more psychological tendency to make emphatic movements" (1933, p. 112).

Allport and Vernon, not completely satisfied with their group comparisons, followed this analysis with four case histories in which the subjects' expressive movements are examined in the context of their known personalities. They said, "we are forced to the striking conclusion that virtually no measurements contradict the subjective impression of the personalities. The measures faithfully record what common sense indicates. Even measures which do not correspond statistically fit into the picture in such a way as to be readily intelligible and psychologically congruent" (1933, p. 180). Further, they found that judges were able to match, with more than chance success, handwriting samples and kymographic curves (indicating the pressure exerted while writing) with personality sketches. Allport and Vernon offered an interesting final statement: "There are degrees of unity in movement, just as there are degrees of unity in mental life and in personality. It is surely not unreasonable to assume that insofar as personality is organized, expressive movement is harmonious and self-consistent, and insofar as personality is un-integrated, expressive movement is self-contradictory." (1933, p. 182).

After a final consideration of the positive findings of their investigations, Allport and Vernon concluded:

*From our results it appears that a man's gesture and handwriting both reflect an essentially stable and constant individual style. His expressive activities seem not to be dissociated and unrelated to one another, but rather to be organized and well-patterned. Furthermore, the evidence indicates that there is a congruence between expressive movement and the attitudes, traits, values, and other dispositions of the "inner" personality. Although the question of the organization of the personality as a whole is beyond the scope of the volume, it is clear that the foundations for an adequate solution of this important problem cannot be supplied by the anarchic doctrine of specificity but only by the positive and constructive theories of consistency. (1933, p. 248)*

A series of studies by Allport and Cantril (1934) attempted to assess the extent to which judges could estimate personality accurately on the basis of voice alone. Over 600 judges were employed in the judgment of 16 speakers. Three different techniques of judging were used: personality sketches, matching speakers to personality descriptions, and rating speakers on attributes that
were independently measured. The attributes judged included physical and expressive features, like age, height, complexion, appearance in photographs, and handwriting, as well as interests and traits, for example, vocation, political preference, extroversion, and ascendance.

The results of these studies were consistent in indicating that judges were able to relate the voice with personality characteristics and with certain physical characteristics with better than chance accuracy. A comparison of judgements based on the natural voice with those based on the radio voice revealed that under both conditions the judges were able to do better than chance but that the natural voice led to slightly more accurate ratings than the radio voice. An examination of the different personal characteristics that were assessed revealed that the judges were both more consistent and more accurate in their estimates of interests and traits as opposed to physical features and handwriting. The authors concluded from this: "Not only are the more highly organized traits and dispositions judged more consistently than such outer characteristics as physique and appearance, but they are also judged more correctly" (Allport & Cantril, 1934, p. 51).

Allport, generalizing from the results of his own and others' investigations, stated:

*The expressive features of the body are not independently activated. Any one of them is affected in much the same way as any other. Hence, to a degree Lavater is justified in saying that "one and the same spirit is manifest in all."*

The consistency, however, is never found to be perfect. One channel of expression is not an exact replica of all others. If this were so, monosymptomatic methods of psychodiagnostics would be fully justified. The complete personality would be betrayed equally well in every feature. Handwriting would tell the whole story, so too would the eyes, the hands, or the limbs. The amount of agreement that has been demonstrated does not justify so simple an interpretation of the case.

*The unity of expression turns out, as we would indeed expect, to be entirely a question of degree, just as the unity of personality itself is a matter of degree. The expressive features of the body should not be expected to reflect more consistency than the personality itself possesses (nor should they be expected to reflect less). Expression is patterned in complex ways precisely as personality itself is patterned. There are major consistencies and secondary consistencies, much congruence and some conflict and contradiction. Psychodiagnostics must then proceed as any other branch of the psychology of personality proceeds, to the study of complex phenomena at a complex level. (1937, pp. 480–481)*
In the 1940s, Allport came into possession of 301 letters written by a middle-aged woman, Jenny Masterson (a pseudonym), to a young married couple over a period of twelve years. Allport recognized the psychological import of these particular letters and used them for many years in his classes in personality at Harvard to stimulate class discussion. They were published in an abridged form in the *Journal of Abnormal and Social Psychology* (Anonymous, 1946).

Allport and his students conducted several types of analyses of these letters in order to determine Jenny’s outstanding traits. Baldwin (1942) was the first to make use of the letters. He devised a method that he called *personal structure analysis*. The first step consisted of reading the letters in order to identify the prominent topics and themes that Jenny wrote about. Baldwin found that she often wrote about her son, Ross, money, nature and art, and, of course, her own feelings. The next step was to find the relationships among these topics by noting how often they occurred together. When Jenny wrote about Ross, for instance, how frequently was he mentioned along with money, art, women, and so forth? A number of statistically significant clusters or constellations emerged from this analysis. Two such clusters revolved around seeing Ross in a favorable and in an unfavorable light. When he was referred to favorably in a letter, the themes of nature and art and of Jenny’s memories of her past life were also more likely to occur in the same letter than would be expected by chance. When Ross was written about unfavorably, other topics mentioned were Ross’s selfishness, Jenny as self-sacrificing, and other women as unfavorable. Allport remarked that Baldwin’s study shows “that quantification of the structure of a single personality is possible by means of statistical aids applied to content analysis” (1965, p. 199), but he also wondered “whether this rather laborious mode of classifying ideational clusters adds anything new to the interpretations reached through a common sense reading of the material” (pp. 198–199).

Allport himself used a more common sense approach to the analysis of Jenny’s traits as revealed in her letters. He asked thirty-six people to read Jenny’s letters and characterize her in terms of her traits. They used a total of 198 trait names. Since many of these names were synonymous or highly related, it was possible for Allport to group them under eight headings and a residual group of thirteen terms. The eight categories are as follows:

1. **Quarrelsome–suspicious**
2. **Self-centered**
3. **Independent–autonomous**
4. **Dramatic–intense**
5. **Aesthetic–artistic**
6. **Aggressive**
7. Cynical–morbid
8. Sentimental

There was considerable agreement among the judges, almost all of them perceiving as most prominent in Jenny's personality the traits of suspicionsness, self-centeredness, and autonomy.

Allport acknowledged that a list of traits is not a structure: "Surely her personality is not an additive sum of eight or nine separate traits" (1965, p. 195). Accordingly, he asked the judges whether they could perceive any one unifying theme that marks almost all of her verbal behavior and received such a diversity of replies that it was impossible to decide upon one cardinal trait. Allport also admitted that psychoanalysts would be critical of his trait analysis since it does not get at the underlying dynamics (motivations) of Jenny's behavior. He defended his position, however, by pointing to the consistency of Jenny's behavior so that one is able to predict her future conduct by what she did in the past.

Allport's evaluations of these content-analysis studies are summed up in the following statement:

"Content analysis (whether longhand or automated) provides no golden key to the riddle of Jenny. It does, however, objectify, quantify, and to some extent purify commonsense impressions. By holding us close to the data (Jenny's own words) it warns us not to let some pet insight run away with the evidence. And it brings to our attention occasional fresh revelations beyond unaided common sense. In short, by bringing Jenny's phenomenological world to focus it enables us to make safer first-order inferences concerning the structure of personality that underlies her existential experience." (1965, p. 204)

The publication of Walter Mischel's (1968) Personality and assessment was one of the most salient events in the recent literature on personality. It is important to note two points before we briefly consider the debate itself. First, as the word revisited in the title to this section is meant to indicate, the controversy was in no way a new one (e.g., Epstein & O'Brien, 1985; Pervin, 1978, 1985). Allport dealt with the issue throughout his career, for example, in his rejection of the concept of "identical elements" as the basis for cross-situational consistency (1961, pp. 319–324) and in his discussion of the Hartshorne and May (1928) studies of honesty. Second, many researchers (e.g., Eysenck, 1981b) have emphasized that the debate is artificial because both personality factors and situational forces are necessary for an understanding
of behavior and their relative importance depends on the particular circumstances under consideration (cf. Anastasi, 1958, on heredity and environment). Although the debate largely consumed the field for two decades, it now has evolved into different research questions (see, e.g., Kenrick & Funder, 1988; Pervin, 1985). The debate is noteworthy here, however, because one of the major contentions was argued in Allportian terms.

Mischel (1968) basically issued an empirical challenge. He proposed that the predictive utility of global traits of personality had not been demonstrated. Furthermore, there is little evidence that behavior is cross-situationally consistent, as the notion of an enduring and trans-situational personality would seem to imply. Absent any demonstration to the contrary, Mischel suggested, the most reasonable conclusion is that behavior is situationally specific, not cross-situationally consistent.

Mischel's challenge provoked a number of responses. Some researchers pointed out that the implicit alternative conclusion that situations must account for the majority of the variance in behavior, since personality traits apparently could not do so, was in error. Thus, Funder and Ozer (1983) pointed out that even with such ostensibly powerful situational forces as those underlying attitude change under forced compliance, bystander intervention, and obedience, the percentage of behavioral variance accounted for did not exceed that acknowledged by Mischel for personality traits. Similarly, Bowers (1973) summarized studies that employed analyses of variance to partition behavioral variance. He reported that the interaction of personality factors and situational forces had the greatest impact on behavior. Still other investigators suggested important reconceptualizations of the controversy. Epstein (e.g., 1979), for example, proposed that behavior is much more consistent when single behaviors have been aggregated into larger units (see Mischel, 1984; Mischel & Peake, 1982, 1983, for rebuttals). Similarly, Moskowitz (1982) demonstrated that broad and narrow trait constructs were characterized by different patterns of consistency.

The response to Mischel that generated the most attention, however, came from Daryl Bem and Andrea Allen (1974). They noted an apparent paradox between our intuitions, which suggest that people do display cross-situational consistency, and the empirical literature, which indicates that they do not. Bem and Allen assumed that intuitions are more in accord with reality than is the research. The problem, they argued, is that the literature falls prey to the nomothetic fallacy first pointed out by Gordon Allport. That is, researchers implicitly have assumed that any trait dimension will be "universally applicable to all persons." As a consequence, researchers end up investigating concepts that make sense to them but that do not exist in the phenomenology or behavior of their subjects! In other words, a sample of behaviors and situations that an experimenter thinks goes together may not belong in an "equivalence class" for the subjects. To the extent that this is true, the resulting research will fail
to find evidence of cross-situational consistency, not because it does not exist, but because it is being pursued in the wrong place. As Bem and Allen put it, "The traditional verdict of inconsistency is in no way an inference about individuals; it is a statement about a disagreement between an investigator and a group of individuals and/or a disagreement among the individuals within the group" (p. 510). In contrast to the research strategy, our intuitions operate in an idiographic manner. We do not begin by imposing labels on a person; rather, we first organize his or her behavior into rational sets, and then attempt to make sense of that set.

As a consequence of this analysis, Bem and Allen only expected to find consistency for "some of the people some of the time." They collected data on the cross-situational consistency of friendliness and conscientiousness in an attempt to support this contention. They first partitioned their sample into those subjects who reported that they were consistent on the traits and those who reported that they were not consistent. They then collected instances of friendly behavior and conscientious behavior. They reported substantial agreement among the different indicators of friendliness for the subjects who previously had indicated that they were consistent on friendliness but minimal agreement for the subjects who had indicated that they were not consistent on that trait. Similar results were obtained for conscientiousness. As a consequence of their analysis, Bem and Allen concluded that researchers must indeed pay more attention to situations, as Mischel had advocated. Researchers must also, however, attend seriously to persons. That is, there is a payoff for heeding Gordon Allport. (See Chaplin & Goldberg, 1984, for a failure to replicate Bem and Allen. Also, see Zuckerman, Bernieri, Koestner, & Rosenthal, 1989, for a sophisticated replication of Bem and Allen.)

Idiographics and Idioethics

Allport’s most enduring legacy probably was his advocacy of an “idiographic” approach to personality. That is, Allport believed that the study of personality made no sense unless it focused on the attempt to understand the “pattern of uniqueness” of particular individuals. He fundamentally opposed the “dismemberment of personality” guaranteed by any between-persons comparison of happiness. As a consequence, Allport accepted the proposition that “psychology seeks general laws, but [he drew] special attention to the laws and principles that tell how uniqueness comes about” (1961, p. 572). In other words, he proposed that we start with the behavior of individuals as the source of hunches, then seek generalization about such behavior, but finally “come back to the individual” (1962, p. 407). It is this last step, confronting our wobbly laws of personality with “the concrete person” (1962, p. 401), that captures the essence of Allport’s prescription for personality.

Despite occasional support for Allport (e.g., Tyler, 1978) there have, of course, been a number of second opinions regarding this prescription.
central objection has been that an idiographic approach must be incompatible with a scientific approach (Eysenck, 1954; Holt, 1962; Skaggs, 1945). In recent years, however, a number of personality psychologists have embraced Allport’s idiographic position. We here consider briefly three such efforts (see also the discussion in Chapter 6 on life history research).

Saul Rosenzweig (e.g., 1986) believed that the goal of personality theory (and clinical psychology) is to understand particular individuals as distinct from others but also as related to others. He proposed that we do so by employing nomothetic (or universal), demographic (or group), and idiodynamic (or individual) norms. In contrast to Allport’s focus on the traits of the unique individual, Rosenzweig focused on the “unique dynamic organization of events through time” (1986, p. 242) that distinguishes each person. He in turn used this analysis to locate psychology with respect to other physical and social sciences.

Perhaps the most influential of the idiographic proposals came from James Lamiell. In a widely cited paper, Lamiell (1981) proposed an empirical strategy for combining Allport’s quest for nomothetic principles with the idiographic description of an individual’s personality. Lamiell argued that the traditional individual-differences research paradigm assigns scores on an attribute to a person by combining values on a set of responses or observations, each of which is weighted by its relevance to the attribute of interest. For example, a person’s level of extraversion might be defined as the sum of his or her score on each of twenty-four self-report questions, with an implicit relevance weighting of 1 for each question. In the crucial next step, the score would be interpreted by comparing it with the average score for a representative set of respondents. In practice, this is equivalent to obtaining trait scores by adding up responses to the items on a personality test, then comparing that total score with norms for the test. Lamiell argued persuasively that such between-person scores say nothing about any one individual’s personality. Furthermore, he contended, it is impossible to reach a meaningful conclusion about the consistency of any one individual’s behavior from such aggregate measures (see Rorer & Widiger, 1983, for a similar argument). As a consequence, the method employed by personality researchers is fundamentally incompatible with their avowed goal of understanding individuals.

Lamiell suggested that we substitute what he termed an idiographic measurement strategy. This strategy diverges in two key ways from the individual-differences strategy described above. First, the set of items across which one combines responses may be specific to the individual being assessed. In principle, this may be true for the individual-differences strategy as well, but in practice a common set of items almost always is used. Second, and most important, the meaning of an individual’s total score would depend not on a comparison with the average score for a set of respondents, but on where the total score fell within the total range of scores possible for that individual.
That is, an idiographically defined measure of Mary’s rebelliousness on some occasion would depend on how rebellious her behavior was compared with her maximum and minimum possible rebelliousness. Lamiell’s point is that researchers can, and indeed must, conceptualize and measure each individual in his or her own right, not via comparisons with other individuals. This in turn would allow researchers to investigate the consistency of individuals over time, rather than focusing on aggregate measures for sets of individuals. In the process, researchers would accommodate Allport’s and Bem and Allen’s (1974) requirement that we avoid any assumption that a given attribute is relevant to all, or even to any other, individuals.

Ultimately, Lamiell (1981, p. 287) proposed that “the ‘kind of person’ one is is directly reflected in the kind of person one is not but could be and is only incidentally, if at all, reflected in the kind of person someone else is” (see Lamiell, 1987, for a fuller discussion). Lamiell concluded that systematic research of the type he proposed is idiographic in that it does justice to individuals, but it also is nomothetic in that it would attempt to confirm the applicability of general principles across individuals. That is, such research would be idiothetic. Lamiell clearly was responding to Allport’s admonition that our research culminate in going “back to the individual.”

Pelham (1993) provides a final illustration of idiographic research. He included as idiographic any approach that adopts a within-subjects rather than a between-subjects method. Such an approach, he argued, can be shown to be much more useful than critics (e.g., Paunonen & Jackson, 1985) have claimed. In particular, Pelham wrote, idiographic techniques afford practical advantages. Furthermore, because “mental life is primarily a within-subjects rather than a between-subjects experience ... idiographic techniques capture the integrity of phenomenological reality in ways that nomothetic techniques typically cannot” (Pelham, 1993, p. 666). Pelham provided data on the relation between self-perceptions and peer appraisals that are consistent with his analysis.

In one of his last publications, Allport (1966) “revisited” his concept of traits. Beginning some twenty years later, several other writers also have returned to Allport’s model of traits, using it as a theoretical springboard for provocative discussions. Consider three such efforts.

Zuroff (1986) posed the ironic question, “Was Gordon Allport a trait theorist?” His article sought to “rehabilitate Allport by demonstrating that he was not a trait theorist, at least in the sense that most psychologists now understand the term” (p. 993). The confusion that Zuroff addressed is not Allport’s; rather, it resides in contemporary misunderstanding of Allport’s definition of traits. As Zuroff pointed out, and as we have seen above, Allport’s definition of traits did not imply pervasive, cross-situational consistency of behavior. At least in
the case of personal dispositions, Allport predicted that people will exhibit self-consistency of behavior across time and in relevant situations, not consistency across all situations or across sets of situations compiled by a researcher. Bem and Allen (1974) were echoing this point when they introduced the concept of equivalence classes. Allport proposed that we need traits to refer to the connection between a set of "equivalent" responses and a set of "functionally equivalent" provoking situations. The linkages within and between these sets derive from their shared meaning. Viewed in this light, as Zuroff (1986) pointed out, Allport's theory clearly qualifies as what psychologists now are calling an "interactionist" theory. That is, behavior is determined by both the person and the situation, and traits themselves are defined in interactionist terms.

At this point, Zuroff referred to Magnusson and Endler's (1977a) distinction between person–situation interaction in a mechanistic sense and in a dynamic sense. The former refers to the necessity of including both persons and situations in explanations or predictions of behavior, but the latter refers to a process by which situations affect an individual's behavior. Zuroff (1986) argued that Allport's trait is interactionist in a mechanistic sense but not in a dynamic sense. In contrast, however, one could argue that Allport's reference to underlying meaning provides just the dynamic mechanism that Zuroff saw as lacking.

The remainder of Zuroff's paper provides a useful discussion of the utility of trait constructs (see also Buss, 1989). Zuroff (1986, p. 999) added the apt and ironic observation that Walter Mischel, whose 1968 book led many to reject Allport's ostensibly naive model of traits in favor of a supposedly sophisticated and more accurate interactionist approach to behavior, had introduced what can be regarded as a "contemporary reformulation of Allport's concept of a trait." Mischel (1984, p. 362) proposed a focus on specific or local consistencies: "Instead of seeking high levels of consistency from situation to situation for many behaviors in a wide range of contexts or looking for broad averages, one might try to identify unique 'bundles' or sets of temporally stable prototypic behaviors . . . . that characterize the person even over long periods of time but not necessarily across most or all possibly relevant situations."

An integrative recent paper by Nancy Cantor (1990) might be viewed as an attempt to provide the "process" that Zuroff regarded as missing in Allport's theory. Indeed, Cantor's work is intriguing precisely because she demonstrated connections between Allportian trait psychology and contemporary work on social motivation. Cantor proposed that a cognitive (or "doing") approach to personality expression, maintenance, and growth complements a trait (or "having") approach to personality structure. The cognitive units that Cantor described represent contextualized "middle-level" units of analysis in that they provide for the expression of more generalized personality dispositions (see Briggs, 1989, and Wakefield, 1989). Cantor introduced schema, tasks, and
strategies to account for the "intentional structure of personality-in-context" (1990, p. 737; see also Little, 1989).

A schema is a knowledge structure concerning past behavior in a domain. A person with a "self-as-shy" schema, for example, has certain memories that predispose him or her to perceive situations in certain terms and to respond in certain ways. Cantor considered schemes to be "the cognitive carriers of dispositions . . . a record of the individual's particular expression of [e.g.] shyness" (1990, pp. 737–738). This description is reminiscent of Henry Murray's "need integrate." Furthermore, Cantor's elaboration of a shyness schema sounded very similar to Allport's definition of a trait as the linkage between a set of functionally equivalent stimuli and a set of equivalent responses. An individual's shyness schema records "the specific kinds of people and interactions that make him or her nervous, the particular acts of shyness most characteristic of his or her shyness, and the subset of life situations or contexts to which he or she is most readily predisposed to respond with shyness" (p. 738).

Individuals differ not only in their schemes, but also in the life tasks to which those schemes give rise. Cantor suggested that life tasks may be universal, reflecting evolutionary, developmental, or sociocultural significance. In addition, people have individualized, self-articulated life tasks. Notice the apparent parallel here to Allport's common traits and personal dispositions. Cantor described specific life tasks as "readily linked to the motivational component of characteristic dispositions" (p. 740), thereby suggesting a parallel with Murray's distinction between general needs and specific aims. Cantor went on to provide a persuasive analysis of life tasks and their developmental fluidity. In this detailed analysis of tasks, Cantor was fleshing out the suggestions of theorists such as Allport and Murray.

Cantor became even more specific in discussing the strategies that individuals employ to work on their life tasks. She was clear in her belief that, even when individuals share tasks, they employ unique behavioral paths to pursue those tasks. The existence of such goals, and the individual's striving for them, is of course highly suggestive of Allport's "propriate strivings." Cantor's description of how "strategic work involves a blending and a reciprocal interaction of cognition and emotion in the service of reaching for an important self-goal" (p. 743), as in the case of "defensive pessimism," provides, however, a very useful extension of Allport's concept.

The most attractive feature of Cantor's approach is her explicit discussion of the differing levels of analysis that characterize these cognitive variables. Thus, she described "a natural ordering of generality from relatively higher level schemes applying across many life domains and life periods ('self-as-achiever'), to more delimited tasks for particular life periods ('becoming a law partner'), to fairly specific strategies conditionally linked to particular kinds of contexts or interactions ('managing anxiety before an important trial with
defensive pessimism’)” (p. 746). This hierarchy permits Cantor to resolve the apparently paradoxical coexistence of personality stability and personality change. That is, she accepted the longitudinal evidence of considerable stability at the level of broad personality dispositions, but she also believed that “critical changes occur throughout the life span in the microstructure of schema content, life-task priorities, and strategy rules” (p. 747).

A final example of “a neo-Alportian approach to personality” comes from David Funder (1991). Funder observed that one consequence of the person–situation debate has been an image of global traits as “old-fashioned, rather quaint ideas not relevant for modern research in personality” (p. 31). In contrast to “modern reconceptualizations” of personality, Funder’s “neo-Alportian theory of global traits” suggests that personality psychologists are best served by dispositions that are global and framed in everyday language. For example, one of Funder’s seventeen assertions proposes that global traits have real explanatory power precisely because they are not redundant with specific behaviors. As Funder put it, “movement from the specific [behavior] to the general [trait] is what explanation is all about” (p. 36). That does not mean that traits are sufficient explanations of behavior; they have a developmental history and are embedded in a hierarchy of generality. “But traits remain important stopping points in the explanatory regress” (p. 36). Furthermore, Funder concluded that intuitively accessible, global traits remain “the appropriate level of analysis at which investigation should begin, and which more specific investigations should always remember to inform” (p. 37). Funder echoed Allport in his belief that global traits provide our best opportunity for understanding “whole, functioning individuals.”

According to Allport (1968, p. 377), the greater part of his professional work can be understood as an attempt to deal with one question: “How shall a psychological life history be written?” His attempt to answer this query was guided by the belief that the “patterned uniqueness” of an individual’s attributes is the central psychological reality. As he wrote, “although Bill can be compared profitably on many dimensions with the average human being or with his cultural group, still he himself weaves all these attributes into a unique idiomatic system. . . . Whatever individuality is, it is not the residual ragbag left over after general dimensions have been exhausted. The organization of Bill’s life is first, last, and all the time, the primary fact of his human nature” (1962, p. 410).

In contrast to many theorists, Allport never developed a school of followers, although traces of his influence may be found in the work of former students such as A. L. Baldwin, J. S. Bruner, H. Cantril, G. Lindzey, D. G. McGranahan, T. Pettigrew, and M. B. Smith. Most of the developments in his theory have
depended upon Allport's own contributions, which were continuous for nearly a half-century. Beginning with an interest in an appropriate unit for the description of personality that led to his conception of the trait, and a simultaneous concern over the developmental transformation that motives undergo, which culminated in the concept of functional autonomy, he progressively modified the theory so as to place increasing emphasis upon intentionality and ego (propriate) functions.

One of the striking phenomena of the past sixty years in psychology has been the demise and subsequent rebirth of self and ego concepts. Perhaps no other psychologist has had so influential a role in restoring and purifying the ego concept as Allport. Not only did he place the concept in historical context, but he also attempted persistently to show the functional necessity of employing some such concept in a discriminating way in any attempt to represent normal, complex, human behavior. A further novel feature of Allport's position has been his emphasis upon the importance of conscious determinants of behavior and, as a corollary to this, his advocacy of direct methods of assessing human motivation. In addition, Allport made an ardent plea for the detailed study of the individual case. Although others have shared this conviction, Allport, with his monograph on the use of personal documents in psychology (1942), his stress upon idiographic methods, his Letters from Jenny, and his publication of case histories as editor of the Journal of Abnormal and Social Psychology, is clearly one of the most important figures in a movement that has led to current acceptance of the individual case as a legitimate object of psychological investigation.

Finally, Allport's position is noteworthy for his emphasis upon the future and the present to the relative exclusion of the past. It is easy for an investigator or practitioner to forget about the importance of situational and ongoing determinants of behavior in favor of historical determination. Consequently, it has indeed been helpful to have Allport's writings as a constant reminder that the past is not the whole of the functioning individual.

So much for the positive side of the register. Let us examine the negative. In many respects, this theory is singularly vulnerable to criticism, and there has been no dearth of active critics, such as Bertocci (1940), Coutu (1949), Seward (1948), and Skaggs (1945). As we suggested earlier, Allport has usually been more concerned with presenting his viewpoint vividly and effectively than in protecting himself from criticism. The formal inadequacy of the theory has led to much negative comment. Just what is the axiomatic base of his position? What is assumed and what is open to empirical test? Just how are the assumptions made by the theory interrelated, and where are the careful empirical definitions that permit the investigator to translate concepts into observation terms? Intimately related to these questions, but vastly more important, is the issue of the variety and quantity of investigation to which the theory has led. It must be admitted that, with the possible exception of the field of expressive
behavior, this theory has not been an efficient generator of propositions for empirical test. Like most other personality theories, it is more at home when attempting to account for known relations than it is in attempting to make predictions about unobserved events. Thus, although Allport’s own writings and investigations have led to a large amount of related research, for example, prejudice, social and religious attitudes, and rumor, his theory falls down sadly as a formal device for generating research.

Many psychologists feel that one reason the theory has difficulty in making predictions is that the concept of functional autonomy is not susceptible to empirical demonstration, let alone to making predictions about unobserved events. We have already referred to some embarrassment created for this concept when the notion of propriateness is introduced as a criterion for determining what becomes autonomous. The basis of functional autonomy is a failure to observe the expected extinction or dropping out of a given response, and no matter how long we observe a given response that has failed to extinguish, there is always the possibility of criticism. The detractor may say we should have watched longer in order to observe extinction or may account for the apparent autonomy of the response in terms of some underlying motivation that is not adequately understood by the investigator. It is always possible to account for any concrete example of functional autonomy in terms of other theoretical formulations, but so, too, can examples of other theoretical principles be accounted for in terms of alternative principles. Perhaps the most serious criticism of this principle is that Allport provided no adequate account of the process or mechanism underlying functional autonomy. He tells us that the phenomenon takes place but provides no satisfactory explanation of how or why.

Another feature of the theory that has come under heavy critical fire is Allport’s assumption of partial discontinuity between normal and abnormal, between infant and adult, and between animal and human. Most psychologists are so firmly convinced that we have gained increased knowledge of normal behavior from studying abnormal subjects that any attempt to imply that the abnormal is discontinuous from the normal seems nothing short of heretical. In fact, the extent to which psychologists have borrowed conceptions developed through observation of lower animals makes the assumption of discontinuities within the human species all the more difficult to accept. Consistent with his view of normal, adult, human behavior as distinct from abnormal, child, or lower animal behavior is Allport’s preference for a model of a human that emphasizes positive or normatively prized aspects of behavior. The influence of psychoanalysis and comparative psychology has been so strong that a theory that insists upon emphasizing socially acceptable motives rather than primitive needs, such as sex and aggression, sounds mildly Victorian at present. Allport himself would say that he does not deny the importance of biological or of unconscious motives but wishes to give due place to the role of socialized
motives and rational processes, which he believes a transitory era of irrationalism has neglected. However, that may be, many critics of the theory maintain that Allport's position represents humans in terms that are altogether too similar to those that the ordinary individual uses in accounting for his or her behavior.

No contemporary psychologist can dwell heavily upon "uniqueness" without incurring the wrath of many colleagues who are oriented toward abstracting and measuring behavior. What Coutu (1949) called "the fallacy of the unique personality" represents a major disagreement between Allport's beliefs and those of most contemporary social scientists. It is their conviction that individuality can be accounted for in terms of adequate common or general principles and that to focus upon the individual and unique at psychology's present state of development can only lead to sterile speculation.

Sanford (1963) has also been severely critical of the "uniqueness" concept. He insisted that science cannot take account of unique events, that it looks for uniformities and statistical regularities and it attempts to generalize. He observed that clinicians and others who are most intimately involved with the study of individual personalities have not followed Allport's recommendation that they concentrate on trying to understand the uniquely patterned organization of a person. Rather they attempt to discover general principles in the analysis of the individual case. Allport's reply to this criticism was that one can find uniformities in a person's life, and one can make generalizations for that person. The fact remains, however, that aside from Jenny, Allport did not follow his own advice. (Even in the case of Jenny there was little attempt made to establish her uniqueness as a human being.) His research has been of the nomothetic type.

A further objection to the theory, intimately related to its failure to generate empirical propositions, is the theory's inability to specify a set of dimensions to be used in studying personality. Individual traits, by definition, cannot be stated in a general form, and consequently, the investigator, if he or she takes the idiographic approach, must begin anew the task of devising variables for each subject studied. Obviously, this is a discouraging state of affairs for the person interested in research.

Finally, those among contemporary psychologists who are impressed with the contribution of sociocultural determinants to behavior find no easy way to give these factors adequate representation in Allport's theory. They maintain that the theory gives full attention to the interrelatedness of all behavior but fails to recognize the interrelatedness of behavior and the environmental situation within which it operates. Allport attributed too much credit to what goes on inside the organism and not enough credit to the seductive and constraining impact of external forces.

Allport, in his characteristic openminded manner, listened to this criticism and replied to it. He acknowledged in his important paper *Traits revisited*
(1966) that "my earlier views seemed to neglect the variability induced by ecological, social and situational factors" (p. 9). "This oversight," he went on to say, "needs to be repaired through an adequate theory that will relate the inside and outside systems more accurately." Allport did not, however, attempt to provide such a theory and in fact seemed to imply that such a theory will not invalidate or replace his viewpoint. He did not believe that traits can be accounted for in terms of interaction effects. Environmental situations and sociocultural variables may be distal causal forces, but "the intervening factor of personality is ever the proximal cause of human conduct." It is the duty of psychology, Allport maintained, to study the person-system because it is the person who accepts, rejects, or remains uninfluenced by the social system. Allport’s tolerant eclecticism is seen in this solution to the person–society controversy.

The personality theorist should be so well trained in social science that he can view the behavior of an individual as fitting any system of interaction; that is, he should be able to cast this behavior properly in the culture where it occurs, in its situational context, and in terms of role theory and field theory. At the same time he should not lose sight of the fact that there is an internal and subjective patterning of all these contextual acts. (1960a, p. 307)

Perhaps the most remarkable attribute of Allport’s theoretical writings is that in spite of their pluralism and eclecticism they have managed to create a sense of novelty and to exert a broad influence. His work stands as a monument to a wise and sensitive scholar who was committed to representing the positive aspects of human behavior in terms that respected the uniqueness of every living organism.
In the present chapter we will be concerned both with a particular empirical method, the technique of factor analysis, and with a theoretical position whose development has been heavily dependent on the use of that method, the person-
The essential ideas of factor analysis were introduced by Spearman (1904), a distinguished English psychologist who is best known for his work with mental abilities (Spearman, 1927). He suggested that if we examine any two related tests of ability we may expect to find two types of factors contributing to performance on these tests. First there is a general factor (for example, verbal fluency, general intelligence, educational level) that is important for both tests. Second there is a specific factor (for instance, visual memory, spatial perception, specific information) that is unique to each test. The method of factor analysis was developed as a means of determining the existence of general factors and aiding in their identification. Spearman’s technique for isolating single factors was revised with Thurstone’s (1931) introduction of multiple-factor analysis. This opened the way to studying much more complex problems and has since remained the principal method of factor analysis.

A detailed understanding of factor analysis is not necessary for purposes of the exposition involved in this chapter; however, it is essential that the reader appreciate the general logic behind the technique. The factor theorist typically begins the study of behavior with a large number of scores for each of a large number of subjects. Given these surface indices, the investigator then applies the technique of factor analysis to discover what the underlying factors are that determine or control variation in the surface variables. Thus, he or she hopes to identify a small number of basic factors whose operation accounts for most of the variation in the very large number of measures with which the investigator began.

The outcome of the factor analysis not only isolates the fundamental factors but also provides for each measure or set of scores an estimate of the extent to which this measure is contributed to by each of the factors. This estimate is customarily referred to as the factor loading or saturation of the measure and is simply an indication of how much of the variation on this particular measure is to be attributed to each of the factors. The psychological meaning of a factor and the nature or label that is attached to it are largely determined by the nature of the particular measures that have high loadings on this factor. Having identified the basic factors, it is possible for the factor theorist to attempt to devise means of measuring these factors more efficiently than can be done by means of the original measures.
Raymond Bernard Cattell
Thus, the factor theorist commences with a wide array of behavioral measures, identifies the factors underlying these measures, and then attempts to construct more efficient means of assessing these factors. The factors of the factor analyst are in conception little different from the components or underlying variables of other personality theorists. They are merely attempts to formulate variables that will account for the diverse complexity of surface behavior. It is in the technique employed in deriving these variables that the novelty of this approach lies.

The reader should remember that although group or common factors are of particular interest to the factor analyst, these are not the only types of factors. Burt (1941) has provided a widely accepted description of the kinds of factors that can be derived from the application of factor analysis. He suggests that there are universal or general factors that contribute to performance on all measures, and there are also particular or group factors that play a role in more than one but not in all measures. Further, there are singular or specific factors that contribute to only one of the measures, and finally there are accidental or error factors that appear on a single administration of a single measure and are to be attributed to faulty measurement or lack of experimental control.

One other issue that has proved somewhat controversial among factor analysts should be mentioned here—the distinction between orthogonal and oblique systems of factors (and the related notion of second-order factors). One may specify in the factor analysis that the factors extracted are to be uncorrelated with one another (in a geometrical sense, at right angles to one another, or "orthogonal") or one may allow correlated, or "oblique," factors to emerge. The former procedure has been preferred by some factor analysts in the personality realm because of its simplicity and efficiency. But others, including Cattell, have argued for oblique factors on the ground that true causal influences in the personality realm may well be somewhat intercorrelated and that only by the use of an oblique factor system can an undistorted picture emerge.

The use of oblique factors has an additional implication. If factors are obtained that are correlated with one another, it is possible to reapply the same factor-analytic methods to the correlations among the factors, yielding so-called second-order factors. For instance, the factoring of ability tests often leads to such first-order factors as "verbal fluency," "numerical ability," "spatial visualization," and so on, which themselves tend to be interrelated. One can then proceed to factor the correlations among these first-order factors, perhaps finding a single second-order "general intelligence" factor, or perhaps broad "verbal" and "nonverbal" factors, or the like.

Similar to any other procedure, factor analysis can be abused, and the wisest investigators in this area emphasize the fact that it is no substitute for good ideas or detailed knowledge of the phenomena under investigation. Thus,
Thurstone (1948), in discussing the work of his psychometric laboratory, states:

We spend more time in designing the experimental tests for a factor study than on all of the computational work, including the correlations, the factoring, and the analysis of the structure. If we have several hypotheses about postulated factors, we design and invent new tests which may be crucially differentiating between the several hypotheses. This is entirely a psychological job with no computing. It calls for as much psychological insight as we can gather among students and instructors. Frequently we find that we have guessed wrong, but occasionally the results are strikingly encouraging. I mention this aspect of factorial work in the hope of counteracting the rather general impression that factor analysis is all concerned with algebra and statistics. These should be our servants in the investigation of psychological ideas. If we have no psychological ideas, we are not likely to discover anything interesting because even if the factorial results are clear and clean, the interpretation must be as subjective as in any other scientific work. (p. 402)

For a full discussion of factor analysis, the reader is referred to Carroll (1993), Comrey (1973), Harman (1967), and Nesselroade and Cattell (1988). For information on newer confirmatory factor-analytic methods, the reader may consult McArdle (1996) and Nesselroade and Baltes (1984).

So much for the logic of factor analysis. For an important illustration of the diverse ways in which this method can be applied in the theoretical and empirical analysis of personality, we turn to a consideration of the personality theory of Raymond B. Cattell.

In Raymond Cattell we find an investigator whose deep interest in quantitative methods has not narrowed the spectrum of his interest in psychological data and problems. For him, factor analysis has been a tool to enlighten a variety of problems all of which have been ordered within a systematic framework. His theory represents a major attempt to bring together and organize the findings of factor-analytic studies of personality. He pays some attention to the findings of investigators using other methods of study, although the core of his position rests upon the results of factor analysis because it is here that he derives the variables that he considers most important in accounting for human behavior. He resembles Gordon Allport in that his position may accurately be labeled a "trait theory" and Kurt Lewin in his ability to translate psychological ideas into explicit mathematical forms. However, among the theorists discussed in this volume, perhaps the one Cattell most resembles is
Henry Murray. Both take a broad view of personality and have developed large-inclusive theoretical systems incorporating many different classes of variables. Both have been concerned with an empirical mapping of wide reaches of the personality domain, and this has in both cases resulted in large numbers of constructs, with operational links to data, and often with strange names. In addition, both theorists place heavy emphasis on motivational constructs: "needs" for Murray, "dynamic traits" for Cattell. Both also make substantial use of psychoanalytic formulations, and both give a systematic theoretical status to the environment as well as to the person. An outstanding difference between them is, of course, Cattell's heavy commitment to a particular statistical methodology, factor analysis.

Raymond Bernard Cattell was born in Staffordshire, England, in 1905 and received all of his education in England. He secured his B.Sc. from the University of London in 1924 in chemistry and his Ph.D. in psychology under Spearman from the same institution in 1929. He was a lecturer at University College of the South West, Exeter, England, from 1928 to 1931 and director of the City Psychological Clinic at Leicester, England, from 1932 to 1937. This unusual combination of an academic post followed immediately by extensive experience in a clinical setting undoubtedly provides a partial explanation for Cattell's subsequent breadth of interest. In 1937 he was awarded a D.Sc. by the University of London for his contributions to personality research. He served as research associate to E. L. Thorndike at Teachers College, Columbia University, during the period 1937–1938 and following this was the G. Stanley Hall professor of psychology at Clark University until moving to Harvard University as a lecturer in 1941. In 1944 he accepted a position at the University of Illinois, where he remained, as research professor in psychology and director of the Laboratory of Personality and Group Behavior Research, until his retirement in 1973. In 1973, he became a visiting professor at the University of Hawaii. He currently is professor of psychology at the Forest Institute of Professional Psychology in Honolulu, Hawaii. In 1953, Cattell was awarded the Wenner-Gren prize of the New York Academy of Science for his work on the psychology of the researcher. He was instrumental in founding the Society for Multivariate Experimental Psychology in 1960 and served as its first president.

Like all other theorists who emphasize the method of factor analysis, Cattell is deeply indebted to the pioneer work of Spearman and the extensive developments by Thurstone. His theoretical formulations are closely related to McDougall's, whose interest in ferreting out the underlying dimensions of behavior and emphasis upon the self-regarding sentiment is seen in modern dress in Cattell's writings. The details of many of Cattell's theoretical ideas, especially those related to development, are quite intimately related to the formulations of Freud and subsequent psychoanalytic writers.
Over a period of forty years Cattell has published an amazing number of books and articles that not only span the field of personality research and mental measurement but also touch upon topics within the traditional fields of experimental psychology, social psychology, and human genetics. The simple statistics of this output are staggering. Cattell has published more than 400 research articles, some 40 books, and over a dozen different tests to measure personality, intelligence, and psychopathology.

Out of this wealth of publication we may single out a few that constitute major landmarks in Cattell's systematic treatment of personality. The first of these volumes is entitled *Description and measurement of personality* (1946) and attempts to outline from a cross-sectional viewpoint a descriptive foundation for an adequate theory of personality. The second is called *Personality: A systematic, theoretical, and factual study* (1950) and tries to build upon the foundation established in the earlier book a synthetic view of the major phenomena of personality, including both a developmental and a cross-sectional perspective. The third is *Personality and motivation structure and measurement* (1957). A semipopular account of his theory and research in the area of personality is contained in *The scientific analysis of personality* (1966a), which was updated with Paul Kline and published in 1977 as *The scientific analysis of personality and motivation*. This book, along with *Human motivation and the dynamic calculus* (Cattell, 1985) and Cattell's recent chapter in Pervin's *Handbook of personality* (Cattell, 1990), provides the best current summary of Cattell's position. The reader is warned, however, that these later volumes contain difficult material. Cattell's enormous contributions to multivariate theory, measurement, and research are summarized in *The handbook of multivariate experimental psychology* (Nesselroade & Cattell, 1988). Cattell has summarized his approach to learning theory in *Personality and learning theory*, which appeared in two volumes: *The structure of personality in its environment* (1979) and *A systems theory of maturation and structured learning* (1980). Other signal volumes include *Personality and mood by questionnaire* (Cattell, 1973a), *Motivation and dynamic structure* (Cattell & Child, 1975), *The inheritance of personality and ability* (Cattell, 1982), and *Structured personality-learning theory* (Cattell, 1983). Cattell's scholarly productivity has been remarkable. In recent years, Cattell (1972, 1987) has proposed a new morality based on scientific knowledge and investigation. This approach, termed Beyondism, is a combination of ethics, religion, and social organization.

Cattell's psychological tests include *The Culture Free Test of Intelligence* (1944), *The O-A Personality Test Battery* (1954), *The Clinical Analysis Questionnaire* (Cattell, 1973a), *The Motivation Analysis Test* (Cattell, Horn, & Sweney, 1970), and the *Sixteen Personality Factor Questionnaire* (Cattell, Saunders, & Stice, 1950; see also Cattell, Eber, & Tatsuoka, 1970).
The system of constructs proposed by Cattell is among the most complex of any of the theories we shall consider. Although these concepts derive their characteristic flavor and, in many cases, their empirical definition from studies using factor analysis, some of them represent derivations from experimental findings or simple observational studies of behavior. This state of affairs is considered by Cattell to be only an expedient, however, as the following quotation reveals:

Our knowledge of dynamic psychology has arisen largely from clinical and naturalistic methods and secondarily from controlled experiment. Findings of the former, and even of the latter, are in process of being placed on a sounder basis by the application of more refined statistical methods. In particular, experiments and clinical conclusions need to be refounded on real conceptions as to what traits (notably drives) are really unitary, and this requires a foundation of factor-analytic research. (1950, p. 175)

Cattell considers that the detailed task of defining personality must await a full specification of the concepts that the theorist plans to employ in his or her study of behavior. Thus, he deliberately provides only a very general definition:

Personality is that which permits a prediction of what a person will do in a given situation. The goal of psychological research in personality is thus to establish laws about what different people will do in all kinds of social and general environmental situations. . . . Personality is . . . concerned with all the behavior of the individual, both overt and under the skin. (1950, pp. 2–3)

It is clear that this emphasis upon personality study including "all" behavior is not an attack upon the necessary abstracting or segmenting that takes place in the usual empirical study. It is simply a reminder that the meaning of small segments of behavior can be fully understood only when seen within the larger framework of the entire functioning organism.

Cattell views personality as a complex and differentiated structure of traits, with its motivation largely dependent upon a subset of these, the so-called dynamic traits. When we have examined Cattell’s multifarious trait concepts and certain related notions, such as the specification equation and the dynamic lattice, we will have a fairly broad grasp of his conception of personality. A discussion of his treatment of personality development, a consideration of his views of the social context of personality, and a brief look at some of his characteristic research methods will complete the picture. At the conclusion of this discussion, the reader will appreciate the meaning of Cattell’s dictum “Science demands measurement.”
The trait is by far the most important of Cattell’s concepts. In fact, the additional concepts that we shall examine are for the most part viewed as special cases of this general term. Except perhaps for Gordon Allport, Cattell has considered this concept and its relation to other psychological variables in greater detail than any other theorist. For him a trait is a “mental structure,” an inference that is made from observed behavior to account for regularity or consistency in this behavior.

Central to Cattell’s point of view is the distinction between surface traits, which represent clusters of manifest or overt variables that seem to go together, and source traits, which represent underlying variables that enter into the determination of multiple surface manifestations. Thus, if we find a number of behavioral events that seem to go together, we may prefer to consider them as one variable. In a medical setting, this would be referred to as a syndrome, but here it is labeled a surface trait. Source traits, on the other hand, are identified only by means of factor analysis, which permits the investigator to estimate the variables or factors that are the basis of this surface behavior.

It is evident that Cattell considers source traits more important than surface traits. This follows not only because the source traits promise greater economy of description, as there are presumably fewer of them, but more importantly because

the source traits promise to be the real structural influences underlying personality, which it is necessary for us to deal with in developmental problems, psychosomatics, and problems of dynamic integration. . . . as research is now showing, these source traits correspond to real unitary influences—physiological, temperamental factors; degrees of dynamic integration; exposure to social institutions—about which much more can be found out once they are defined. (1950, p. 27)

Surface traits are produced by the interaction of source traits and generally can be expected to be less stable than factors. Cattell admits that surface traits are likely to appeal to the commonsense observer as more valid and meaningful than source traits because they correspond to the kinds of generalizations that can be made on the basis of simple observation. However, in the long run it is the source traits that prove to have the most utility in accounting for behavior.

Clearly, any single trait may represent the outcome of the operation of environmental factors, hereditary factors, or some mixture of the two. Cattell suggests that while surface traits must represent the outcome of a mixture of these factors, it is at least possible that source traits may be divided into those that reflect heredity, or more broadly, constitutional factors, and those derived from environmental factors. The traits that result from the operation of environ-
mental conditions are called *environmental-mold traits*; those that reflect hereditary factors are called *constitutional traits*:

If source traits found by factorizing are pure, independent influences, as present evidence suggests, a source trait could not be due both to heredity and environment but must spring from one or the other. . . . Patterns thus springing from internal conditions or influences we may call constitutional source traits. The term "innate" is avoided, because all we know is that the source is physiological and within the organism, which will mean inborn only in a certain fraction of cases. On the other hand, a pattern might be imprinted on the personality by something external to it. . . . Such source traits, appearing as factors, we may call environmental-mold traits, because they spring from the molding effect of social institutions and physical realities which constitute the cultural pattern. (1950, pp. 33-34)

Traits may also be divided in terms of the modality through which they are expressed. If they are concerned with setting the individual into action toward some goal, they are *dynamic traits*. If they are concerned with the effectiveness with which the individual reaches the goal, they are *ability traits*. Or they may be concerned largely with constitutional aspects of response such as speed, energy, or emotional reactivity, in which case they are referred to as *temperament traits*. In addition to these major trait modalities, Cattell has in recent writings placed increasing emphasis on more transient and fluctuating structures within the personality, including *states* and *roles*. In discussing Cattell's views of personality structure, we will find it convenient to discuss first the relatively stable and enduring ability and temperament traits, then the dynamic traits, which tend to be intermediate in stability, and finally the more changeable roles and states.

In Cattell's view, there are three major sources of data about personality: the life record, or *L-data*; the self-rating questionnaire, or *Q-data*; and the objective test, or *T-data*. The first of these, *L-data*, may in principle involve actual records of the person's behavior in society, such as school records and court records, although in practice Cattell has usually substituted ratings by other persons who know the individual in real-life settings. Self-rating (*Q-data*), by contrast, involves the person's own statements about his or her behavior and thus can provide a "mental interior" to the external record yielded by *L-data*. Objective test (*T-data*) is based on a third possibility, the creation of special situations in which the person's behavior may be objectively scored. These situations may be pencil-and-paper tasks or may involve apparatus of various kinds.
Cattell and his associates have been extremely fertile in devising and adapting these tests: a compendium (Cattell & Warburton, 1967) lists over 400 of them. Cattell has sought to locate general traits of personality by conducting separate factor-analytic studies using all three of the above data sources, on the assumption that if the same source traits emerged from all three, this would provide strong presumptive evidence that the source traits were true functional unities and not mere artifacts of method. The outcome of some twenty or thirty factor analyses carried out by Cattell and his associates leads to the conclusion that a similar factor structure emerges from behavior rating data and questionnaire data but rather different factors tend to emerge from objective test data. The populations sampled in these studies have included several age groups (adults, adolescents, and children) and several countries (United States, Britain, Australia, New Zealand, France, Italy, Germany, Mexico, Brazil, Argentina, India, and Japan), so presumably the factors have some generality. As is discussed more fully later in this chapter, other investigators, using somewhat different procedures, have found different sets of replicable factors in the personality domain (Comrey & Jamison, 1966; Guilford & Zimmerman, 1956; Norman, 1963); but even if Cattell’s factors constitute merely one of a number of sets of dimensions along which personality may be described, they are at least a set around which considerable empirical data have been accumulated.

A critical determiner of the outcome of a factor analysis is the starting point, the surface variables one begins with, and Cattell has placed considerable stress on the importance of adequately sampling the whole personality sphere at the start of exploratory research. Cattell began his behavior rating study with Allport and Odbert’s (1936) list of around 4500 trait names from an unabridged dictionary. These were condensed to 171 by grouping near-synonyms and eliminating rare and metaphorical terms. The remaining trait names were intercorrelated and further reduced by empirical clustering procedures to yield thirty-five surface traits. Cattell subsequently added other surface traits, based on his reading of the experimental and abnormal literature, for a total of 46 (Cattell & Kline, 1977). Cattell referred to these 46 surface traits as the “standard reduced personality sphere” (see Cattell, 1957, pp. 813–817, for a list). Peer ratings on these traits provided the basis for Cattell’s initial L-data factor analysis. Through this analysis, Cattell identified 15 factors, which he interpreted as the L-data source traits of personality. Using these factors as models, Cattell wrote and selected thousands of questions designed to tap personality. Through a series of factor analyses of self-reports by subjects on these items, he reduced them to 16 factors, which he interpreted as the Q-data source traits of personality. Cattell determined that 12 of the 16 matched 12 of the 15 L-data source traits. Cattell regarded this as a reasonable correspondence between the factor structure, and hence the personality structure, in the L- and Q-data domains.
The top half of Table 8.1 summarizes these 16 traits, which are measured by Cattell’s most popular personality test, the Sixteen Personality Factor Test (16 PF). The traits labelled $Q_1$–$Q_4$ are the ones unique to $Q$-data, and the first 12 are common to $L$ and $Q$. In later work, Cattell identified an additional 7 source traits, and these are listed in the bottom half of Table 8.1. Four of these new factors are common to $L$- and $Q$-data, and they are designated $D$, $J$, $K$, and $P$ to fill the missing alphabetic spots in the original list of 16. The remaining three, $Q_5$, $Q_6$, and $Q_7$, emerge only with $Q$-data.

Many of the factor titles, it will be noted, illustrate Cattell’s characteristic fondness for inventing new terms. Some of the factor titles are essentially descriptive, others reflect Cattell’s hypotheses concerning the origin or underlying nature of the factor. Parmania, for instance, stands for “parasympathetic immunity.” Premsia is a contraction of “protected emotional sensitivity,” autla suggests an autistic, or self-absorbed quality in persons extreme on this factor, and so on (Table 8.1). Cattell regards the factor names as approximate and tentative in any case and in practice typically refers to factors by identifying letters or numbers. In addition to these twenty-three factors, Cattell proposes twelve factors from the domain of psychopathology (Cattell, 1973a).

These rating and questionnaire factors fall chiefly in the class of temperament traits, although $B$ (intelligence) would be classed as an ability factor. Factors derived from objective tests spread more broadly across the ability, temperament, and dynamic realms. The twenty-one $T$-data source traits identified by factor-analyzing scores on a great many objective tests of personality appear in Table 8.2. One example of an objective test factor in the temperament realm is shown in Table 8.3. As is characteristic of Cattell’s $T$-data factors, a curious array of measures show up together, although some coherence is evident. The themes of emotionality and conformity appear to run through a good many of the measures in Table 8.3. Cattell has reported that the factor correlates well with psychiatric ratings of anxiety and with the Taylor Manifest Anxiety Scale (Cattell & Scheier, 1961).

This particular factor is interesting for another reason as well. It will be recalled that the factors found by Cattell in $L$- and $Q$-data tended to be generally similar but that the $T$-data factors on the whole did not match these. It turns out, however, that some of the $T$-data factors seem to correspond to second-order factors in questionnaire and rating data. The $T$-data factor just described appears to align itself very well with a second-order temperament factor, also labeled anxiety, which loads the first-order factors $C$, low ego strength; $O$, guilt proneness; $H$, shyness; and $L$, suspiciousness. Another case of such correspondence involves a test data factor that loads measures of fluency, confidence, and inaccuracy and that shows close agreement with a second-order questionnaire and rating factor of extraversion−introversion (or, as Cattell prefers, exvia−invia). This second-order factor loads $F$, happy-go-lucky; $A$, outgoing; and $H$, venturesome. Cattell has identified eight second-order factors
Table 8.1
Summary of Cattell’s major source traits

<table>
<thead>
<tr>
<th>Source trait index</th>
<th>Low-score description</th>
<th>High-score description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Sizil: Reserved, detached, critical, aloof, stiff</td>
<td>Affectil: outgoing, warmhearted, easygoing, participating</td>
</tr>
<tr>
<td>B</td>
<td>Low intelligence: dull</td>
<td>High intelligence: bright</td>
</tr>
<tr>
<td>C</td>
<td>Lower ego strength: at mercy of feelings, emotionally less stable, easily upset, changeable</td>
<td>Higher ego strength: emotionally stable, mature, faces reality, calm</td>
</tr>
<tr>
<td>E</td>
<td>Submissiveness: humble, mild, easily led, docile, accommodating</td>
<td>Dominance: assertive, aggressive, competitive, stubborn</td>
</tr>
<tr>
<td>F</td>
<td>Desurgency: sober, taciturn, serious</td>
<td>Surgery: happy-go-lucky, gay, enthusiastic</td>
</tr>
<tr>
<td>G</td>
<td>Weaker superego strength: expedient, disregards rules</td>
<td>Stronger superego strength: conscientious, persistent, moralistic, staid</td>
</tr>
<tr>
<td>H</td>
<td>Threctia: shy, timid, threat sensitive</td>
<td>Parmsia: venturesome, uninhibited, socially bold</td>
</tr>
<tr>
<td>I</td>
<td>Harria: tough-minded, self-reliant, realistic</td>
<td>Premsia: tender-minded, sensitive, clinging, overprotected</td>
</tr>
<tr>
<td>L</td>
<td>Alaxia: trusting, accepting conditions</td>
<td>Protension: suspicious, hard to fool</td>
</tr>
<tr>
<td>M</td>
<td>Praxerilla: practical, “down-to-earth” concerns</td>
<td>Auttia: imaginative bohemian, absent-minded</td>
</tr>
<tr>
<td>N</td>
<td>Artlessness: forthright, unpretentious, genuine, but socially clumsy</td>
<td>Shrewdness: astute, polished, socially aware</td>
</tr>
<tr>
<td>O</td>
<td>Untroubled adequacy: self-assured, placid, secure, complacent, serene</td>
<td>Guilt proneness: apprehensive, self-reproaching, insecure, worrying, troubled</td>
</tr>
<tr>
<td>Q₁</td>
<td>Conservatism of temperament: conservative, respecting traditional ideas</td>
<td>Radicalism: experimenting, liberal, free-thinking</td>
</tr>
<tr>
<td>Q₂</td>
<td>Group adherence: group-dependent, a “joiner” and sound follower</td>
<td>Self-sufficiency: self-sufficient, resourceful, prefers own decisions</td>
</tr>
<tr>
<td>Q₃</td>
<td>Low self-sentiment integration: undisciplined, self-conflict, lax, follows own urges, careless of social rules</td>
<td>High strength of self-sentiment: controlled, exacting will power, socially precise, compulsive, following self-image</td>
</tr>
<tr>
<td>Q₄</td>
<td>Low ergic tension: relaxed, tranquil, torpid, unfrustrated, composed</td>
<td>High ergic tension: tense, frustrated, driven, overwrought</td>
</tr>
</tbody>
</table>

D: Insecure excitability
I bubble over with ideas of things I want to do next.
(a) Always (b) Often (c) Practically never
The people I want never seem very interested in me.
(a) True (b) Uncertain (c) False

J: Coathenia vs. Zeppia
I enjoy getting a group together and leading them into some activity.
(a) True (b) Uncertain (c) False
People tell me I’m
(a) Apt to be noisy (b) In between (c) Quiet and hard to understand
Table 8.1 (Continued)

K: Mature socialization vs. boorishness
I prefer plays that are
(a) Exciting (b) In between (c) On socially important themes
If I take up a new activity I like
(a) To learn it as I go along (b) In between (c) To read a book on it by an expert

P: Sanguine casualness
I rarely let my mind stray into fantasies and make-believe.
(a) True (b) Uncertain (c) False
I most enjoy talking with my friends about
(a) Local events (b) In between (c) Great artists and pictures

Q4: Group dedication with sensed inadequacy
I like a project into which I can throw all my energies.
(a) Yes (b) Perhaps (c) No
In a situation which puts sudden demands on me I feel
(a) No good (b) In between (c) Confident of handling it

Q5: Social panache
I am good at inventing a clever justification when I appear in the wrong.
(a) Yes (b) Perhaps (c) False
I have never been called a dashing and daring person.
(a) True (b) Uncertain (c) False

Q6: Explicit self-expression
I am not concerned to express my ideas at public meetings.
(a) True (b) Uncertain (c) False
In many undertakings I am in I don’t seem to get a definite idea of what to do next.
(a) Yes (b) Perhaps (c) No

Source: Reprinted with permission from Cattell & Kline, 1977, pp. 342-344.

using the sixteen original traits and a total of twelve using the expanded set of twenty-three source traits.

Thus Cattell suggests that part of the lack of correspondence across data sources may merely mean that the different measurement approaches are sampling data at rather different levels of generality, so that a one-to-one match of factors is not found, but rather a modest degree of across-level alignment. In any event, it is clear that Cattell’s initial hope of finding identical factor structures in all three data sources has been realized only partially.

Given that one may describe the personality in terms of ability, temperament, and other kinds of traits, how is one to put this information back together in
Table 8.2
Primary objective personality test factors: brief titles agreed upon for use in compendium

| U.I. 16 | Narcissistic ego vs. secure, disciplined unassertiveness |
| U.I. 17 | Inhibition-timidity vs. trustingness |
| U.I. 18 | Manic smartness vs. passiveness |
| U.I. 19 | Independence vs. subduedness |
| U.I. 20 | Comention (herd conformity) vs. objectivity |
| U.I. 21 | Exuberance vs. suppressibility |
| U.I. 22 | Cortertia (cortical alertness) vs. pathemia |
| U.I. 23 | Mobilization of energy vs. regression |
| U.I. 24 | Anxiety vs. adjustment |
| U.I. 25 | Realism vs. tensinflexia (psychotic tendency) |
| U.I. 26 | Narcistic self-sentiment vs. homespunness |
| U.I. 27 | Sceptical apathy vs. involvement |
| U.I. 28 | Super ego asthenia vs. rough assurance |
| U.I. 29 | Wholehearted responsiveness vs. lack of will |
| U.I. 30 | Stolidness vs. dissofrustance |
| U.I. 31 | Wariness vs. impulsive variability |
| U.I. 32 | Exvia (extraversion) vs. invia (introversion) |
| U.I. 33 | Dismay (pessimism) vs. sanguine poise |
| U.I. 34 | Onconautia (impracticalness) vs. practicalness |
| U.I. 35 | Stolparsonnia (somnolence) vs. excitation |
| U.I. 36 | Self-sentiment vs. weak self-sentiment |


Table 8.3
A typical T-data factor, U.I. 24, anxiety

<table>
<thead>
<tr>
<th>Measures Loaded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willingness to admit common frailties</td>
</tr>
<tr>
<td>Tendency to agree</td>
</tr>
<tr>
<td>Annoyability</td>
</tr>
<tr>
<td>Modesty on untried performance</td>
</tr>
<tr>
<td>High critical severity</td>
</tr>
<tr>
<td>Few questionable reading preferences</td>
</tr>
<tr>
<td>High emotionality of comment</td>
</tr>
<tr>
<td>Many anxiety tension symptoms checked</td>
</tr>
</tbody>
</table>

a particular case to predict the response of an individual in some particular situation? Cattell suggests that we can do this by means of a specification equation of the form

\[ R = s_1 T_1 + s_2 T_2 + s_3 T_3 + \cdots + s_n T_n \]

This simply means that the given response may be predicted from the characteristics of the given person (the traits \( T_1 \) to \( T_n \)), each weighted by its relevance in the present situation (the situational indices \( s_1 \) to \( s_n \)). If a particular trait is highly relevant to a given response, the corresponding \( s \) will be large; if the trait is totally irrelevant, the \( s \) will be zero; if the trait detracts from or inhibits the response, the sign of \( s \) will be negative. The form of the equation implies that each trait has an independent and additive effect on the response. The model is an extremely simple one. Cattell does not deny that more elaborate models may ultimately be needed; he merely suggests that simple linear models often provide fairly good approximations to more complex ones and provide a logical place to begin.

It is sometimes bemoaned that the factor analyst reduces the personality interactions to additive ones, whereas, in fact, they may be multiplicative or catalytic in some sense. It cannot be doubted that there are likely to be instances where one factor does not merely add itself to another; but greatly facilitates the second factor. . . . Related to this is the general assumption of linearity, whereas again it is likely that in some cases the relation of the factor to the performance will be curvilinear. Properly regarded, these limitations are stimuli to fresh inquiry, but not criticisms of the factor-analytic method as such. One must walk before he can run. The fact is that the factor-analytic model in its present simple form certainly seems to give better predictions and greater constancy of analysis than any other design that has been tried. As it progresses, it will doubtless become modified to meet the special needs of the possibilities just indicated. (Cattell, 1956, p. 104)

The specification equation implies both a multidimensional representation of the person and of the psychological situation. The person is described by his or her scores on a set of traits—a trait profile. The psychological situation is described by a set of situation indices, as another profile. Put together, these yield the prediction. Cattell points out that the specification equation can be regarded as a multidimensional version of Kurt Lewin's formulation of behavior as a function of person and environment: \( B = f(P, E) \). In the specification equation, the person \( P \) is differentiated into a series of \( T \)'s and the psychological environment \( E \) into a series of \( s \)'s.
The specification equation formulation lends itself readily to applied use. Thus, in an employment situation, one might maintain a file of jobs described as profiles of s's. A job applicant can then be tested and described as a profile of T's, which can be combined in turn with the various sets of s's to find the job placement in which this individual would be expected to perform best. Or, in an academic setting, a specification equation could be developed to predict academic achievement from ability and personality variables (compare Cattell & Butcher, 1968).

Dynamic Traits

The important dynamic traits in Cattell's system are of three kinds: attitudes, ergs, and sentiments. Ergs correspond roughly to biologically based drives. Sentiments focus on a social object, such as one's college or mother or country. They are acquired through learning, and they serve as "subgoals on the way to the final ergic goal" (Cattell, 1985, p. 14). Attitudes are dynamic surface traits; they are the specific manifestations or combinations of underlying motives. We will now examine these three kinds of dynamic traits, their interrelationships in the dynamic lattice, and their role in conflict and adjustment.

Attitudes. An attitude, for Cattell, is the manifest dynamic variable, the observed expression of underlying dynamic structure from which ergs and sentiments and their interrelationships must be inferred. An attitude of a particular individual in a particular situation is an interest of a certain intensity in some course of action with respect to some object. Thus the attitude of a young man "I want very much to marry a woman" indicates an intensity of interest ("want very much") in a course of action ("to marry") toward an object ("a woman"). The attitude need not be verbally stated; indeed, Cattell would prefer to measure the strength of the young man's interest by a variety of devices, direct and indirect. These might include his rise in blood pressure to a picture of a bride, his ability to remember items from a list of good and bad consequences of marrying, his misinformation concerning the matrimonial prospects of a male in our society, and so forth. Cattell and his co-workers have in fact intercorrelated some sixty or seventy different devices for measuring attitude strength in a series of studies aimed at developing an efficient test battery for measuring conscious and unconscious components of attitudes (see, for example, Cattell, Radcliffe, & Sweney, 1963). Five attitude component factors, designated Alpha through Epsilon, have been described and speculatively related to psychoanalytic concepts (id., ego strength, superego, physiological component, and conflict; in his later work Cattell (1985) has identified two additional components that we will not describe). In practice, two second-order components of attitude strength usually are measured—one concerned with the relatively conscious and integrated aspects of an attitude (reflecting ego and superego components) and one concerned with unconscious or unintegrated aspects (reflecting the
other components). The integrated aspects represent those parts of an interest that have been articulated and realized, but the unintegrated aspects have never come to terms with reality and are manifested in fantasy and physiology. The integrated and unintegrated aspects of an attitude may be uncorrelated with one another. The discrepancy between the integrated and unintegrated components is one measure of maladjustment or conflict in an individual.

Attitudes, of course, are as numerous as one cares to specify. In his research, Cattell has mostly worked with a sample of about fifty varied attitudes and interests. A possible limitation on the generality of his research in this area lies in the fact that much of it leans heavily on this somewhat arbitrarily selected sample of attitudes.

**Ergs.** In simplest terms an erg is a constitutional, dynamic source trait. It is this concept that permits Cattell to give adequate representation to the importance of innately determined but modifiable impellents of behavior. His heavy emphasis upon eric motivation reflects his conviction that hereditary determinants of behavior have been underestimated by contemporary American psychologists. He defines an erg as:

> an innate psycho-physical disposition which permits its possessor to acquire reactivity (attention, recognition) to certain classes of objects more readily than others, to experience a specific emotion in regard to them, and to start on a course of action which ceases more completely at a certain specific goal activity than at any other. The pattern includes also preferred behavior subsidiation paths to the preferred goal. (1950, p. 199)

As Cattell indicates, this definition has four major parts that refer to perceptual response, emotional response, instrumental acts leading to the goal, and the goal satisfaction itself.

Cattell considers ten ergs to have been reasonably well established by his factor-analytic researchers (Cattell & Child, 1975). These ergs are hunger, sex, gregariousness, parental protectiveness, curiosity, escape (fear), pugnacity, acquisitiveness, self-assertion, and narcissistic sex. (The last of these derives its title from a psychoanalytic notion; the content of the factor has to do with general self-indulgence—smoking, drinking, laziness, and so on.)

**Sentiments.** A sentiment is an environmental-mold, dynamic source trait. Thus, it is parallel to the erg, except that it is the result of experiential or sociocultural factors, not constitutional determinants. In Cattell's words, sentiments are "major acquired dynamic trait structures which cause their possessors to pay attention to certain objects or classes of objects, and to feel and react in a certain way with regard to them" (1950, p. 161).
Sentiments, in Cattell's view, tend to be organized around important cultural objects, such as social institutions or persons, toward which elaborate constellations of attitudes accrue during an individual's life experience. Among sentiments found in the researches of Cattell and his associates with young adult (mostly male) populations are career or profession, sports and games, mechanical interests, religion, parents, spouse or sweetheart, and self (see Cattell & Kline, 1977, p. 181, for a list of twenty-seven hypothesized sentiments). The last named, the self sentiment, is one of the stablest and most consistently reported in different studies, and, as we shall see, plays a particularly important role in Cattell's theorizing.

The Dynamic Lattice. The various dynamic traits are interrelated in a pattern of subsidiation (Cattell has borrowed the term from Murray). That is to say, certain elements are subsidiary to others, or serve as means to their ends. In general, attitudes are subsidiary to sentiments, and sentiments are subsidiary to ergs, which are the basic driving forces in the personality. These various relationships may be expressed in the dynamic lattice, pictorially represented in Figure 8.1. This represents a portion of the motivational structure of a hypothetical American male. At the right in the diagram are the basic biological impulses, the ergs. In the middle of the diagram are sentiment structures, each subsidiary to several ergs. Thus the sentiment toward wife is built upon the expression of the ergs of sex, gregariousness, protection, and self-assertion; the sentiment toward God expresses the ergs of self-submission and appeal; and so forth. At the left of the diagram are attitudes toward particular courses of action with respect to the designated objects—to see a particular film, for instance, or to travel to New York. Note that each attitude is subsidiary to, and hence expresses, one or more sentiments and, through them, a number of ergs; sometimes attitudes express ergs directly as well. Thus the desire to see the film is linked to sentiments toward the man's hobby of photography and toward his country (perhaps the movie has a patriotic theme). There appears also to be a cross-link to his wife and her hair style (maybe it looks better in the dark). There is also a direct expression of the erg of curiosity, in addition to the indirect one via photography. Note that through the sentiments to hobby, wife, and country, the desire to see this movie may express to a greater or lesser degree the ergs of curiosity, sex, gregariousness, protection, self-assertion, security, and disgust—in some cases along multiple paths. Note also that sentiments may sometimes be subsidiary to other sentiments—as bank account to wife or political party to country.

These multiple and overlapping paths between ergs and sentiments and the expressed attitudes provide the basis for inferring ergs from sentiments. If one observes that a certain subset of attitudes tends to vary in strength together across individuals, or within an individual over time, one infers an
erg or sentiment structure underlying them. In fact, that is what Cattell does: Measures of a number of attitudes are obtained (by the methods described earlier) and factored and the factors interpreted as representing ergs or sentiments.

The Self. The self is one of the sentiments, but an especially important one, since nearly all attitudes tend to reflect the self sentiment in greater or lesser degree. It in turn is linked to the expression of most or all of the ergs or other sentiments. In some studies (see, for example, Cattell & Horn, 1963), related but distinct superego and ideal self sentiments have emerged as well. In any event, the sentiment or system of sentiments focused around the self is considered by Cattell to play a crucial role in the integration of the personality, by interrelating the expression of the various ergs and sentiments:

In the first place, the preservation of the self as a physically healthy and intact going concern is obviously a prerequisite for the satisfaction of
any sentiment or erg which the individual possesses! So also is the preservation of the social and ethical self as something which the community respects. . . . Dynamically, the sentiment towards maintaining the self correct by certain standards of conduct, satisfactory to community and super-ego, is therefore a necessary instrumentality to the satisfaction of most other of our life interests.

The conclusion to which this leads is that the self-sentiment must appear in the dynamic lattice . . . far to the left and therefore among the latest of sentiments to reach a ripe development. It contributes to all sentiment and ergic satisfactions, and this accounts also for its dynamic strength in controlling, as the "master sentiment," all other structure. (Cattell, 1966a, p. 272).

**Conflict and Adjustment.** Cattell has suggested that a useful way of expressing the degree of conflict that a particular course of action presents for a person is by way of a specification equation that expresses the involvement of the person's dynamic source traits (ergs and sentiments) in the action. Thus, to take our earlier example, suppose that a particular young man's interest in marrying has the following specification equation, in which $E$'s stand for ergs and $M$'s for sentiments:

$$I_{marry} = 0.2E_{curiosity} + 0.6E_{sex} + 0.4E_{gregariousness} - 0.3E_{fear} + 0.3M_{pamela} - 0.4M_{career} + 0.5M_{self}$$

Marrying, for this man, promises potential rewards for his sex, gregariousness, and curiosity ergs; he thinks his parents would approve and it would be good for his self-esteem. He is, however, somewhat fearful of the prospect of such a marriage, and it represents a potential threat to his career interests. The exact strength of this attitude at any given moment will of course depend on the current strengths of the various motivational factors, but one can make certain general observations about the role of attitudes in the personality based on their situational indices. For example, if the terms in the specification equation for an attitude are predominantly positive, the attitude will tend to be fixed as a stable feature of the individual's motivational structure; if they are predominantly negative, it will tend to be abandoned. A fixed attitude will represent a source of conflict to the extent that it contains negative terms in its specification equation. In fact, Cattell (1985) suggests that a possible index of the degree of conflict inherent in a particular attitude is the ratio of the sum of negative situational weights to the sum of positive situational weights plus the negative situational weights for the dynamic source traits involved. In the example above, this ratio would be $(0.3 + 0.4)/(0.2 + 0.6 + 0.4 + 0.3 + 0.5 + 0.3 + 0.4) = 0.7/2.7 = 0.26$. Maximum conflict would occur
when the total negative and total positive weights are equal, producing a value
of 0.5. For example, if the man's parents were disapproving, changing the
weight for the sentiment toward parents from +0.3 to −0.3, the conflict ratio
would increase to become 1.0/2.7 = 0.37. The degree of conflict inherent in
a total personality would be represented by this type of ratio computed over
all of the person's stable attitudes (in practice, estimated from a sample of
them). The degree of adjustment or integration level of a personality could
then be defined as the inverse of the summed conflict index. Cattell (1985,
pp. 32–38) terms this approach to measuring conflict the "indurated conflict,"
or the conflict that remains after a decision has been reached. There also is
"active conflict," or the conflict involved in deciding what action to take. For
example, a man deciding which of two women to marry faces more conflict
the more similar the two attitudes or tendencies are. In addition, there is a
discrepancy between the integrated and unintegrated components of a given
attitude. Finally, Cattell has factor-analyzed a variety of conflict measures to
find components of conflict (Cattell & Sweney, 1964), in a fashion essentially
parallel to his work with components of attitudes discussed earlier.

States, Roles, and Sets. The concepts to be discussed in this section constitute
a recent development in Cattell's theorizing, and in consequence, some of
Cattell's formulations are not yet firmly crystallized.

Certain patterns within the personality come and go to a much greater
extent than others: mood states change, a person steps into or out of a particu-
lar role, and momentary mental sets are adopted toward aspects of the environ-
ment. These factors all influence behavior; hence they must be included in
the specification equation, which winds up as a series of ability terms plus
temperament terms plus erg and sentiment terms plus state terms plus role
terms plus set terms, each with its appropriate situational index defining its
relevance. The personality is still a profile, but a profile involving all the kinds
of factors that may affect response at a particular moment in time.

Although roles and sets have not received extensive empirical exploration
by Cattell and his associates, a good deal of work has been done with states—in
particular, with the state of anxiety (Cattell & Scheier, 1961). It will be recalled
that anxiety has also been studied by Cattell as a trait. These two approaches
are in no sense incompatible. A person's level of anxiety may be characteristic
as a trait and yet fluctuate considerably with situational and organismic influ-
ences as a state.

States are investigated by factor analysis in much the same manner as
are traits, the difference being that traits are usually studied by correlations
among test scores and states by correlations among changes in test scores—
over time or in response to particular situations. Thus, if the same persons
tend to be high on, say, annoyability and lack of confidence, this will help
define a trait factor, but if both measures tend to increase or decrease together, this will help define a state factor.

A number of other state factors besides anxiety have been investigated by Cattell and his co-workers. These include exvia, depression, arousal, fatigue, stress, regression, and guilt (see Cattell, 1977, Chapter 11).

Cattell and Freud

By now we have seen that Cattell employs various trait dimensions to answer questions concerning personality structure and dynamics. Cattell intends his approach to replace the earlier "prescientific" and "speculative" models introduced by Freud, Jung, and others. He recognizes the "remarkable intellects" of these earlier theorists, as well as the fact that their work was based on observation and (clinical) data. Cattell, however, is committed to the position that "The scientific method ensures the accuracy of what is found" (Cattell & Kline, 1977, p. 3), in contrast to the uncertainty regarding earlier conclusions. "It is possible that immensely insightful men can hit on the truth" (Cattell & Kline, 1977, p. 3), but we can have no confidence in the reliability or validity of their claims because of their flawed data recording, sampling, and inference processes. Cattell hopes that "modern scientific procedures can develop their own sets of results which can sort out of the confused mass of speculations the dross from the gold" (Cattell & Kline, 1977, p. 7). In this light, it is interesting to note certain convergencies between Cattell's factor-analytic and Freud's psychoanalytic approaches. For example, the first three components of attitudes bear a striking resemblance to the Freudian triumvirate of id, ego, and superego. The alpha, or "conscious id," refers to the part of an attitude that reflects an "I desire" component that is only partly conscious, may be somewhat irrational, and has not been tested against reality. The beta, or "ego," portion of an attitude reflects strength of interest that has been consciously and deliberately developed. The gamma, or "superego," component has an "I ought to be interested" quality. Although they certainly are not equivalent to the corresponding Freudian structures, Cattell (Cattell & Kline, 1977, p. 331) concludes that "they do give confirmation of the classical psychoanalytic approach which sees all behavior as a function of the balance between ego, id and superego."

Cattell's distinction between the Integrated and unintegrated components of attitudes also clearly reflects a conclusion that we are not always fully aware of the reasons for our actions and interests. "As Freud found, simply asking people why they do this or that is not adequate" (Cattell, 1985, p. 17). Rather than employ free association as the "fundamental rule" for discovering the underlying, unacknowledged motives, Cattell depends on factor analysis. As we have seen, Cattell also relies on the construct of conflict, although he attempts to quantify it within his own system. In addition, Cattell is following Freud in his belief that conscious goals and specific behaviors "subsidiate."
or are in the service of, underlying innate ergic goals. This becomes clear in the dynamic lattice, as described earlier in this chapter. Cattell proposes that the lines in the lattice reflect pathways for gratification or expression of underlying motives. Furthermore, he employs a version of Freud's hydraulic model of tension reduction. That is, Cattell proposes that "path obstruction," in which an individual is prevented from following established paths within the lattice, leads to energization of alternative modes of expression for underlying ergs and sentiments. For example, if the person represented in our previous Figure 8.1 is prevented from traveling to New York, the blockage in his opportunity to express his self-assertion and gregariousness ergs will fuel alternative outlets for these basic urges.

Finally, Cattell suggests that sentiments allow us to drain off impulsive, ergic energy in socially sanctioned ways. This, of course, is reminiscent of Freudian sublimation. In addition, Cattell proposes that individuals control antisocial behavior provoked by ergs and sentiments by means of the superego, the self sentiment, and the ego (the reader should note the similarity between these control strategies and Bandura's strategies for selective engagement and disengagement of self-judgments as described in Chapter 14). The super-ego refers to "a set of attitudes directed to moral behavior" (Cattell, 1985, p. 39), as Freud suggested; it is measured on the Motivation Analysis Test (MAT) and also as factor G on the 16 PF. The self sentiment was not described by Freud: "It is concerned with maintaining the social acceptability of the self and, indeed, even its physical existence. The loaded attitudes are to control impulse, to maintain social reputation, to be sane, to be normal in sex, and to know our nature better" (Cattell, 1985, p. 39). In many respects, this unit is analogous to Allport's properium (see Chapter 7). The self sentiment is measured on the MAT and as factor Q3 on the 16 PF. The third control factor, the ego, "has essentially the characteristics described by Freud" (Cattell, 1985, p. 40). It entails impulse control and persistence, and its goal is the greatest overall satisfaction of the individual. The ego is measured by factor C on the 16 PF. The parallels between the two ego constructs are further apparent in Cattell's specification of the skills that the ego needs to develop: Evaluating the strength of and competition between various ergs and sentiments (cf. resolving id–superego conflict in Freud's model); evaluating the probabilities in external situations (cf. reality testing); producing a decision (cf. secondary process); and implementing a decision (cf. ego strength and adaptation).

One would expect the self sentiment, superego, and ego to occupy prominent positions in the specification equations for a great many attitudes. They, plus the constructs described above, make it clear that Cattell's factor-analytic approach provides striking validation for Freud's psychoanalytic approach.
It is possible to study personality development at a purely descriptive level, by charting the change in personality structures over the life span. Alternatively, one may study development at a theoretical level, in terms of the genetic and environmental influences involved, and the laws of maturation and learning that describe their interaction in shaping the developing individual. Cattell has done both.

In his investigations of temperament and dynamic traits, Cattell and his associates have carried out factor-analytic studies at both adult and child levels, in an effort to develop devices capable of measuring the same personality factors at different ages. In general, he has tended to find similar factors at ages ranging from four years to adulthood. Table 8.4 illustrates which of the twenty-three source traits have been found using the Pre-school Personality Quiz (PSPQ; for children ages 4–6 years), the Early School Personality Quiz

| Table 8.4 |
| Factors of various age groups |

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Source: Reprinted with permission from Cattell & Kline, 1977, p. 52.
(ESPO: ages 6–8 years), the Child’s Personality Questionnaire (CPQ: ages 8–12 years), the High School Personality Questionnaire (HSPO: ages 12–15 years), and the adult 16 PF. As all psychologists know, it is difficult to be sure that purported measures of the "same" trait at different ages are in fact measuring the same thing, a difficulty produced by the fact that one expects a particular aspect of the personality to be expressed through somewhat different behavior at different ages. Cattell has suggested that one way of dealing with this predicament is to carry out bridging studies with intermediate age groups; thus he has compared separately factored adult and eleven-year-old versions of his personality questionnaire by giving both to an intermediate group of sixteen-year-olds (Cattell & Beloff, 1953). The results of such studies have been somewhat equivocal; usually there are a number of fairly good matches, but others that are less convincing (Cattell, 1973a, Chapter 3). Further work along these lines would appear to offer promise of producing genuinely comparable personality measuring instruments across a range of age and thus the possibility of a true mapping of developmental trends in personality traits.

Cattell has for a number of years been actively interested in assessing the relative weight of genetic and environmental influences on source traits. He has developed a method for this purpose, which he calls Multiple Abstract Variance Analysis, or MAVA (1960, 1982). MAVA involves gathering data on the resemblances between twins and siblings reared together in their own homes or adopted into different homes and then analyzing the data to estimate the proportions of individual variation on each trait that are associated with genetic differences, with environmental differences, and with at least some of the correlations and interactions between heredity and environment. A preliminary version of MAVA has been tried out by Cattell and his coworkers on a limited scale (Cattell, Blewett, & Beloff, 1955; Cattell, Stice, & Kristy, 1957). One tendency observed in the initial studies is of some theoretical interest: The heredity–environment correlations appeared to be predominantly negative. Cattell interprets this as evidence for a law of coercion to the biosocial mean, that is, a tendency for environmental influences to oppose systematically the expression of genetic variation, as when parents (or other social agents) attempt to bring different children to the same norm of behavior by encouraging the bashful ones and reining in the more obstreperous.

In sharp contrast to most personality theorists, who deal with learning implicitly or in passing, Cattell (1979, 1980, 1985, 1990) has developed an elaborate "structured learning theory" containing five principles or types of learning. The first two are the familiar classical and instrumental (operant) conditioning
of the experimental psychologist. Cattell's treatment of these is fairly conventional: Classical conditioning is held to be of importance in attaching emotional responses to environmental cues, and instrumental conditioning for establishing means to the satisfaction of ergic goals. Instrumental conditioning plays a substantial role in building up the dynamic lattice, which, it will be recalled, consists of equidistant relations (that is, means–end) relations (attitudes and sentiments serve as the means of achieving ergic goals). A form of instrumental conditioning of special interest in personality learning is what Cattell calls confluence learning, in which a behavior or attitude simultaneously satisfies more than one goal. Thus one attitude comes to be linked to several sentiments, and one sentiment to several ergs, giving the dynamic lattice its characteristic structure.

The third kind of learning is called integration learning. It appears to be essentially a more elaborate form of instrumental learning. In integration learning, the individual learns to maximize total long-term satisfaction by expressing some ergs at any given moment and suppressing, repressing, or sublimating others. Integration learning is a key aspect of the formation of the self and superego sentiments. Notice how similar this type of learning is to the Freudian ego dynamics and to Murray's scheduling.

The fourth type of learning is called ergic goal modification. This occurs when the ergic goal as well as the path to the goal is modified, and it is analogous to the process Freud termed sublimation. The fifth type of learning, energy saving, refers to the process of dropping unnecessary steps in learned behaviors.

According to Cattell, personality learning is best described as a multidimensional change in response to experience in a multidimensional situation. A way of studying personality learning empirically is by means of a procedure called path learning analysis. One begins with two things: first, with information about trait changes occurring in a number of people, possibly in response to a period of ordinary life adjustments, and second, with a theoretical analysis of various possible paths of adjustment (such as regression, sublimation, fantasy, neurotic symptoms) that people may take in response to conflictual life situations. If one can then estimate the frequency with which each of these individuals has taken each of the adjustment paths, one can solve a matrix equation to find out what the average effect of taking each path is on changing each of the traits. This is of theoretical interest itself and has the practical value that, given new but comparable individuals and information about their trait changes, one can estimate the frequency with which they have taken each of the various adjustment paths by solving the equation in the opposite direction.

As indicated earlier, the guiding assumption in path learning analysis is that "all learning is multidimensional change in a multidimensional situation" (Cattell, 1985, p. 43), a multivariate perspective that does not characterize
the "reflexological" classical conditioning and operant learning approaches. Cattell's matrix approach has not yet been implemented with real data.

Cattell has attempted to bring together personality changes due to environmental influences and genetically based maturation into a single theoretical scheme (Cattell, 1973b). He has coined the term threptic to designate changes due to environmental influence, including learning as well as other changes induced by such external agents as general stimulation, diet, drugs, and the like. He proposes as a goal the splitting of developmental change curves for various traits into genetic and threptic components and various subcomponents of these. His general strategy for achieving this is the comparative use of the MAVA method mentioned earlier. The comparisons may involve various ages or various cultural or subcultural groups. Thus, if the threptic variation of a trait in the population is large during the preschool years, diminishes during the years children are in the public schools receiving a relatively standard educational exposure, and increases again in adulthood, one could draw different conclusions about the forces acting on the trait than if the genetic and threptic components were constant over this age span. Likewise, if genetic and threptic components varied substantially among different religious groups or ethical traditions (or did not so vary), one again could learn something about the forces acting on the development of the trait in question.

Such an analysis has many complexities, as the genetic and threptic sources of influence on a trait may be correlated in various ways and may interact over time. Thus genetic influence may lead to certain behaviors that may provoke particular kinds of threptic influences that may in turn either enhance or inhibit the further development of the trait. Cattell's treatment of these issues has for the most part been at a schematic and theoretical level, but he has suggested a number of statistical approaches toward resolving them empirically (Cattell, 1973b).

Thus far we have focused upon individuals and their development in interaction with the immediate environment. Here we shall suspend this restriction and consider the efforts Cattell has made to give adequate emphasis to sociocultural determinants of behavior.

Cattell suggests that objective dimensions may be used to describe groups in much the same manner as traits are used to describe individuals. These dimensions represent the group syntality (Cattell, 1948), which is the equivalent of the individual personality. Thus, an important task for the individual who would study personality in relation to the sociocultural matrix is the description of the syntality of the various groups that influence the individual personality. It is only through an adequate representation of both the individual
personality and the group syntality that one can hope to gain detailed knowledge concerning the interaction between these two structures.

There are many social institutions that exert a molding or modifying influence upon personality, but by far the most important of these is the family. In addition to this primary source of influence there are other institutions whose role is worth consideration, such as occupation, school, peer group, religion, political party, and nation. These institutions may produce effects upon personality in one of three ways. First, there may be a deliberate intention to produce a particular kind of character or personality. That is, the definition of socially desirable behavior may include specification of personality traits, and the institution may involve a self-conscious attempt to produce these characteristics. Second, situational or ecological factors may produce effects that are not intended by the society or the institutions. Third, as a result of patterns of behavior established through the first or second process, the individual may find further modification of personality necessary in order to express or gratify important motives.

Thus, an adequate understanding of personality development must include a specification of the contribution of various social institutions ranging from the family to the nation or cultural group. Further, this step can be taken only when the appropriate dimensions for describing and differentiating these groups and institutions have been isolated. We find that factor analysis plays just as crucial a role in the description of the syntality as it did in the description of the individual personality. Early work in the study of the syntality of small groups (Cattell & Wispe, 1948; Cattell, Saunders, & Stice, 1953) led to the description of a number of factors with such labels as extrovert responsiveness versus withdrawal; informed, realistic relaxedness versus industrious, rigid aggressiveness; vigorous unquestioned purposefulness versus self-conscious unadaptedness; diffidence in internal communication; and so forth. Given group syntal variables such as these and means of measuring them objectively, it becomes possible to examine relationships between groups varying along such dimensions and individual personalities described by the source traits we have already considered.

Cattell (1949) has also provided a set of dimensions for describing the syntality of nations. In this case, ten factors were derived from the study of seventy nations by means of seventy-two diverse measures. Of these ten factors only eight seemed to possess clear significance; these were size, cultural pressure, enlightened affluence, thoughtful industriousness, vigorous and self-willed order, bourgeois–Philistinism, Buddhism–Mongolism, and cultural integration and morale. Many, although not all, of these dimensions of national syntality have reemerged in subsequent factorings of economic and cultural variables within and across nations (Cattell, 1953; Cattell & Adelson, 1951; Cattell & Gorsuch, 1965).
Cattell has drawn together his ideas on the relationship between individual personality and group syntality in a series of twenty-eight propositions, which are reported in a major theoretical article (1961) and a chapter (1966b). He concludes that the relationship between the individual personalities of the group members and the syntality of the group is mediated by variables of group structure, of which the most fully discussed is role. A subset of syntality dimensions are synergy dimensions, which are to the group what dynamic traits are to the individual. Moreover, a specification equation can be written for group synergy in terms of the interests of the individual members belonging to the group.

Cattell’s (1979, 1985) attention to the influential role of the environment is further elaborated in his recent econetic model. Cattell proposes that any psychological event has “five signatures”: the person, the stimulus, the act, the ambient situation, and the observer. He represents these five influences in a five-dimensional Basic Data Relation Matrix. This approach requires that the researcher consider separately the “focal stimulus” to which a person attends and the “ambient situation” in which the response occurs, effectively rebutting the frequently heard criticism that personality theorists ignore the role of the situation in generating behavior. Econetics, the study of the behavioral ecology, requires that one construct a “cultural syntality matrix” representing the syntality of a culture on common dimensions plus a “personal relevance matrix” which indicates how much individuals consider each of those cultural syntality dimensions. The product of these two matrices produces an “impact matrix” indicating how much each person has to do with each cultural element. Additional matrices indicate the relevance of dynamic traits to the cultural dimensions and the strength of the dynamic traits in each individual. The product of all these matrices summarizes the interaction of individuals with a culture. This model remains largely untested, but it reveals the direction of Cattell’s current thinking.

In this section we shall mention very briefly certain distinctive aspects of Cattell’s views concerning personality research. In addition, we shall summarize an investigation that illustrates the flexibility with which Cattell employs his favorite tool of factor analysis—in this case, to a study of the dynamic traits of a single individual. The reader will recall that we already have a considerable familiarity with Cattell’s research as a result of frequent references to his empirical work in discussing his theoretical concepts.

Earlier we mentioned Cattell’s conviction that large-scale research will produce the most significant advances of the future in this area. Coupled with this is his belief that most psychologists have unwisely shunned the necessity of careful description of personality in favor of moving toward impressive
generalization and the study of developmental phenomena. Much of his work, particularly that concerned with identifying source and surface traits, can be considered simply an attempt to fulfill this task of description and provide a firm base upon which future investigation and generalization can build.

One of the most novel features of Cattell’s writing has been his consistent emphasis upon the different types of correlational studies that the investigator may pursue. First, he points out, there are $R$-technique studies that represent the customary approach of the psychologist. Here, a large number of individuals are compared in terms of their performance on two or more tests. The fundamental question is whether individuals who score high on one test tend to do so on the other test, and the resulting coefficient represents the extent to which scores on the tests covary or go together. Second, there is the $P$-technique, in which scores for the same individual on a number of measures are compared for different occasions or at different times. Here we are asking how consistent the individual’s behavior is, and the resulting statistic is an index of how closely different aspects of the same individual’s behavior covary or go together. Third, there is the $Q$-technique, in which two individuals are correlated on a large number of different measures. In this case, the resulting coefficient represents a measure of similarity or covariance between two individuals; if such correlations are carried out on a number of persons, the investigator may secure a typology, or a clustering together of persons who are similar on these measures. ($Q$-technique, by the way, has no special relationship to $Q$-data; the use of the same letter is merely coincidental.) A fourth technique, really a variant of the first, is called differential $R$-technique, which is like ordinary $R$-technique, except that the measurements are repeated twice and the changes between them correlated and factored. As we have noted, this method is especially useful in the study of psychological states.

In addition to the above techniques, Cattell has described and discussed quite a number of other theoretically possible designs (the interested reader should consult the treatment of the “data box” in Cattell, 1966b). However, the four designs we have mentioned are the ones that have been most employed in practice.

In the preceding section the distinction was drawn between $R$-technique and $P$-technique. In the former, the usual factor-analytic procedure, correlations are calculated over many persons, and the factors obtained are common traits. In $P$-technique, however, the correlations are calculated over many repeated measurements on a single person, and the factors can represent unique traits of that individual. As Cattell puts it:

Thus an $R$-technique discovery of the pattern of the dominance source trait might show that for most people it expresses itself with highest
loading in, say, reaction to insults and in interference with subordinates, whereas for a particular individual analyzed by P-technique it might prove also to have a high loading in, say, piano playing, because that individual happens to have learned to express dominance by pounding a piano. (Cattell & Cross, 1952, p. 250)

To illustrate the possibility of a factor-analytic approach to the unique individual, we will describe a study carried out by Cattell and Cross (1952) in which twenty attitudes of a twenty-four-year-old male graduate student in drama were measured twice a day over a forty-day period and then intercorrelated over the eighty occasions and factor analyzed. The resulting factors should represent the dynamic source traits of this person, and one can observe how they are similar to or different from those of people in general obtained through R-technique studies and how their day-to-day fluctuations reflect the events of the person’s life during the period studied.

This type of study presents special problems of method. In addition to securing a cooperative and dependable subject, one must have measures that can be given over and over again to the same individual without showing large effects due to the repeated testing itself and one must work with traits showing appreciable day-to-day fluctuation.

The twenty attitudes were selected from the sample of attitudes used in Cattell’s R-technique studies and were measured by three techniques: a preference measure, in which the subject made choices from pairs of statements, each describing a course of action relevant to some attitude; a fluency measure, in which the subject was asked to state in thirty seconds as many satisfactions as he could think of that could be derived from a course of action relevant to an attitude; and a retroactive inhibition measure, carried out in conjunction with the fluency task, in which six three-digit numbers were exposed to the subject before a fluency measurement and the amount of interference with the attitude was observed. A combined score for each attitude on each occasion was obtained and the attitudes were intercorrelated over occasions and factored. Seven of the eight interpretable factors were judged to correspond to six ergs and one sentiment found in previous R-technique studies: fear, sex, self-assertion, parental protectiveness, appeal, and narcissism, in addition to the self sentiment. The extra factor was identified as fatigue, which has since shown up as a state factor in several studies from Cattell’s laboratory.

Thus the common factor structure from the population serves reasonably well to describe this particular person; at any rate, no massive unique factors emerged from the analysis. One can speculate—and the authors do—about the possible significance of some of the deviations of this individual’s loadings from the population pattern, but it is not altogether clear that these deviations
exceed those one would expect to find between one R-technique study and another, with a sample size of eighty.

Having identified factors, it is possible to estimate scores on them for each session, and a plot of these over the period of the experiment, shown in Figure 8.2, displays some interesting reflections of the events of the subject’s life, as recorded in a diary he kept during the experiment. Some of the major incidents are indicated on the baseline of Figure 8.2—rehearsals for a play in which he was to act a leading role, a severe cold, the nights of the play itself, a fairly serious accident occurring to his father, a letter in which an aunt reproached him for not giving up his own interests to help his family, and worry over apparent hostility from a faculty adviser. One may note especially the sharp peaks in fatigue during rehearsals and the play itself; the drop in anxiety after the play, when he was beginning to get caught up in his studies and have

Figure 8.2
Changes in strength of dynamic source traits in one individual over eighty test sessions (Cattell, 1966a, p. 229).

Fear—anxiety —— Fatigue —— Parental ——
Self-assertion —— Mating —— Appeal ——
Self-sentiment —— Narcism ——

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

21 February — 28
March — 31 April — 5
some time for dating (witness the rise of the sex erg); the rise in parental feelings at the time of his father's accident—and the rather interesting drop later, at the time of his aunt's reproach; and finally, the oscillations of the self-related source traits (self-assertion, narcissism, self-sentiment) at the critical period of the play performances.

One other initiative by Cattell merits mention, because it illustrates the direction in which his thinking has gone in recent years. He now (1985, 1990) describes his general personality model as a vector–id description systems (VIDAS) theory. Cattell adopts this designation because he analyzes personality structure into ids (i.e., the factorial traits behind behavior), acting in vectors (i.e., weighted combinations, as in a specification equation), within a closed system. The complicated diagram presented in Figure 8.3 summarizes the VIDAS conception of personality. Cattell is attempting to represent the manner in which the "flow" of behavior is decided by the mutual interaction of stimuli, sentiments, ergs, and ego structure. We will allow Cattell (1985, p. 93) to describe how this system functions:

As Figure [8.3] shows the traits of the VIDAS model are gathered together in eleven major organs. First there is E, the energy source of all ergs, which has a secondary compartment for ergs actually in a state of arousal as a result of stimulation by the perceptual apparatus, P, and the memory, M. The memory source of stored engrams, mainly [sentiments], also has its derivative parts, M, the presently activated [sentiments], and LM, a learning apparatus generating new [sentiments] as a result of interaction of M, E, and P. In connection with this we have an extension of the perceptual organ, P, into PD which has the task of evaluating the extent of dynamic reward from various actions undertaken. . . . Finally supervising the E, M, and P interactions is the controlling ego, D, with the help of the general state reservoir, GS, which we have seen to exercise a general direction on the solution of dynamic conflicts. Also acting along with the ego are all the nondynamic traits, T's, which present limiting powers for the ego to take into account.

When the decision on an external act is made by D as a result of the internal processes beginning with the perceptual encoder, P, the act is partly determined in its character by the nondynamic traits, T, which feed into shaping of the act by A, the output determiner.

This approach has not been implemented, and it currently represents theory rather than empirical research, but it provides a significant and provocative new package of personality units.
Figure 8.3
Full VIDAS systems model of personality. (Reprinted with permission from Cattell, 1985, p. 95.)

Channels and Reservoirs

1. Apperception information contributed
2. Referral to memory bank
3. Direct information on result of simple motor action
4. Trait effects on perception
5. Direct innate stimulation of ergs
6. Information on reward
7. Information on reward
8. Reciprocal action of ergic tension on M activation
9. Stimulation of ergs by sentiment
10. Cognitive feedback on final responses and results of earlier experience
11. Referral to sentiment "committee"
12. Invocation of controlling cues
13. Tempering effects of general states on ergs
14. Action urged by ergic demands
15. Information on degree of ergic gratification occurring
16. Invocation of controlling cues
17. Temperament limitations to arousal
18. Effect of ego decisions on general states
19. Effect of general states on ego decisions
20. Dynamic goal decisions sent for executive action
21. Emergence of response to stimulus $S_1$
22. Sensing fitness of action to ability and temperament traits
23. Call on abilities to help decision
24. Temperament-ability endowments shaping effectiveness of response
25. Response success or failure as new stimulus ($S_2$) input
One of the most important developments in personality in recent years is the emergence of the Big Five as a general model for describing personality structure. This model, which stems from the work of Cattell, serves as a conceptual foundation for much of the contemporary work in personality measurement. Several versions of the Big Five exist, as we shall see, and the model has not been universally embraced, but it complements the biological/genetic approach as one of the two dominant orientations in contemporary work on personality. There are a number of excellent discussions of the Big Five, and in what follows we rely heavily on John (1990) and Goldberg (1993) as well as Digman (1990), Goldberg (1990), and McCrae and John (1992).

The development of the Big Five really begins with Allport and Odbert (1936), who attempted to identify possible individual differences by extracting all relevant terms from Webster’s unabridged dictionary. Allport was proceeding on the basis of a “lexical hypothesis,” first articulated by Sir Francis Galton, that the most important individual differences will be encoded in language. Allport and Odbert extracted some 18,000 terms, of which 4500 referred to generalized and stable traits. At about the same time, Thurstone (1934) factor analyzed peer ratings using 60 common adjectives. Thurstone identified 5 factors, thereby anticipating the contemporary Big Five model.

Raymond Cattell (1943) used Allport and Odbert’s trait-descriptive terms as a starting point for his analyses of personality structure, as we saw above. When other researchers repeated Cattell’s analyses; however, only five factors were reliably obtained (e.g., Digman & Takemoto-Chock, 1981; Norman, 1963; Tuples & Christal, 1961). As Goldberg (1993, p. 27) comments, Cattell may be the intellectual father of the Big Five, but he “has consistently denied his paternity and has yet to embrace the model.”

It was Donald Fiske (1949) who first extracted five replicated factors using rating variables drawn from Cattell’s work. Tuples and Christal (1958, 1961) reanalyzed rating data from eight samples and identified five “relatively strong and recurrent factors.” They labeled these factors (I) surgency (or assertive-talkativeness), (II) agreeableness, (III) dependability, (IV) emotional stability, and (V) culture. This was the first set of personality factors to be called the Big Five (Goldberg, 1981).

Warren Norman (1963) also confirmed a five-factor model using a selected set of Cattell’s variables. He employed essentially the same labels as Tuples and Christal for these factors, renaming factor III as conscientiousness. Norman was skeptical that sampling and statistical problems in Cattell’s work limited the findings and believed that analysis of a more representative set of trait descriptor terms would yield additional dimensions, but Goldberg (1990) subsequently failed to support this conjecture. Norman (1967) extracted 18,125 personality terms from the unabridged 1961 Webster’s third new international dictionary. He eliminated approximately half of these as unsuitable, then sorted the remaining 8081 terms into three classes: stable traits; tempo-
rary states and activities; and social roles, relationships, and effects. Note the similarity to the categories Cattell employs, as well as Cattell’s assumption that personality can be considered at different levels. Norman focused on the 2800 trait terms, which he subsequently reduced to approximately 1600. He sorted these terms into 10 broad classes, one for each alternative pole in the Big Five dimensions. He then sorted the terms in each of the 10 classes into a total of 75 narrower semantic categories. As a final step, he combined similar terms into a total of 571 synonym sets. In essence, then, Norman used the Big Five to build a hierarchy of personality descriptive terms.

Following Norman’s work, Goldberg (1981, 1990, 1993) conducted a series of studies investigating the underlying structure for trait descriptive adjective terms. Despite his early skepticism, he also identified five broad factors, which he represents using a set of 100 synonym clusters.

The research programs described above converge on a Big Five structure by using the lexical hypothesis to study trait descriptive terms. A separate research program by McCrae and Costa (e.g., 1987, 1989a, 1990; Costa & McCrae, 1986a, b, 1992a, 1995a) also has identified a Big Five structure by investigating personality questions rather than descriptive terms. They use the following labels for the five factors: neuroticism, extraversion, agreeableness, conscientiousness, and openness. John (1990, p. 96) points out that “OCEAN” serves as a useful mnemonic device for remembering the five names. McCrae and Costa have developed the NEO-PI to measure this structure. Thus, there actually are two parallel five-factor models: one from the lexical work and one from the personality questionnaire work. One of the hallmarks of McCrae and Costa’s approach is the specification of six specific facets that comprise each of the Big Five factors (e.g., Costa, McCrae, & Dye, 1991). The six underlying facets for extraversion, for example, are warmth, gregariousness, assertiveness, activity, excitement seeking, and positive emotions. The six facets for conscientiousness include competence, order, dutifulness, achievement striving, self-discipline, and deliberation. The Revised NEO-PI (NEO-PI-R; Costa & McCrae, 1992b) provides measures of personality at both levels. As a consequence of this refinement, Costa and McCrae have provided an articulated, hierarchical approach to personality structure. It is this structure that serves as a basis for so much contemporary research.

Before sampling from research that employs the Big Five orientation, we should note that there are dissenters. Cattell, for example, has never been persuaded that five factors is a sufficient number. Five of his second-order factors correspond well to the Big Five (see John, 1990, p. 88), and he clearly prefers to work at a level of greater specificity. Hans Eysenck (1991, 1992a), whose theory we consider in Chapter 9, proposes three basic dimensions of personality: extraversion, neuroticism, and psychoticism. He argues that extraversion and neuroticism correspond to the Big Five factors of the same name but that agreeableness and conscientiousness from the Big Five are
better collapsed into his psychoticism factor (see Costa & McCrae, 1992a, 1995a for a rebuttal). Similarly, Zuckerman (1992; Zuckerman, Kuhlman, Joireman, Teta, & Kraft, 1993; Zuckerman, Kuhlman, Thornquist, & Kiers, 1991), whose work we also consider in Chapter 9, has proposed his own five-factor system.

A number of psychologists also have objected to the Big Five on conceptual grounds. Carlson (1992, p. 644) worries that the Big Five is inducing personality researchers to value “psychometric purity over conceptual power” and that it is not well suited for those “who suppose that personality includes feelings, motives, and interpersonal and social contexts as well as the integration of these traits in the course of individual development.” In sum, she argues, “advocates of the big five would shrink personhood to the narrow procrustean cot of their own methodology” (see also Loevinger, 1994). McAdams (1992) highlights six limitations of the five-factor model: (a) inability to address core constructs of personality functioning; (b) limitations in predicting specific behaviors and describing individual lives; (c) absence of causal explanations; (d) disregarding context; (e) disregarding personality organization and integration; and (f) adopting a comparative approach to describing individuals. Several of these objections, such as a, d, e, and f, represent philosophical disagreements about how personality research should proceed. The introduction of facets largely accommodates the second objection, and one could argue that ongoing work, particularly in the areas of behavior genetics, is beginning to address the third point.

The most elaborate critique comes from Jack Block (1995a; see rebuttals by Costa & McCrae, 1995b, and Goldberg & Saucier, 1995, and the response by Block, 1995b). Block raises a series of methodological, statistical, and conceptual arguments regarding the development and use of the Big Five. Block (1995a, p. 204) poses the question, “Are the five broad, ‘global’ domains or dimensions adopted and focused upon indeed uniquely comprehensive and sufficiently incisive to provide a satisfactory framework for personality research and assessment?” Block’s answer is no. As was true for the other critics, Block’s basic objection is that researchers should attend to intraindividual structure and functioning in the process of adopting a broader set of conceptual and methodological orientations than are afforded by the Big Five approach.

Rather than attempt a systematic review of the burgeoning literature on the Big Five, we will illustrate by mentioning several representative studies. One of McCrae and Costa’s goals has been to demonstrate that the Big Five subsumes other measurement approaches. For example, they (McCrae & Costa, 1989b) demonstrate that there is substantial correspondence between Big Five factors and the four indices from the Myers-Briggs Type Indicator (MBTI). Specifically, extraversion correlates highly with MBTI introversion–extraversion and openness with MBTI sensing–intuition; to a lesser extent, agreeableness correlates with MBTI thinking–feeling, and conscientiousness
correlates with MBTI judgment—perception. There is no MBTI counterpart to neuroticism. Similarly, McCrae and Costa (1989c) provide correlations that demonstrate that the two axes underlying the interpersonal circumplex can be defined in terms of extraversion and agreeableness. They conclude that extraversion and agreeableness thus can be used “to define the plane of interpersonal behavior” (p. 592). In like manner, they argue, the affective domain can be structured in terms of extraversion and neuroticism, and attitudes can be understood in terms of agreeableness and openness. They conclude (p. 593) that the five-factor model “provides a larger framework in which to orient and interpret the circumplex, and the interpersonal circle provides a useful elaboration about two of the five factors.” In essence, McCrae and Costa are building a case for employing the Big Five to structure our understanding of the contribution of person characteristics in a variety of behavioral domains.

A few other examples will serve to illustrate the range of research provoked by the Big Five model. Costa, McCrae, and Dye (1991) have demonstrated that NEO-PI measures of extraversion correlate positively and neuroticism negatively with self-esteem. Similarly, people who are happy and satisfied with life tend to be high on extraversion and low on neuroticism (McCrae & Costa, 1991a). Costa (1991) has proposed that the Big Five approach can be useful in helping people to select appropriate forms of therapy (see also McCrae & Costa, 1991b). And finally, Costa and Widiger (1994; Widiger & Costa, 1994) have suggested that the five-factor model can be used to help understand distinctions among various personality disorders. Whatever its limitations, the Big Five model has been hugely successful in fostering research and in provoking discussion about strategies in investigating the phenomena of personality.

### Behavior Genetics

One of the most exciting recent developments in personality research entails studies of the genetic bases of personality characteristics (e.g., Plomin, 1986). As we saw above Cattell has long been concerned with identifying the genetic contributions to source traits. We will see an even stronger emphasis on physiology and genetics in Hans Eysenck’s model of personality, discussed in the next chapter. Because much of the genetic research is not tied to any one particular theory or attribute, however, and given Cattell’s early emphasis on the biological bases of personality, we introduce behavior genetic approaches to personality in the present chapter.

Behavior genetics is based on the assumption that the differences among a set of individuals on some characteristic, such as extraversion, must be due to differences among those individuals in genetic material and/or experiences. The larger the differences, or variability, among the individuals on the genes that contribute to differences in a characteristic, the larger the heritability of that characteristic. In other words, the heritability of a characteristic such as
extraversion can be defined as the ratio of the genetic variability for a group of people compared to the total variability in extraversion for those people. As such, a heritability index for extraversion estimates the percentage of the variability in extraversion scores that is due to genetic variability. The closer the heritability comes to 1.0, the larger the contribution of genetic differences to observed differences. Heritabilities are extremely useful tools. Before we begin, however, the student should be aware of three limitations of any heritability coefficient: It is only an estimate, it is specific to the sample of people being studied, and it applies to the sample as a whole rather than to any individual.

Estimation of heritability may make the most sense if we think about identical and fraternal twins. Identical (or monozygotic) twins come from a single fertilized egg, but fraternal (or dizygotic) twins come from different eggs. It follows that identical twin pairs must have identical genetic material, but fraternal twin pairs, on average, share only one-half of their genes. Differences between identical twin pairs in scores on a characteristic such as extraversion, therefore, must be due to differences in their experiences, because they have the identical genetic material. Similarities in extraversion for such twins, however, are based on some combination of identical genes and similar experiences. Differences in extraversion between fraternal twin pairs are due to differences in genetics and experience, and the similarity of such pairs also reflects some combination of shared genes and shared experiences.

One of the most common ways to estimate the heritability of a characteristic is to use statistical models that compare the similarity of identical twin pairs with the similarity of fraternal twin pairs on a characteristic. Recent studies have been able to include four separate samples: identical and fraternal twin pairs who have been reared together and identical and fraternal twin pairs who have been reared apart. Presumably, twins reared together experience a more similar environment than twins reared apart. Despite this advancement, determining the degree of similarity of the environments that the twin pairs have experienced remains a major difficulty in such analyses.

One final complication deals with conceptualizations of the environment. Just as genetic material can be shared or not shared between fraternal twins, so also can the environment that twins experience be shared or nonshared. Shared environmental factors make twins similar, and nonshared environmental factors make twins dissimilar. Socioeconomic status, religious beliefs, and child-rearing philosophies of parents operate as shared factors. Birth order, accidents, health, differential parental treatment, and differing friends or teachers operate as nonshared factors. The shared environment makes twins (or siblings in general) similar, and the nonshared environment makes twins dissimilar. As we will see, a striking finding in recent behavior genetics studies of personality is that the nonshared environment is much more influential than the shared environment.
We now turn to actual data in order to illustrate different ways in which heritability, the shared environment, and the nonshared environment are estimated in twin studies. First, let us compare the similarity of identical twin pairs who have been reared together with the similarity of identical twins reared apart. Because all identical twin pairs share the same genes, the extent to which identical twins reared together are more similar than identical twins reared apart provides one estimate of the extent to which the environment acts to produce similarity in personality. Bouchard (1981), however, reported that the average correlation across eleven personality scores for members of identical twin pairs reared together was .54, but the average for identical twin pairs reared apart was .56. The fact that these correlations are not 1.00 indicates that genetics is not the sole determinant of personality. Environmental factors clearly play a major role, but note that the environment is acting to make members of twin pairs dissimilar, not similar. This conclusion is corroborated by the fact that the average correlation is slightly smaller for the twins reared together. These data suggest that being raised together (i.e., sharing an environment) does not lead to greater similarity of personality. Thus, this study suggests that there is a substantial heritability for personality traits but that the shared environment is not a major determinant of personality similarity.

Second, let us compare the similarity of personality characteristics for members of identical and fraternal twin pairs. Loehlin and Nichols (1976) reported correlations between identical twin pairs and fraternal twin pairs on Hans Eysenck’s two major personality dimensions, extraversion and neuroticism. The correlations for extraversion were .60 for identical twins and .25 for fraternal twins, and the correlations for neuroticism were .52 for the identical twins and .24 for the fraternal twins. A simple estimate of the heritability for a trait is obtained by calculating 2 times the difference between the identical and fraternal twin correlations. Given the Loehlin and Nichols data, the heritability estimates are $2(0.60 - 0.25) = 0.70$ for extraversion and $2(0.52 - 0.24) = 0.56$ for neuroticism. In other words, over two-thirds of the observed variability in extraversion scores and over half the variability for neuroticism were attributable to genetic differences.

One minus the heritability estimate provides an estimate of the environmental contribution, and the identical twin correlation minus 2 times the difference between the identical and fraternal twin correlations provides an estimate of the importance of the shared family environment. In the Loehlin and Nichols example, the environmental contributions are considerable (.30 for extraversion and .44 for neuroticism), but there is no evidence of a shared family contribution for either characteristic. The estimates for the shared environment are in fact slightly negative: $0.60 - 2(0.60 - 0.25) = -0.10$ for extraversion and $0.52 - 2(0.52 - 0.24) = -0.04$ for neuroticism.
More recent data reported by Bouchard and McGue (1990) on identical and fraternal twins reared apart led to similar conclusions. Using scales from the California Psychological Inventory, Bouchard and McGue found an average correlation for identical twins of .45 and an average correlation of .18 for fraternal twins. Using the formula provided above, they reported an average heritability just over .50. Their findings led them to "a rather remarkable conclusion: The degree of [identical] twin resemblance on self-reported personality characteristics does not appear to depend on whether the twins are reared together or apart... Approximately 50% of the variance in self-reported personality characteristics is associated with genetic factors, which means that environmental factors account for an equal share of the variance. However... common familial environmental factors do not have a substantial influence upon adult personality" (1990, p. 286).

Such findings have led Plomin and Daniels to conclude that "shared family environment accounts for a negligible amount of environmental variance relevant to personality development" (1987, p. 5). The environment provides a major component of the variability in personality, but it is very important to note that "psychologically relevant environmental influences make children in a family different from, not similar to, one another" (Plomin & Daniels, 1987, p. 1). Plomin and Daniels draw the implications that researchers and theorists must focus on experiences "specific to each child" (p. 9) and that "the child rather than the family must be considered the unit of socialization" (p. 15).

As a final example of a twin study, consider Tellegen et al. (1988). The noteworthy aspect of this study is that it included scores on an eleven-scale personality inventory for four separate samples: identical and fraternal twins reared together plus identical and fraternal twins reared apart. This comprehensive design permitted Tellegen et al. to obtain sophisticated estimates of the heritability, unshared environment, and shared environment influences we have been considering. Their conclusions were quite consistent with what we have seen. The average correlations for the identical twins reared together and apart were very similar (.52 and .49, respectively). This suggests that the effect of the shared environment is quite small, since the lack of a shared environment is all that distinguishes the latter group from the former. Some differences existed across scales, but Tellegen et al. estimated the overall contribution of the shared environment to be about .05. Furthermore, the average correlations suggested a heritability of about .50, consistent with what we previously calculated. And ten of the eleven diverse scales had estimated heritabilities between .40 and .55, suggesting remarkable consistency of the effect. In summary, the surprising but consistent findings across all these twin studies are that (a) genetic factors account for about half the variability in personality characteristics and (b) "the common environment generally plays a very modest role in the determination of many personality traits" (Tellegen et al., 1988, p. 1037). Such findings corroborate personality models that
emphasize the unique determinants of individual personalities (e.g., Gordon Allport; see Chapter 7), and they challenge models that emphasize shared family experiences.

Twin studies clearly indicate that there is a strong genetic contribution to individual differences on a number of personality characteristics. Other methodologies exist for investigating the role of genetics, most notably adoption studies. Such studies lead to similar conclusions about the strong role of genetic contributions and the weak role of the shared environment, although they generally produce lower estimates of heritabilities (see Plomin, Chipuer, & Loehlin, 1990). In addition, we will not consider work that investigates the mechanisms through which genes influence personality. Given the strong evidence for the heritability of traits, however, it is important to ask why this influence is at work. We now turn to a brief consideration of the evolutionary pressures that may have led to variation in personality characteristics.

**Evolutionary Personality Theory**

A number of researchers have investigated the evolutionary basis for individual differences (e.g., Arnold Buss, 1988; David Buss, 1991; Loehlin, 1992; Tooby & Cosmides, 1990). In this section, however, we will focus on the work of David Buss. Buss (1984) identified three basic concerns for personality psychology: What characteristics are typical of humans? What are the most important characteristics on which humans differ? What is the relationship between human nature (i.e., species-typical characteristics) and individual differences? Buss suggested that evolutionary biology provides a framework for investigating these concerns. In particular, he saw a parallel with the distinction in evolutionary biology between "typological thinking" and "population thinking." The former approach, as emphasized by sociobiology, emphasizes species-typical characteristics and their adaptive significance. This is analogous to the concern within personality for the "core" tendencies shared by people. The latter approach, as illustrated by behavior genetics, studies the genetic and adaptive bases for the variation observed among members of a species. This is analogous to the concern within personality for conceptualizing and measuring those behavioral dimensions along which people differ.

Buss (1984) identified three criteria from evolutionary biology for determining that a characteristic is part of human nature. First, it must be universal. Second, it must be "innate, unconditioned, and relatively difficult to modify" (p. 1139). Third, it must have an adaptive function; that is, it must enable individuals to function well in their ecological niche. Similarly, Buss suggested four criteria from evolutionary biology for determining which individual differences are important. The first of these criteria is heritability. Buss argued that "differences among individuals that are traceable to genetic differences can be considered important because they provide the variation necessary for evolution" (p. 1140). Second, a trait has intrinsic importance if it contributes
to inclusive fitness or genetic perpetuation through offspring. Third, sexual selection suggests that traits which are consensually valued will provide a basis for mate choice and therefore prove important. Finally, traits are important if they provide a basis for assortative mating, the choice of a mate based on his or her resemblance to the chooser. Buss concluded that paying attention to both sets of criteria may help personality psychologists to address their "relatively neglected descriptive task" while also helping to overcome the tendency to "study . . . isolated traits without explicit rationale" (p. 1144).

In a subsequent article, Buss explicitly endorsed evolutionary theory as the basis for studying personality: "Evolutionary theory promises to circumvent the plethora of seemingly arbitrary personality theories by anchoring a theory of human nature in processes known to govern all life. . . . Personality theories inconsistent with evolutionary theory stand little chance of being correct" (1991, p. 461). Buss reasoned that individual survival and reproduction are the two basic adaptive problems that humans have encountered during their evolutionary history. Understanding the adaptations we have evolved to deal with these problems should point personality psychologists in the direction of important dimensions of human nature and individual differences. In this manner, evolutionary thinking provides "constraints upon otherwise unanchored assertions about motivation" (1991, p. 468).

As one example, Buss discussed the Big Five dimensions of personality. From his evolutionary perspective, Buss identified three explanations for the prominence of these behavioral dimensions. They may reflect "fundamental differences in the strategies humans use to accomplish species-typical goals," they may represent evolutionarily unimportant variations that are "neutral with respect to natural selection" or they may capture "the most important dimensions of the social landscape to which humans have had to adapt" (1991, p. 471). As one example of this third possibility, Buss reasoned that our ancestors would have had to be sensitive to the agreeableness and conscientiousness of others in forming social liaisons. As an example of the first possibility, he describes the heritable individual differences in extraversion and aggression (the opposite of agreeableness) that our ancestors might have evolved for approaching mates and other resources. Buss proposed that personality theory should follow evolutionary theory in specifying the major goals to which humans have attended in order to enhance reproductive success, the psychological mechanisms that have evolved in the course of solving such problems, and the species-typical and individual behavioral strategies humans have evolved in order to achieve these adaptive goals. He concluded, in no uncertain terms, that "evolutionary metatheory, properly conceived, provides for personality psychology the grand framework it seeks" (1991, p. 486).

Buss also has considered the approaches evolutionary psychology might use to investigate the origins of individual differences within the lifespan of the individual. DeKay and Buss (1992) suggest three such possibilities. First,
Individual differences may result from differential experiences during development, such as presence or absence of the father. Second, differences in the environment that currently is inhabited obviously can lead to behavioral differences, as when jealousy is more likely for a person with a relatively desirable spouse. (The student should compare these two possibilities with Skinner’s description of reinforcement history and contingencies of reward; see Chapter 12. Note also that the third of Skinner’s proposed environmental mechanisms, contingencies of survival, refers explicitly to the evolutionary pressures responsible for human nature, as discussed by Buss, Tooby and Cosmides, and other students of evolutionary personality theory.) Third, “reactive individual differences” arise when an individual selects a strategy for pursuing a species-typical goal based on his or her anatomical characteristics. Citing Tooby and Cosmides (1990), DeKay and Buss (1992) provide the example that “Individuals who are mesomorphic are better able to carry out an aggressive strategy, whereas those who are ectomorphic may perform cultivate diplomatic skills” (p. 187).

Finally, we consider Buss’s work on sexual strategies theory (Buss, 1994; Buss & Schmitt, 1993). Buss (1994) proposed that men and women have evolved different mechanisms underlying their short-term and long-term mating strategies. These differences arose because men and women encounter different adaptive problems in mating. Buss and Schmitt (1993) reasoned that “men historically have been constrained in their reproductive success primarily by the number of fertile women they can inseminate. . . . [Whereas] women historically have been constrained in their reproductive success not by the number of men they can gain sexual access to but rather primarily by the quantity and quality of the external resources that they can secure for themselves and their children and perhaps secondarily by the quality of the man’s genes” (1993, p. 206). As a consequence, men and women have developed distinct sets of problems underlying their characteristic short-term and long-term mating strategies (see Table 8.5). The resulting sexual strategies theory holds that male–female differences in mating behavior exist because they are evolutionarily advantageous in light of different mating problems encountered during human evolution, not because they are culturally specified.

Sexual strategies theory gives rise to a number of hypotheses (all quoted from Buss, 1994). For example, “short-term mating is more important for men than women” and “men seeking a short-term mate will minimize commitment and investment.” “Men seeking a short-term mate will solve the problem of identifying fertile women, whereas men seeking a long-term mate will solve the problem of identifying reproductively valuable women.” Because beauty, youth, and health are linked to fertility and reproductive value, these cues should be attractive to men. Buss reports large-scale, cross-cultural survey data consistent with these hypotheses. In addition, “men seeking a long-term mate will solve the problem of paternity confidence.” This hypothesis has led
Table 8.5
Mate selection problems men and women confront in short-term and long-term mating contexts

<table>
<thead>
<tr>
<th>Type of mating</th>
<th>Problems confronted by men</th>
<th>Problems confronted by women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short term</td>
<td>1. Partner number</td>
<td>1. Immediate resource extraction</td>
</tr>
<tr>
<td></td>
<td>2. Identifying which women</td>
<td>2. Evaluating short-term mates as possible</td>
</tr>
<tr>
<td></td>
<td>are sexually accessible</td>
<td>long-term mates</td>
</tr>
<tr>
<td></td>
<td>commitment</td>
<td>4. Mate switching, mate expulsion, or mate</td>
</tr>
<tr>
<td></td>
<td>4. Fertility</td>
<td>backup</td>
</tr>
<tr>
<td>Long term</td>
<td>1. Paternity confidence</td>
<td>1. Identifying men who are able to invest</td>
</tr>
<tr>
<td></td>
<td>2. Female reproductive value</td>
<td>2. Identifying men who are willing to invest</td>
</tr>
<tr>
<td></td>
<td>3. Commitment</td>
<td>3. Physical protection</td>
</tr>
<tr>
<td></td>
<td>4. Good parenting skills</td>
<td>4. Commitment</td>
</tr>
<tr>
<td></td>
<td>5. Gene quality</td>
<td>5. Good parenting skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Gene quality</td>
</tr>
</tbody>
</table>


to interesting studies of fidelity and jealousy. For example, men have been found to place a higher value than women on mate chastity and fidelity. Similarly, Buss, Larsen, Westen, and Semmelroth (1992) found that men reported they would be more upset if their mate had sexual intercourse with another man than if she formed a deep emotional attachment to another man. The reverse pattern held for women, who indicated that they would be more upset if their mate formed an emotional attachment to another woman. Both patterns were also supported by measures of physiological distress.

Women have confronted different mating problems than men throughout the evolutionary history of our species. As a consequence, Buss (1994) hypothesized that women seeking a short-term mate will be “more selective than men” and will “prefer men willing to impart immediate resources.” In support of these predictions, Buss reported that women dislike potential short-term mates who are already in a relationship or who are promiscuous, and they favor physical strength in a potential short-term mate. Similarly, a sample of women reported especially disliking men who are stingy early on in a relationship. Finally, Buss proposed that “women seeking a long-term mate will prefer men who can provide resources for her offspring.” In support, he reported that a sample of women emphasized the probability of professional and financial
success more in a long-term than in a short-term mate and also more than men did. Furthermore, in thirty-six of the thirty-seven cultures he sampled, Buss found that women placed a greater value on the financial prospects of a potential mate than did men.

One may certainly challenge many of the non-survey findings on the grounds of sampling bias, small sample size, or demand characteristics. The hypotheses and data themselves, however, are not particularly surprising. What is provocative is Buss's anchoring of them in evolutionary processes, rather than contemporary or cultural processes.

CURRENT STATUS
AND EVALUATION

It is clear that over the years Cattell has developed a large, diversified, and complex theory of personality. Purely as an intellectual achievement it must be considered on a par with the other theories described in this book. It is equally clear that Cattell and his co-workers have produced a volume of empirical data related to their theory that exceeds that inspired by most of the personality theories we have discussed. And yet reviews of Cattell's work invariably seem to display a mixture of admiration and uneasiness. An insightful appraisal by Goldberg (1968) suggests that this ambivalence may involve a confusion between Cattell the strategist and Cattell the tactician:

Virtually all previous criticism of Cattell has focused upon Cattell the tactician and has brushed aside Cattell the strategist—a fault akin to ignoring Freud on the grounds that free association is a poor measurement technique. Cattell has been roundly criticized because his efforts to chart "the whole domain of personality structure" have prevented him from focusing concerted attention on any one delimited portion of the total task. (p. 618)

And this seems accurate. The very breadth of Cattell's theoretical interests has tended to send him off to a new project before the old one was really solidly nailed down. Great chunks of Cattell's theoretical structure rest on shaky empirical underpinnings (Becker, 1960). But great chunks of any comprehensive personality theory must rest on shaky empirical underpinnings, at least during the lifetime of the theorist if he does much of the work himself. Good personality research is slow and expensive. It is greatly to Cattell's credit that so much of his theory has as much empirical grounding as it does.

Cattell's theory cannot be said to be popular in the sense that Freud's, Rogers's, or Sullivan's or even Allport's or Murray's theories have been popular, although it has attracted a small and active band of adherents. Partly this is because the somewhat forbidding technical machinery of factor analysis, including the debates over its controversies, is likely to put off the casual
reader. As Cattell (1990, p. 101) put it, "from the beginning, psychologists stood back from learning the complexities of factor analysis, as the hosts of the barbarians stood back before the Great Wall of China. The story of the advances of multivariate experimental personality theory is therefore an extraordinary tale of isolation from the random mainstream of personality speculation." Partly, the lack of popularity occurs because the sometimes exaggerated empirical claims and occasional denigration of alternative approaches are not well calculated to win over the sophisticated reader. This is a great pity, because it is exactly the latter who should find the most to appreciate in Cattell's wealth of theoretical ideas and in the glittering treasure trove of raw facts that his laboratory has gathered over the years. In contrast to other personality theories, there is no tendency for Cattell's theory to develop as an armchair abstraction while the empirical appraisal lingers far behind. In fact, there is scarcely any clear separation of theory and experiment.

In an area of psychology that has been characterized by sensitivity and subjectivity, factor theorists have introduced a welcome aura of toughness and emphasis upon the concrete. Where many personality theorists have been content to elaborate concepts and assumptions to a point where the investigator is trapped in a morass of conflicting and unclear implications, factor theorists are inclined to put forward their faith in terms of a simple and lucid set of dimensions or factors. Thus, simplicity and explicitness are cardinal virtues of this brand of theory.

Not only is the factor theorist economical and explicit in formulations but he or she is also operational. More than almost any other brand of psychological theory this position has included a detailed concern for clear and unambiguous empirical definition. The factor theorist has borrowed much of the traditional skill of the psychometrician in devising adequate means of measurement and has tended to ask embarrassing but important questions concerning unidimensionality, internal consistency, and repeatability that surely have had a beneficial effect upon colleagues who are less concerned with the details of measurement.

Whereas most personality theorists have arrived at their conception of the crucial personality variables through a process that is largely intuitive and unspecified, these theorists provide an objective and replicable procedure for the determination of underlying variables. Although one may quarrel with the assertion that the variables are determined by the factor analysis instead of by the tests that are inserted into the factor analysis, there is no possibility of objecting to the claim that factor analysis at least provides a test of whether the variable that had already been conceived of, and was represented in the initial measure, actually exists. In other words, even though factor analysis depends upon prior ideas, it provides a means of assessing the fruitfulness of these ideas. In contrast, many personality theorists have originated hosts of personality variables without ever submitting them to the empirical crucible.
Most personality theories owe more to the clinical setting than to the computation room. Consequently, it is not surprising to find that many psychologists have treated Cattell's factor theory as an interloper on the personality scene. One of the most frequent and vigorously voiced criticisms alleges that factor theorists create systems of artifacts that have no true relation to any single individual and consequently distort and misrepresent reality. This point of view was stated effectively by Allport (1937):

An entire population (the larger the better) is put into the grinder, and the mixing is so expert that what comes through is a link of factors in which every individual has lost his identity. His dispositions are mixed with everyone else's dispositions. The factors thus obtained represent only average tendencies. Whether a factor is really an organic disposition in any one individual life is not demonstrated. All one can say for certain is that a factor is an empirically derived component of the average personality, and that the average personality is a complete abstraction. This objection gains point when one reflects that seldom do the factors derived in this way resemble the dispositions and traits identified by clinical methods when the individual is studied intensively. (p. 244)

As we have seen, factor analysis can deal with the unique individual, but the last point still stands. The essence of this objection is that the derived factors are not psychologically meaningful and, consequently, that they do not fit with the observations of other students of human behavior. Thus, most psychologists simply do not find the factors of the factor analyst useful in describing individual behavior.

Another popular criticism is that what comes out of factor analysis is no more than what is put in. Factor analysts object to subjectivity and eliminate it in the place where it is usually encountered, but actually they are simply moving subjectivity or intuition back to the point where one decides what tests or measures will be introduced into the matrix of correlations. The criticism seems clearly valid where the theorist maintains that the method of factor analysis, applied to any collection of variables, suffices to produce the fundamental dimensions of personality. However, Cattell's concept of sampling a defined personality sphere provides a rational basis for a more broadly exploratory approach.

Other critics point to the inevitable subjectivity involved in naming the factors that result from factor analysis. Particularly if the elements composing the factor are very diverse, as is often the case, the investigator may have to resort to as much imagination and ingenuity in arriving at an overall caption for the variable as a clinician would ordinarily employ in describing a single intensively studied case. The last two points may be generalized as a claim that the concern for rigor and empirical control, professed by the factor analyst,
is not evenly spread over the research process. Thus, these critics assert that whereas the factor analysis may be carried out with great care and attention to detail, the same amount of attention is not always paid to the steps that have led to the scores from which the factors are derived or the process by means of which the eventual factor is interpreted.

Many psychologists have felt that factor theories are not theories at all. Some of the systems simply specify important variables or factors but with no indication of the developmental process or provision of the detailed assumptions concerning behavior that would be necessary to permit predictions concerning unobserved data. As we have seen, this criticism does not apply to Cattell’s position.

A more substantial problem concerns the extremely complex information required by Cattell’s theory and equations. The model is detailed and conceptually appealing. The irony is that its very complexity renders it largely impractical. The amount of information about the individual’s enduring traits and temporary states that the researcher or applied psychologist must possess, plus the relevance weights necessary to predict any specific behavior, virtually preclude ever implementing the full model.

Whatever the shortcomings of Cattell’s factor theory may be, it is clear that its emphasis upon explicitness and adequate standards of measurement represents a very healthy influence. One might contend that the content of the theory may or may not make a fruitful contribution to future theories of personality, but Cattell’s style or mode of approach will surely have an impact upon the way in which future theory will develop.
Hans Eysenck’s Biological Trait Theory

INTRODUCTION AND CONTEXT
Eysenck (1967)

PERSONAL HISTORY

THE DESCRIPTION OF TEMPERAMENT
Extraversion and Neuroticism
Psychoticism

CAUSAL MODELS
Eysenck (1957)

CHARACTERISTIC RESEARCH AND RESEARCH METHODS
Current Research
Gray
Zuckerman

CURRENT STATUS AND EVALUATION

INTRODUCTION AND CONTEXT
Eysenck’s model of personality is distinctive in a number of respects. First, Eysenck proposes that “the study of personality has two interlocking aspects” (1990, p. 244). The first aspect is descriptive or taxonomic, and it focuses on establishing the units to be used in summarizing the ways in which individuals differ. The second is concerned with causal elements, and it is here that Eysenck makes one of his distinctive contributions. He recognizes the critical role played by learning and environmental forces, but he maintains that we also must account for the fact that the effect of a given situation varies for different individuals. In addition, we must recognize the determining, causal role played by biological factors. Eysenck’s approach to personality is virtually
unique in that it specifies a causal chain in which a biological substrate is responsible for individual differences on fundamental dimensions of personality. Behavior results from a person's position on these dimensions, combined with the circumstances to which he or she is exposed. That is, behavior typically reflects an interaction of person tendencies and environmental forces. Thus, Eysenck focuses on "biological dimensions of personality," and his approach is "biosocial" in that the characteristic functioning of the central nervous system predisposes individuals to respond in certain ways to their environment. Eysenck may be wrong about the basic dimensions of personality structure, and he may be mistaken about the physiological differences that are responsible for those dimensions, but he is right that an adequate model of personality must include a descriptive taxonomy and specify biological mechanisms that contribute to observed differences on those descriptive dimensions. In this sense, Eysenck's position is distinguished by being a good theory in a formal sense. That is, he explains behavior at one level in terms of processes operating at a more fundamental level. For example, introverts' and extraverts' work habits are a function of differences in sensitivity to stimulation, which in turn are a function of underlying physiological differences. We will follow Eysenck's (1990; H. J. Eysenck & Eysenck, 1985) lead in maintaining the distinction between the descriptive and causal components of his theory. Second, in developing his model for the description of personality organization, Eysenck distinguishes between the concepts of trait and type. A trait refers to a set of related behaviors that covary or repeatedly occur together. A person with a trait of sociability goes to parties, talks with friends, likes to spend time with people, and so on. A type is a higher order or superordinate construct comprised of a set of correlated traits. An extravert, for example, is sociable, assertive, and venturesome. Both concepts refer to continuous dimensions, in contrast to the tendency to think of a type as an either-or set of categories. The distinction is that a type is more general and inclusive. Eysenck's model of personality includes three basic typological dimensions: introversion versus extraversion, neuroticism versus stability, and psychoticism versus impulse control. Like Cattell, Eysenck concludes that his three factors consistently emerge from factor-analytic studies of personality questionnaires. For example, both Eysenck and advocates of the Big Five model (see Chapter 8) include extraversion and neuroticism as basic dimensions. Eysenck (e.g., H. J. Eysenck & Eysenck, 1985; Eysenck, 1992a,b; see reply by Costa & McCrae, 1992c) accounts for the discrepancy between his model and the Big Five by arguing that the Big Five dimensions of agreeableness and conscientiousness are traits at the third level that combine as part of his type of psychoticism. Similarly, he regards the fifth of the Big Five dimensions, variously labeled as openness to experience and culture, as a cognitive dimension that does not fit with his own temperamental dimensions. An individual may fall at any location between the two extremes on each type, and Eysenck
regards all three dimensions as essentially normally distributed within the population. Figure 9.1 illustrates the relationships between these three types and their defining traits.

Figure 9.1 also demonstrates Eysenck's (e.g., 1947, 1990) belief that a model of personality must be hierarchical. He proposes a hierarchy containing four levels. At the bottom level are specific responses, such as talking before class on a single occasion. At the second level are habitual responses, which include frequent or recurring behaviors, such as talking before class on a

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**Figure 9.1**

Traits making up the type concept of (a) neuroticism, (b) extraversion, and (c) psychoticism. (Reprinted with permission from H. J. Eysenck & Eysenck, 1985, pp. 14–15.)
regular basis. The third level is that of traits, which are defined in terms of intercorrelated sets of habitual responses. A person who is sociable, for example, talks before class, enjoys talking with other people, likes to go to parties, and so on. At the highest level of generality are types, which in turn are defined as intercorrelated sets of traits. In Figure 9.1, for example, the psychoticism type subsumes the traits of aggressive, impulsive, and antisocial. Eysenck identifies the three types using factor analysis (see Chapter 8). In factor-analytic terms, a trait is a primary factor and a type is a second-order factor. Thus, Eysenck’s trait corresponds to Cattell’s source trait, and Eysenck’s type corresponds to Cattell’s second-order factor. Eysenck proposes that psychoticism, extraversion, and neuroticism structure individual differences in temperament, or the noncognitive domain of personality. He acknowledges intelligence as a separate characteristic that structures individual differences within the cognitive domain. It is critically important to understand that Eysenck is not claiming that these three “superfactors” provide an exhaustive description of personality or a sufficient basis for predicting specific behaviors: “To fill in the descriptive picture of a person’s temperament, a number of primary traits additional to the superfactors or major dimensions of personality will always be required” (H. J. Eysenck & Eysenck, 1985, p. 185). Figure 9.1 illustrates this point. The reader should notice the parallel between Eysenck’s reliance on traits to flesh out the general descriptive structure established by types and the expansion of the description of personality provided by the Big Five personality traits through the addition of six facets comprising each of the five superordinate characteristics (see Chapter 8).

Eysenck (1990; see also 1991 for a discussion of “criteria” for acceptable dimensions and dimensional systems of personality) advances three arguments that biological factors play a critical role in determining individual differences on the three types. First, these same factors consistently have emerged in investigations of personality structure in widely divergent cultures (Barratt & Eysenck, 1984); this cross-cultural unanimity is difficult to explain except in terms of biological factors. Second, individuals tend to retain their position on these dimensions across time (Conley, 1984a,b, 1985). Third, there is evidence of a substantial heritable component in individual differences on the three dimensions (Eaves, Eysenck, & Martin, 1989; Loehlin, 1989). Both of these last two findings clearly suggest to Eysenck that biological forces contribute to individual differences on the typologies. In addition, there is a large body of work that directly supports the biological bases of extraversion and neuroticism (e.g., Bullock & Gilliland, 1993; Eysenck, 1967; H. J. Eysenck & Eysenck, 1985; Gale & Eysenck, 1989; Matthews & Amelang, 1993; Smith, 1983; Smith, Rockwell-Tischer & Davidson, 1986; Stelmack, 1981, 1990; Stelmack & Geen, 1992; Stelmack, Houlihan, & McGarry-Roberts, 1993; Stenberg, 1992; Strelau & Eysenck, 1987).
Finally, Eysenck stipulates that a theory of personality must be testable, and, contrary to current practice, it must be evaluated rigorously in terms of the balance of evidence that supports and contradicts it. Because of our failure to do so, "the lack of a paradigm in psychology is particularly obvious and instructive in the personality field. Following the example of Hall and Lindzey (1970), most textbooks now simply give a set of chapters organized around one particular author, explaining his theories, quoting a few example of work more or less relevant to it, but eschewing the scientifically important and indeed essential job of judging the adequacy of the theory in terms of the empirical work devoted to it and comparing the adequacy of one theory along these lines with that of all the others. Thus what we have is not the evolution of a paradigm, but a Dutch auction in ideas, alien to the spirit of science, and conducive to arbitrary choice in terms of existing prejudices on the part of the student" (Eysenck, 1983, p. 369). No stranger to controversy or bold claims, Eysenck goes on to argue that his three-dimensional model provides "the beginnings at least of a paradigm in the personality field," and he proposes that personality tests be evaluated by correlating them with his measures of psychoticism (P), extraversion (E), and neuroticism (N). This strategy would have the twofold benefit of determining the extent of unique contribution to measuring personality for any test, and it would also provide a common metric for comparing scores on personality tests. Eysenck maintains that P, E, and N are "more fundamental than other proposed dimensions, and they therefore pave the way for "unification of the field" by providing a common metric and a unified basis for generating predictions about the relationship between personality and experimental or social variables. Eysenck clearly is an outspoken advocate of his own position, but probably no more so than someone like B. F. Skinner. His aggressive advocacy should not obscure the fundamental soundness of his argument that an adequate theory of personality must generate testable hypotheses (e.g., 1991, 1992a). In this respect, Eysenck's model has achieved exemplary success.

Eysenck has published two autobiographical papers (1980, 1982a), and Gibson (1981) has provided a biography. In what follows, we rely most closely on Eysenck (1982a). Hans Jürgen Eysenck was born in Berlin, Germany, on March 4, 1916, during the depths of World War I, and he was raised during the economic and social turmoil that followed Germany's defeat. He detested Hitler's "murderous regime," with which he clashed repeatedly. Eysenck was raised as a Protestant, but he reports that "very early on all my sympathy went to the persecuted Jews, and all my hatred to their persecutors" (1982a, p. 287). These sympathies led to being labeled a "white Jew," and Eysenck reports that only his size and athletic ability (he was nationally ranked in
tennis and several other sports) protected him. Eysenck's parents were entertainers who divorced when he was two, and he was raised by his grandmother. This "most lovable person" was killed in a concentration camp early in the 1940s. Eysenck writes that his hatred of Hitlerism led him to develop left-wing political sympathies, later tempered by recognition of problems at both political extremes. His interest in politics has been lifelong.

In 1934, when he turned 18, Eysenck refused to join the German military and emigrated to London. He intended to study subatomic physics at the University of London, but he turned to psychology when he was told that he lacked the prerequisites for physics. He reports that he felt "thrown to the wolves. I have become resigned to my fate, but at first my feelings about psychology as a science were anything but complimentary" (1982a, p. 290). Eysenck's early interest in natural and physical science has continued to characterize his approach to psychology, much as Cattell's early interest in chemistry profoundly influenced his career in psychology. Eysenck studied with the eminent psychologist, Sir Cyril Burt, but he reports that Burt engaged in "quite abnormal" behavior toward him, both personally and professionally: "Burt was probably the most gifted psychologist of his generation, but he was seriously disturbed psychically" (1982a, p. 290).

Eysenck received his Ph.D. in 1940, but his status as an "enemy alien" jeopardized his employment prospects. Through a fortuitous chain of events, he became research psychologist at the Mill Hill Emergency Hospital, a world War II psychiatric facility. Eysenck began research here, advocating dimensional analysis rather than categorical analysis into separate diagnostic groups. He also identified the two major dimensions in neurotic patients, extraversion–introversion and neuroticism–stability, which he subsequently applied to "normal people" as well. In addition, Eysenck maintained his interest in behavior therapy, although opposition from his psychiatrist director prevented him from working openly on this initiative. After the war Eysenck became director of the Psychology Department in the new Institute of Psychiatry established at Maudsley Hospital, as well as professor of psychology at the University of London. This is when Eysenck's research on behavior therapy began in earnest (e.g., Eysenck, 1957a, 1960), research that led to a "great battle" with the British psychiatric establishment. Under Eysenck's direction, the department has been a center for clinical training and for research in personality measurement and behavior genetics. In 1994, Eysenck received the American Psychological Society's William James Fellow Award. The citation recognized Eysenck "for the reach of his visionary intellect, for the grasp of his scholarly achievements . . . for his devotion to fact, and above all for his unflagging courage."

Eysenck has been incredibly productive. His own publication list exceeded 650 by 1981 (Eysenck, 1982a), and his rate of publication has not diminished in more recent years. His publications include popular books (e.g., 1953a,
Let us turn now to the evolution of Eysenck’s typological approach to the temperamental components of personality structure. Eysenck places his model in historical perspective by describing how two of the major personality types, extraversion and neuroticism, can be traced back through history to temperament systems described in terms of four humors by the Greek writers Hippocrates and Galen (H. J. Eysenck & Eysenck, 1985; see also Stelmack & Stalikas, 1991). The classical theory of humors was first described by Hippocrates (ca. 460 B.C.). Building on earlier work by Empedocles and the Pythagoreans, Hippocrates described four humors (blood, phlegm, black bile, and yellow bile). These humors in turn were reflections of four cosmic elements (earth, water, air, and fire), each of which had a particular quality (cold for air, heat for fire, moist for water, and dry for earth). The view that all matter is composed of these four elements seems much less outrageous when we translate earth, water, air, and fire into three contemporary forms of matter—solid, liquid, and gas—plus energy. Hippocrates proposed that the way in which these humors were combined determined an individual’s health and character. Blood, for example, was associated with wet and hot, and black bile was associated with cold and dry. Galen (ca. 170 A.D.) expanded on this model, arguing that an excess of any humor was responsible for an individual’s distinctive emotional qualities: “The sanguine person, always full of enthusiasm, was said to owe his temperament to the strength of the blood; the sadness of the melancholic was supposed to be due to the overfunctioning of black bile; the irritability of the choleric was attributed to the predominance of the yellow bile in the body; and the phlegmatic person’s apparent slowness and apathy were traced to the influence of the phlegm” (H. J. Eysenck & Eysenck, 1985, p. 42).

Eysenck argues that, underneath their patent absurdity, these ideas embody “the three main notions which characterize modern work in personality” (H. J. Eysenck & Eysenck, 1985, p. 42). First, behavior is best described in terms of traits that characterize people in varying degrees. Second, these traits combine to define more fundamental types. Third, individual differences on these types are based on constitutional (i.e., genetic, neurological, and biochemical) factors. To a large extent, these three notions serve as Eysenck’s credo.
The next chapter in this historical story was written in 1798, when Immanuel Kant published *Anthropologie*, which Eysenck describes as "essentially a textbook of psychology." Kant elaborated on the descriptions of the four temperamental types, and he organized them in terms of two fundamental contrasts: The melancholic has weak feelings and the sanguine person has strong feelings; similarly, the phlegmatic person exhibits weak activity and the choleric person shows strong activity (see Figure 9.2). Kant still regarded the four types as independent, however, and it remained for Wilhelm Wundt (1874) to introduce a dimensional rather than a categorical descriptive system in his *Elements of physiological psychology*. Wundt maintained that the four types reflected characteristic high or low status on the two dimensions of changeability and strength of emotions (see Figure 9.2). Thus, the choleric and the melancholic have strong emotions, and the sanguine and the choleric are inclined to rapid changes. In Wundt’s view, then, individuals are defined in terms of their position in a two-dimensional space in which the four temperaments represent extreme positions in the four quadrants. This system predicts "with uncanny accuracy" Eysenck’s original two-dimensional model: Wundt’s strong versus weak emotions corresponds to Eysenck’s neurotic versus stable dimension, and Wundt’s changeable versus unchangeable axis corresponds to Eysenck’s extraversion versus introversion dimension. As Stelmack and Stalikas (1991) point out, the distinction between Kant and Wundt also anticipates the disagreement between Eysenck and Gray regarding the location of the axes that define the fundamental personality types (see the discussion later in this chapter).

The final contribution in the evolution of Eysenck’s descriptive taxonomy comes from Carl Jung. In 1921, Jung had proposed that introversion—extraversion is a basic attitude pair, where the introvert is oriented toward

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**Figure 9.2**

*Schemata of the four temperaments by (a) Immanuel Kant and (b) Wilhelm Wundt.* (Reprinted with permission from Stelmack & Stalikas, 1991, p. 262.)
the inner world and the extravert is oriented toward the outside world. In addition, the extravert is sociable, changeable, and carefree; all of these characteristics are consistent with Wundt's articulation of the changeable extreme. Furthermore, Jung maintained that introversion and extraversion were likely to lead to different forms of mental illness in the face of stress. Introverts are susceptible to psychasthenia, a syndrome associated with nervousness, free-floating anxiety, and what we now would label as a phobia or obsessive-compulsive neurosis. Extroverts, by contrast, are most likely to develop hysterical disorders—physical symptoms for which no organic basis exists. Jung's model also included an implicit contrast between neuroticism and normality, such that his full model includes two independent dimensions of introversion versus extraversion and neuroticism versus normality. This model corresponds to Eysenck's two-dimensional personality space, in which introversion-extraversion and neuroticism-stability serve as the defining axes. Eysenck's two-dimensional model, as presented in Figure 9.3, serves to integrate the earlier descriptive models provided by Hippocrates, Galen, Kant, Wundt, and Jung.

To test Jung's model, Eysenck (1947) examined the clinical files for 700 neurotic patients at the Mill Hill Emergency Hospital. He subjected 39 relevant

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**Figure 9.3**

Relation between the four temperaments and the modern neuroticism-extraversion dimensional system. (Reprinted with permission from H. J. Eysenck & Eysenck, 1985, p. 50.)

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items dealing with the clients' history and behavior to a factor analysis, which revealed two bipolar factors. He interpreted one factor as general neuroticism, and the second factor distinguished between patients whose neurotic symptoms were associated either with anxiety or with hysterical symptoms. Eysenck introduced the term dysthymia to refer to the anxiety disorders Jung had called psychasthenia, and he retained the hysteria designation for the other class of disorders. More importantly, he found support in the pattern of traits that characterized the two neurotic groups for Jung's claim that introversion is characteristic of dysthmics and extraversion characterizes hysteries. Eysenck generalized these results (see Eysenck, 1953b, for a summary of additional research) to argue that the dimensions of extraversion (E) and neuroticism (N) provide a basic structure for describing individual differences in temperament: "While not wishing to deny the existence of and importance of factors additional to E and N, we believe that these two factors contribute more to a description of personality than any set of two factors outside the cognitive field" (H. J. Eysenck & Eysenck, 1975, pp. 3-4).

Eysenck has developed a series of paper-and-pencil self-report questionnaires to measure individual differences on these two dimensions. The earliest of these questionnaires was the Maudsley Personality Inventory (Eysenck, 1959b). This was replaced by the Eysenck Personality Inventory (EPI; H. J. Eysenck & Eysenck, 1965) and later by the Eysenck Personality Questionnaire (EPQ; H. J. Eysenck & Eysenck, 1975). Eysenck maintains that the descriptive information provided by these tests is consistent, writing in the EPQ manual, "whatever has been discovered about correlates of E and N with the use of the older scales must be assumed to apply with equal force to the new scales" (H. J. Eysenck & Eysenck, 1975, p. 3). Questions measuring the trait of impulsivity that loaded on the extraversion scale on the EPI, however, have been shifted to the psychasthenic scale on the EPQ, thereby challenging Eysenck's "equal force" claim (see Rocklin & Revelle, 1981; Campbell & Reynolds, 1982).

In the EPQ manual, Eysenck provides the following description of the "typical" extravert and introvert:

The typical extravert is sociable, likes parties, has many friends, needs to have people to talk to, and does not like reading or studying by himself. He craves excitement, takes chances, often sticks his neck out, acts on the spur of the moment, and is generally an impulsive individual. He is fond of practical jokes, always has a ready answer, and generally likes change; he is carefree, easy-going, optimistic, and likes to "laugh and be merry." He prefers to keep moving and doing things, tends to be aggressive and lose his temper easily; altogether his feelings are not kept under tight control, and he is not always a reliable person.

The typical introvert is a quiet, retiring sort of person, introspective, fond of books rather than people; he is reserved and distant except to intimate
friends. He tends to plan ahead, "looks before he leaps" and distrusts the impulse of the moment. He does not like excitement, takes matters of everyday life with proper seriousness, and likes a well-ordered mode of life. He keeps his feelings under close control, seldom behaves in an aggressive manner, and does not lose his temper easily. He is reliable, somewhat pessimistic, and places great value on ethical standards. (H. J. Eysenck & Eysenck, 1975, p. 5)

If the reader refers back to Figure 9.1, she or he will see that this description includes many of the traits that the general type of extraversion incorporates. In similar fashion, Eysenck describes

the typical high N scorer as being an anxious, worrying individual, moody and frequently depressed. He is likely to sleep badly, and to suffer from various psychosomatic disorders. He is overly emotional, reacting too strongly to all sorts of stimuli, and finds it difficult to get back on an even keel after each emotionally arousing experience. His strong emotional reactions interfere with his proper adjustment, making him react in irrational, sometimes rigid, ways. . . . If the high N individual has to be described in one word, one might say that he is a worrier; his main characteristic is a constant preoccupation with things that might go wrong, and a strong emotional reaction of anxiety to these thoughts. The stable individual, on the other hand, tends to respond emotionally only slowly and generally weakly, and to return to baseline quickly after emotional arousal; he is usually calm, even-tempered, controlled and unworried. (H. J. Eysenck & Eysenck, 1975, p. 5)

Eysenck emphasizes that these descriptions refer to the phenotypic or expressed aspect of personality. Observed behavior is a function of the interaction between constitutional characteristics and the experienced environment. In this important respect, Eysenck provides a biosocial model of personality.

In more recent years, Eysenck (e.g., H. J. Eysenck & Eysenck, 1976) has expanded his original two-dimensional descriptive model by adding a third descriptive dimension of psychoticism. The psychoticism dimension subsumes the continuum from normal behavior through criminal and psychopathic behavior to schizophrenic and other psychotic states in which contact is lost with reality and there is severely disordered cognition, affect, and behavior. This orientation is consistent with Eysenck's general dimensional approach to conceptualizing and measuring psychopathology. Furthermore, psychoticism is polygenic (H. J. Eysenck & Eysenck, 1976, p. 29), in that a person's status on the constituent traits reflects the presence or absence of a number of "small-
effect" genes. These genes function in an additive manner, such that the total number the individual inherits determines his or her degree of psychoticism. Eysenck also postulates the existence of other genes, which exert a "large effect": "When the number of genes of small value is less than that required for a proper psychosis to develop, or when external stress has not been sufficient to provide for effective interaction in producing this state, we have individuals demonstrating varying degrees of 'schizoid state' or schizotype—psychopaths, sociopaths, criminals, drug addicts, etc. When genes of large effect are present (usually only one) we get the classical pictures discussed in textbooks of psychiatry" (H. J. Eysenck & Eysenck, 1976, p. 29). This interaction of predisposing characteristics that manifest themselves in a psychosis when triggered by environmental stressors places Eysenck's model of psychosis in the general category of diathesis—stress models of psychopathology.

Eysenck's dimensional approach, combined with his hierarchical model of constituent traits underlying a more general type of psychoticism, justifies his claim that psychoticism provides a useful dimension in describing unsocialized, unusual, and poorly controlled behavior in nonclinical individuals. The EPQ contains a scale designed to measure individual differences on this dimension. We should note, however, that considerable controversy exists regarding the proper interpretation of high scores on the psychoticism dimension. For example, Claridge (1967, 1972, 1981, 1983, 1986) has suggested that scores on psychoticism are better interpreted in terms of psychopathy or antisocial behavior (see also Thornquist & Zuckerman, 1995, for a recent comparative review of models of psychopathy).

Eysenck proposes that the person with a high score on psychoticism (P) is best understood as having inherited a vulnerability to develop psychotic disorders in the face of developmental stress, and it is the traits associated with this vulnerability that serve to define the person who obtains high scores on the psychoticism scale. Here is Eysenck's description of the "characteristic pattern" of people who obtain high P scores:

A high scorer, then, may be described as being solitary, not caring for people; he is often troublesome, not fitting in anywhere. He may be cruel and inhumane, lacking in feeling and empathy, and altogether insensitive. He is hostile to others, even his own kith and kin, and aggressive, even to loved ones. He has a liking for odd and unusual things, and a disregard for danger; he likes to make fools of other people, and to upset them. This is a description of adult high P scores; as far as children are concerned, we obtain a fairly congruent picture of an odd, isolated troublesome child; glacial and lacking in human feelings for his fellow-beings and for animals; aggressive and hostile, even to near-and-dear ones. Such children try to make up for lack of feeling by indulging in sensation-seeking "arousal"
Individuals who score in the moderate range would exhibit these behavior patterns to a lesser degree. Eysenck also is careful to point out that the P scale indexes “normal behaviors . . . we are concerned with personality variables underlying behaviors which become pathological only in extreme cases” (H. J. Eysenck & Eysenck, 1975, p. 6).

Eysenck’s description of neuroticism has remained relatively stable across time, but he has modified his description of extraversion. Extraversion originally was conceptualized in terms of the combination of the traits of sociability and impulsivity (S. B. G. Eysenck & Eysenck, 1963). With the introduction in the EPQ of a scale for psychoticism, however, the trait of impulsivity was shifted to contribute to psychoticism. A number of the impulsivity questionnaire items that had contributed to extraversion on the EPI were used as markers for psychoticism on the EPQ. In the process of making this shift, another component of impulsivity called venturesomeness was articulated (S. B. G. Eysenck, Pearson, Easting, & Allsopp, 1985; see S. B. G. Eysenck & Eysenck, 1977, 1978 for additional perspective), and this became a component trait for extraversion (see Brody, 1988). Venturesomeness reflects an interest in dangerous and thrilling activities, and as such it shares much in common with the sensation-seeking trait that also contributes to extraversion. Eysenck (H. J. Eysenck & Eysenck, 1985) argues that impulsiveness in the broad sense, as well as characteristics such as sensation seeking, occupies an “intermediary level” between the type and trait levels in his hierarchy. Research and measurement at this intermediary level is ambiguous, and Eysenck’s clear preference is to proceed either at the type level or the trait level. Not all researchers agree with this advice (e.g., Revelle, Humphreys, Simon, & Gilliland, 1980; see rebuttal by M. W. Eysenck & Folkard, 1980).

Eysenck’s three-dimensional taxonomy provides a system for describing different types of individuals in terms of their characteristic behavior patterns. What remains to be answered, however, is the causal question of why a particular individual is predisposed to exhibit a particular set of behaviors. To borrow the language of genetics, psychoticism, extraversion, and neuroticism refer to the observed or phenotypic components of personality. Eysenck’s attempt to specify the underlying or genotypic factors responsible for observed variations in behavior hinges on identification of physiological differences that covary with high or low status on the typological dimensions. Eysenck has proposed
two explanatory models. The first model (Eysenck, 1957a) accounted for differences between introverts and extraverts in terms of central nervous system differences in levels of inhibitory and excitatory neural processes. The second model (Eysenck, 1967) accounted for differences between (a) introverts and extraverts in terms of levels of cortical arousal and (b) neurotics and stables in terms of levels of visceral brain activation.

Eysenck (1957)

This model begins with the Russian physiologist Ivan Pavlov. Pavlov investigated the process that came to be known as Pavlovian or classical conditioning by presenting a dog with a neutral stimulus such as a buzzer just prior to placing food powder in its mouth. The food powder elicited a reflexive salivary response, and, after a sufficient number of pairings of buzzer and food powder, the buzzer elicited a salivary response when presented by itself. As described by Monte (1995), Pavlov's dogs differed in their ability to acquire the salivary response to the buzzer. Furthermore, the dogs' temperament appeared to be related to their conditioning ability. Sociable and active dogs were the worst subjects, because they became lethargic when strapped into the experimental harness. Pavlov proposed that the differences existed because the dogs differed in their relative ratios of excitatory and inhibitory cortical processes: The "bad" subjects were characterized by more excitatory processes, but these processes rapidly were depleted during the monotonous conditioning task, producing drowsiness and poor learning performance. The "good" subjects were characterized by more inhibitory processes, and these processes facilitated acquisition of inhibitory responses (i.e., learning not to respond to the member of a pair of stimuli that was not reinforced by food powder).

Eysenck (1957a) rejected much of Pavlov's explanatory system. He retained the distinction between excitatory and inhibitory neural processes as the basis for the difference between introverts and extraverts, but he applied it in a different manner. Specifically, he proposed that introverts are characterized by more excitatory neural processes and extraverts are characterized by more inhibitory processes. Eysenck (1957a, p. 114) summarized this position in his typological postulate:

Individuals in whom excitatory potential is generated slowly and in whom excitatory potentials so generated are relatively weak, are thereby predisposed to develop extraverted patterns of behavior and to develop hysterical-psychopathic disorders in cases of neurotic breakdown; individuals in whom excitatory potential is generated quickly and in whom excitatory potentials so generated are strong, are thereby predisposed to develop introverted patterns of behavior and to develop dysthymic disorders in case of neurotic breakdown. Similarly, individuals in whom reactive inhibition is developed quickly, in whom strong reactive inhibitions are
generated, and in whom reactive inhibition is dissipated slowly, are thereby predisposed to develop extraverted patterns of behaviour and to develop hysterical-psychopathic disorders in case of neurotic breakdown; conversely, individuals in whom reactive inhibition is developed slowly, in whom weak reactive inhibitions are generated, and in whom reactive inhibition is dissipated quickly, are thereby predisposed to develop introverted patterns of behaviour and to develop dysthymic disorders in case of neurotic breakdown.

Thus, the fundamental causal distinction between introverts and extraverts is that introverts have a low ratio of inhibitory to excitatory processes and extraverts have a high ratio of inhibitory to excitatory neural processes. Some direct experimental results are consistent with this proposal. For example, Spielmann (1963) found that extraverts displayed more frequent involuntary rest pauses than introverts during a tapping task. This result is consistent with the prediction that extraverts experience a build up of cortical inhibition during a continuous task. Similarly, Claridge (1967; see also Bakan, Belton, & Toth, 1963) found that dysthymsics performed better than hysteries on a monotonous auditory vigilance task involving detection of three successive odd digits, presumably because the accumulation of involuntary rest pauses in extraverted hysteries caused them to miss more of the distinctive events.

Furthermore, if excitatory neural processes can be understood to facilitate the acquisition of conditioned responses, then a basic prediction from Eysenck's 1957 model is that, all other things being equal, introverts have a nervous system that permits them to condition more readily than extraverts. This prediction follows from a combination of Eysenck's model and Clark Hull's model of learning. In greatly simplified form, Hull suggests that learning is facilitated by high motivation ("drive") and by reinforced practice ("habit strength"), but it is impaired by the accumulation of inhibitory processes during practice. If introverts have a low ratio of inhibitory to excitatory processes and extraverts have a high ratio, then introverts should have a dual advantage in Hull's model: Introverts have higher drive, which facilitates learning, and they have lower inhibitory processes, which interfere with learning.

Franks (1956) tested this prediction by comparing acquisition of a classically conditioned eye blink response for dysthymic, hysterical, and normal subjects. A puff of air (unconditioned stimulus; UCS) on the corner of the eye induced subjects to blink (unconditioned response; UCR), and a tone (conditioned stimulus; CS) was sounded just prior to the puff. The tone and puff were paired 30 times, interspersed with 18 presentations of the tone by itself. The introverted dysthymsics made more conditioned eye blinks (conditioned response; CR) than either the extraverted hysteries or the normals, consistent with Eysenck's prediction. A subsequent study by Franks (1957) confirmed this effect. Unfortunately, Franks (1963) and others were unable to replicate
these findings, casting doubt on the validity of the prediction. Eysenck (1966, 1967) responded that the effect hinged on three experimental parameters. First, he argued that the 1957 presentation of his model had specified that inhibition would only develop during those nonreinforced trials in which the tone was presented without the puff of air. Franks’s partial-reinforcement procedure of interspersing reinforced trials with test trials had given extraverts the opportunity to develop strong inhibitory effects; introverts have an advantage under partial reinforcement because they are better able than extraverts to get rid of the inhibition they develop. Second, a weak air puff (UCS) should lead to more inhibition, favoring introverts, but a strong UCS should lead to more excitation, favoring extraverts. Finally, a short interval between the tone (CS) and puff of air (UCS) favors introverts because it leads to greater inhibitory effects for extraverts. Eysenck (1966) reports a study by Levey that manipulated these three parameters. Levey found a trend for introverts to condition more readily than extraverts with partial reinforcement, but the difference was not statistically significant. Introverts did condition significantly more rapidly than extraverts with a short CS–UCS interval and with a weak UCS [i.e., a puff of 3 pounds per square inch (PSI) versus 6 PSI], supporting Eysenck’s revised prediction. Eysenck’s conditional explanations complicate his early prediction that introverts condition more readily than extraverts. Furthermore, several writers have argued that Eysenck’s revisions, especially with respect to UCS intensity, are not easily derivable from his original 1957 statement of the theory (e.g., Brody, 1972). The interactive effect of UCS intensity is, however, consistent with Eysenck’s 1967 model, to which we now turn.

Eysenck (1967)

Eysenck’s second causal model differs from the first in three important respects. First, he relates differences between introverts and extraverts to differences in arousal levels rather than excitation–inhibition, and he localizes the central nervous system structures within which that difference occurs. Second, he provides a neurological explanation for observed differences in neuroticism–stability. Third, he describes a curvilinear relationship between intensity of external stimulation and degree of cortical arousal, with differing curves for introverts and extraverts.

In his 1967 statement of the theory, Eysenck relates differences in introversion–extraversion to levels of activity in the ascending reticular activating system (ARAS). In very general terms, activity in the ARAS serves to stimulate the cerebral cortex, leading to higher cortical arousal (see Figure 9.4 for Eysenck’s original diagram). Because of greater ARAS activity, introverts are characterized by higher levels of cortical arousal than extraverts, and this neurological difference serves as a causal basis for observed differences on the introversion–extraversion typology. That is, introverts have lower thresholds of ARAS arousal than extraverts. In addition, individual differences in emotionality
or neuroticism depend on levels of activity in the *visceral brain* (VB), which consists of the hippocampus, amygdala, cingulum, septum, and hypothalamus (see Figure 9.4). These structures, which are often referred to as the limbic system, have been related to emotional states through the operation of the autonomic nervous system. Neurotic individuals are characterized by greater activation levels and lower thresholds within the VB. The independence of these two causal systems and of the resulting extraversion and neuroticism dimensions are complicated by a one-way link between the ARAS and VB. If a person is cortically aroused, there need not be any emotional (i.e., VB) activation. Emotional activation, however, guarantees that cortical arousal will occur.

The third new aspect of Eysenck’s 1967 model specifies a curvilinear relationship between stimulation and cortical arousal, with introverts reaching their point of maximum arousal at a lower level of stimulation than extraverts. In Eysenck’s newer model, introverts are postulated to be more aroused and more arousable than extraverts. In developing this concept, Eysenck again draws on the work of Pavlov, this time adopting Pavlov’s concept of “strength of the nervous system” (Gray, 1964; Teplov, 1964). As described by Teplov, a *strong nervous system* can tolerate intense stimulation, and it is less sensitive to stimulation than a weak nervous system. A *weak nervous system* is chroni-
cally at a high level of excitation, and it has a limited capacity to tolerate additional stimulation. In describing strong and weak nervous systems, Teplov employs Pavlov’s concept of transmarginal inhibition. This concept suggests that response to a stimulus increases as stimulus intensity increases, but only up to a point. Beyond that point, which is the point of transmarginal inhibition, the magnitude of the response decreases as stimulus intensity increases. This downturn occurs to protect the nervous system from being overaroused. An individual with a weak nervous system reaches this protective threshold at a lower level of stimulus intensity than an individual with a strong nervous system. In Eysenck’s adaptation, introverts behave like individuals with weak nervous systems, and extraverts behave like individuals with strong nervous systems. That is, cortical arousal increases as stimulus intensity increases for both types, but the rate of increase is more rapid for introverts because of their more sensitive ARAS. As a consequence, introverts reach the point of transmarginal inhibition at a lower level of stimulation than extraverts (see Figure 9.5). Introverts are more sensitive to external stimulation than extraverts, and they are more easily overstimulated than extraverts. Because of the resulting tendency for introverts to avoid excessive stimulation and for extraverts to seek stimulation, Eysenck says that introverts are “stimulus shy” and extraverts are “stimulus hungry.” This sensitivity to stimulation is a key characteristic for introverts, because it makes them shy away from any source of intense stimulation. Other people can be one source of intense stimulation, so the introvert tends to avoid people. The low sociability that laypeople consider to be a fundamental attribute of introversion therefore is a derivative of the introvert’s extreme sensitivity to stimulation in Eysenck’s model.

**Figure 9.5**

*Relationship between stimulus intensity and excitatory processes in introverts and extraverts. (Reprinted with permission from Brody, 1972, p. 57.)*
pared to the population average, hedonic tone is maximized for introverts at low levels of stimulation and for extraverts at high levels of stimulation (see Figure 9.6).

Eysenck's transmarginal inhibition curves lead to predictions of differential behavior for introverts and extraverts in any situation that can be scaled in terms of degree of stimulation. For example, Eysenck's (1966) explanation that introverts will condition more readily than extraverts with a weak UCS but extraverts will condition more rapidly with a more intense UCS can fit within the transmarginal inhibition framework: If the 3-PSI UCS falls in the lower portion of the stimulus intensity axis (where the introvert curve is above the extravert curve) and the 6-PSI UCS falls at the higher end of the stimulus intensity axis (where the extravert arousal curve is higher than the introvert curve) and if learning depends on arousal, then Levey's finding is consistent with the model. Similarly, Campbell and Hawley's (1982) finding that introverts prefer to study in library areas that are less stimulating, and extraverts prefer to study in locations that are more stimulating, fits the transmarginal inhibition model. Eysenck refers to his theory as "hypothetico-deductive"; that is, he believes that it is stated in a manner that permits researchers to generate testable hypotheses. We turn now to further examples of research generated by the theory.

**Figure 9.6**
Relationship between level of sensory stimulation and hedonic tone, showing expected shift of optimal level (O.L.) for introverted subjects to the left and extraverted subjects to the right. (From Eysenck, 1971a, p. 69.)
As we have just discussed, Eysenck (1967) proposes that extreme introverts have high levels of cortical arousal and extreme extraverts have relatively low levels of cortical arousal. Similarly, extreme neurotics have high levels of visceral brain (and resulting autonomic) activation, while extreme stables have low levels of visceral brain activation. Combining these two extremes generates a fourfold classification in which neurotic introverts have the highest overall arousal (i.e., high on limbic activation and high on cortical arousal), stable extraverts have the lowest overall arousal (i.e., low on limbic activation and low on cortical arousal), and stable introverts (low, high) as well as neurotic extraverts (high, low) fall in between. McLaughlin and Eysenck (1967) provide a test of this combined arousal hierarchy by integrating it with the Yerkes–Dodson law (1908; Broadhurst, 1959).

The Yerkes–Dodson law suggests that a curvilinear relationship exists between motivation and performance; that is, performance on a variety of tasks is impaired when motivation is either very low or very high, and performance is maximized at some intermediate level of “optimal” motivation (see Figure 9.7). Think about taking a final examination in a course under two very different circumstances. If you are taking the class on a pass–fail basis and your performance in the class to date is good enough that you are quite certain you will pass the course regardless of your performance on the final, your motivation to study and to do well will be less than it otherwise would be and your score on the final probably will be lower than it would be if you were more motivated. In contrast, if you must get an A on the exam in order to be admitted to graduate school, your level of motivation will be so high that it may disrupt your performance, again leading to a lower score than you would obtain if you felt less pressure. “Choking” or being “psyched out” in athletic competition are other examples of impaired performance as a function of

**Figure 9.7**
Yerkes–Dodson law relating motivation and performance.
(Based on Monte, 1995, p. 810.)
excessive motivation. To further complicate matters, the Yerkes-Dodson law actually refers to a family of curves relating motivation to performance. The optimal level of motivation is lower on a more difficult task than on a simpler task, presumably because performance on more complex tasks is more easily disrupted.

McLaughlin and Eysenck combined the Yerkes-Dodson law with Eysenck’s proposed hierarchy of combined arousal by equating Eysenck’s “arousal” with Yerkes and Dodson’s “motivation.” That is, if the Yerkes-Dodson law holds, if Eysenck’s proposed hierarchy of arousal is accurate, and if it makes sense to equate arousal with motivation, then neurotic introverts should do the most poorly of any of the four types on a very difficult task, because their high level of arousal should render them too motivated. Conversely, stable extraverts should do the best of any type on the difficult task by virtue of their low level of arousal/motivation. Performance for the other two types should fall somewhere in between. On a somewhat easier task, however, performance should be the best for the neurotic extraverts or the stable introverts, given their intermediate levels of arousal/motivation. Participants in the experiment first were classified into one of the four personality types. They then were asked to complete either an easy or a difficult paired-associates learning task. On such a task, subjects are presented with stimulus-response pairs of nonsense syllables, and they must learn to make the correct response when each stimulus is presented. On both tasks, the stimulus members of the pairs were trigrams such as JET, COW, FUR, BUS, and VOL. On the easier task, the response members included meaningful but distinguishable trigrams such as SAH, GED, and TAQ. The more difficult task, however, contained response trigrams that were difficult to distinguish, such as WOD, ZOW, and WOT.

The results supported the prediction. As illustrated in Figure 9.8, stable extraverts and neurotic introverts did poorly on the easy task, presumably because the former had too little arousal and the latter had too much arousal. Performance on the easy task was best for the neurotic extraverts. On the difficult task, however, performance was best for the stable extraverts, the group with the lowest arousal. Performance on this task should have been poorest for the highly aroused neurotic introverts. In fact, performance was slightly poorer for the stable introverts than for the neurotic introverts. This difference was not statistically significant, however, and the results as a whole provide strong support for Eysenck’s hierarchy of arousal.

The McLaughlin and Eysenck paper is one of many studies (e.g., Campbell & Hawley, 1982) in the Eysenck literature that does not attempt to measure arousal levels; rather, it uses assumptions about arousal differences to make predictions about behavior that in turn are tested. A different strategy is employed by Geen (1984), who measures arousal and performance for introverts and extraverts as well as preferred levels of noise stimulation. Eysenck’s (1967) model predicts that extraverts, because of their lower levels of cortical
arousal, prefer and perform best with higher levels of stimulation. But what will be true of arousal levels when introverts and extraverts are at their preferred levels of stimulation? Furthermore, what will be true of performance when introverts and extraverts are at, below, and above their preferred levels of stimulation? Geen used male subjects who were classified as introverts or extraverts based on extreme scores on the EPI. Subjects were asked to complete a paired-associates learning task while hearing bursts of noise through headphones. Subjects in the choice condition were asked to choose the noise level they would hear. Introverts in the assigned-same condition heard the same volume of noise as the previous introvert subject had selected, and
extraverts in that condition heard the volume that the previous extravert had chosen. Introverts in the assigned different condition heard the same volume of noise as the previous extravert subject had selected, and extraverts in that condition heard the volume that the previous introvert had chosen. These assigned-same and assigned-different conditions were intended to control for any effects of subject choice. Pulse rate and skin conductance served as measures of the subjects' arousal levels.

Relationships among the various measures provided strong support for Eysenck's model. As predicted, extraverts chose significantly louder noise levels than introverts. Introverts who selected their own noise levels had the same arousal levels as introverts assigned the noise level chosen by the previous introvert; similarly, extraverts in the choice and assigned-same conditions did not differ in arousal. Therefore, making a choice did not affect arousal. Introverts assigned the introvert noise level were more aroused than extraverts assigned the introvert noise level, and introverts assigned the extravert noise level were more aroused than extraverts assigned the extravert noise level. That is, as Eysenck would predict, arousal was higher for introverts than for extraverts. On the learning task, introverts who were assigned the higher extravert noise level took significantly longer to learn the task than introverts who chose their own level or introverts who were assigned an introvert noise level. A trend also existed for extraverts who were assigned the lower introvert noise level to perform more poorly than extraverts who chose or were assigned an extravert noise level, but the difference was not statistically significant.

These results are highly consistent with Eysenck's model, but there is some ambiguity because there is no way to tell with this design what would have happened if introverts had been exposed to a lower level of noise than they preferred, or if extraverts had been exposed to a higher noise level than preferred. Geen eliminated this ambiguity in his second experiment. One-quarter of the introverts and one-quarter of the extraverts were asked to select their preferred noise level. In addition, each of these introverts was asked to indicate the lowest noise level considered acceptable, and each extravert in this condition was asked to select the highest noise level considered acceptable. This procedure established four noise intensity levels: high (the extravert's highest acceptable setting), moderately high (the extravert's preferred or optimal setting), moderately low (the introvert's preferred or optimal level), and low (the introvert's lowest acceptable setting). The remaining six conditions in Geen's experiment 2 consisted of introverts assigned to the three noise levels other than the one chosen by introverts (i.e., high, moderately high, and low) and extravert assigned to the three noise levels not preferred by extravert (i.e., high, moderately low, and low).

As in experiment 1, the introverts' preferred noise level was significantly lower than the extraverts' preferred noise level. Figure 9.9 presents the arousal data based on pulse rates. As in experiment 1, arousal levels are higher for
introverts than for extraverts at the two intermediate noise levels, but arousal is virtually identical for introverts and extraverts when they are at their preferred level of stimulation. In addition, there is no difference between introverts and extraverts in arousal at the highest and lowest noise levels. In many respects, these two empirical curves correspond to the theoretical curves for introverts and extraverts in Eysenck’s transmarginal inhibition graph. Table 9.1 presents the mean trials to criterion for the eight groups on the paired-

**Table 9.1**

*Mean trials to criterion: experiment 2*

<table>
<thead>
<tr>
<th>Noise condition</th>
<th>Extravert</th>
<th>Introvert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>8.0&lt;sub&gt;a&lt;/sub&gt;</td>
<td>7.1&lt;sub&gt;x&lt;/sub&gt;</td>
</tr>
<tr>
<td>Moderate–low</td>
<td>8.0&lt;sub&gt;a&lt;/sub&gt;</td>
<td>5.0&lt;sub&gt;c&lt;/sub&gt;</td>
</tr>
<tr>
<td>Moderate–high</td>
<td>5.3&lt;sub&gt;c&lt;/sub&gt;</td>
<td>8.9&lt;sub&gt;ab&lt;/sub&gt;</td>
</tr>
<tr>
<td>High</td>
<td>8.2&lt;sub&gt;ab&lt;/sub&gt;</td>
<td>9.9&lt;sub&gt;a&lt;/sub&gt;</td>
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</table>

Note: Cells having common subscripts are not significantly different at the .05 level by a Duncan multiple-range test.

Source: Reprinted with permission from Geen, 1984, p. 1309.
associates learning task. Performance was best (i.e., mean trials to the learning criterion were lowest) when introverts and extraverts were at their preferred level of stimulation. When introverts and extraverts are overstimulated or understimulated, their performance deteriorates. The only exception is the introverts in the low condition, when performance was poorer than at the optimal level, but the difference did not reach significance. Taken as a whole, Geen's results provide strong support for Eysenck's predictions regarding differences between introverts and extraverts in arousal, performance, and preference for stimulation.

Eysenck's model of personality has provided the impetus for several other impressive research programs. We discuss two of those here, those proposed by Gray and Zuckerman.

Gray (1967, 1972, 1981, 1982, 1987) agrees with Eysenck that a two-dimensional space captures much of the variance in personality, but he does not accept extraversion and neuroticism as the defining axes for such a space. Rather, he (Gray, 1981) proposes that Eysenck's axes should be rotated 45 degrees (see Figure 9.10). The two new resulting axes are anxiety, which runs between Eysenck's stable extravert quadrant (low anxiety) and his neurotic introvert quadrant (high anxiety), and impulsivity, which runs from the stable introvert quadrant (low impulsivity) to the neurotic extravert quadrant (high impulsivity). Gray's two axes also have neurological grounding and behavioral consequences. Anxious individuals are highly sensitive to signals of punishment, nonreward, and novelty. The underlying physiological system for anxiety is the behavioral inhibition system (BIS). The BIS consists of "an interacting set of structures comprising the septo-hippocampal system (SHS), its monoaminenergic afferents from the brain stem and its neocortical projection in the frontal lobe" (Gray, 1981, p. 261). In contrast, increasing levels of impulsivity reflect increasing sensitivity to signals of reward and nonpunishment. The underlying neurological system for impulsivity is a less well defined behavioral activation system (BAS). From Gray's perspective, extraversion and neurotism are "secondary consequences" of the interactions of anxiety and impulsivity. That is, individuals in whom the BIS is more powerful than the BAS are introverted, and individuals in whom the BAS is relatively more powerful than the BIS are extraverted; "Thus E-I reflects the relative strength of the two systems. N, in contrast, reflects their joint strength: increments in the sensitivity of either system provide increments to N" (1981, p. 261). Mathematically, Eysenck's and Gray's positions are equivalent, but Gray argues that his model is more consistent with neurological and behavioral data. Eysenck (1983,
p. 375) disagrees, concluding that “the support in favor of Gray’s rotational system is decidedly weak.” He would accept a rotation of perhaps 10 or at the most 15 degrees, but not 45 degrees. Interestingly, Gray (1981) states that the 45 degree value for the rotation was only intended to be “schematic,” and there are indications that a smaller rotation would be “more appropriate.” Zuckerman, Kraft, Joireman, and Kuhlman (1996, p. 3) report a personal communication with Gray in which he “now contends that he never intended the placement of the axes to imply a 45 degree relationship to E and N, but he recognized that anxiety is closer to the N axis than to the E (low-end) axis (about 30 degrees), and impulsivity is closer to the E axis (high end) than to the N axis. Actually, as Figure 10.3 reveals, Eysenck’s original model relating E and N to characteristics of the four temperaments places “anxious” and “impulsive” in precisely these locations! There is little reason to choose between Eysenck’s and Gray’s models, at least at a descriptive level, although Eysenck’s descriptions of clusters of traits associated with the types is a very useful feature of his model. The two models do make differing predictions. For example, Eysenck predicts that introverts will exhibit superior conditioning with an appetitive or rewarding UCS, but Gray predicts the opposite (see Brody, 1988, for a comparative review).
In many respects, the most interesting aspect of Gray’s alternative is his discussion of susceptibility to reward and punishment cues as the underlying behavioral characteristic for impulsive and anxious individuals. Eysenck (1983, p. 377) admits that “these studies produce some mild support for a view linking extraversion with susceptibility to reward, and introversion with susceptibility to punishment.” The possibility that reliable individual differences exist in sensitivity to cues of reward and punishment has generated a substantial body of research in recent years. For example, Bachorowski and Newman (1990) investigated the interaction between anxiety, impulsivity, and circle tracing times under behavioral goal and no-goal conditions. They employed a modified version of Gray’s theory, but they used extraversion and neuroticism scores from the EPQ to define impulsivity and anxiety. Bachorowski and Newman predicted that when subjects were told to trace a circle as slowly as possible, impulsives (E+N+) would trace more quickly than nonimpulsives (E−N−) when the task included a concrete behavioral goal of a go–stop line. Conversely, they predicted that anxious subjects (E−N+) would exhibit poorer motor inhibition than nonanxious subjects (E+N−) in a no-goal condition that presumably promoted uncertainty. Results supported their predictions (see also Bachorowski & Newman, 1985; Wallace, Newman, & Bachorowski, 1991; Pickering, Diaz, & Gray, 1995). Finally, we note that Zimbarg and Revelle (1989) tested hypotheses derived from Spence’s, Eysenck’s, Gray’s, and Newman’s models of personality and conditioning. Results indicated that impulsivity and anxiety are more consistently and strongly associated with individual differences in performance than extraversion and neuroticism. Furthermore, the pattern of results was inconsistent with Eysenck’s and Gray’s theories, but not with Newman’s.

Zuckerman (1978, 1979, 1983, 1984, 1989, 1991) has developed a model of a trait he calls sensation seeking. Sensation seeking correlates with Eysenck’s measures of extraversion and psychoticism, but Zuckerman maintains that it cannot be subsumed by Eysenck’s typology. Sensation seeking in turn has four components: thrill and adventure seeking, seeking exciting sensations through participating in risky activities; experience seeking, seeking excitement through the mind, the senses, and a nonconforming style of life; disinhibition, seeking sensations through social stimulation and disinhibitory behaviors such as drinking; and boredom susceptibility, avoiding monotonous and boring situations and activities. Scores on the total sensation-seeking scale or its subscales have exhibited significant relationships with a variety of behaviors such as drug use, sexual activity, participating in risky sports, and a preference for exciting foods. Based on findings such as negative correlations of sensation seeking with monoamine oxidase, dopamine-beta-hydroxylase, and norepinephrine, Zuckerman (e.g., 1983) has developed a biological theory to account
for individual differences in sensation seeking. In his 1984 version of the model, high sensation seeking is associated with low levels of norepinephrine activity or arousability. Such people seek stimulation in order to compensate for their lower than optimal levels of norepinephrine.

In recent years, Zuckerman (1991, 1995; Zuckerman et al., 1996) has proposed a general psychobiological model (see Figure 9.11) to account for the traits in the “alternative five” conception of personality he has developed (Zuckerman, Kuhlman, Johnsen, Teta, & Kraft, 1993). The model proposes that “biologically based positive affect and ‘generalized reward expectancy’ traits are a basis for sociability and activity components of the trait of extraversion, and that dysphoric traits, particularly anxiety, and ‘generalized punishment expectancy’ underlie neuroticism (general emotionality). . . . Hostility is associated with aggression and together they comprise a major factor of personality in our five-factor model. . . . But hostility also is associated with

**Figure 9.11**  
Zuckerman's psychobiological model for personality (Norepi = norepinephrine; Epi = epinephrine; GABA = gamma-aminobutyric acid; MAO = monoamine oxidase; SS-IMP = impulsive sensation seeking) (Reprinted with permission from Zuckerman, 1991, p. 407.)
the general dysphoric, or negative emotionality factor underlying neuroticism. According to my model, the major mechanism underlying the trait of impulsive unsocialized sensation seeking (ImpUSS) is disinhibition vs. inhibition. This trait describes the tendency to respond with impulsive approach behavior in the presence of signals of both reward and punishment or a relative insensitivity to signals of punishment in this situation” (Zuckerman et al., 1996, pp. 1–2).

This is one of the few models that promises to rival that developed by Eysenck in terms of descriptive breadth and explanatory power.

Hans Eysenck’s model of personality has three defining characteristics. First, it is based on a hierarchical description of the temperamental component of personality in terms of specific traits plus the three more general typological dimensions of psychoticism, extraversion, and neuroticism. Thus, he specifies a three-dimensional descriptive system for personality. Furthermore, he provides paper-and-pencil tests to measure individual differences on those dimensions. Second, Eysenck provides a causal explanation for observed differences on the three typologies and their component traits in terms of underlying neurological characteristics. Within the domain of introversion–extraversion, for example, the fundamental or genotypic characteristic is the amount of cortical arousal. This generates a characteristic level of sensitivity to environmental stimulation. Within the limits imposed by transmarginal inhibition, the sensitivity to stimulation affects conditioning, vigilance, and various other tasks. At the phenotypic or observable level, individuals can be scaled on the traits and types. According to his “bio-social” model, observed behavior is a function of the interaction between the biological factors and the environment to which an individual is exposed. Third, Eysenck’s model is structured in a manner that affords experimental tests of derivative hypotheses, and Eysenck himself has been committed to the scientific process of evaluating theories in terms of their degree of experimental support. The experiments provoked by Eysenck’s model have not uniformly supported his propositions, but they have provided clear support for his argument that an adequate theory of personality must incorporate all three characteristics. Regardless of the fate of his model itself, this represents a signal accomplishment.

Despite these strengths, we must point out several problems. First, hypotheses derived from the theory have not always been supported. In addition, some researchers working within the Eysenckian tradition have concluded that certain effects predicted by the theory are themselves dependent on additional variables such as time of day (e.g., Anderson & Revelle, 1994; Revelle et al., 1980). Second, Eysenck on occasion makes ad hoc assumptions in order to preserve the model. Third, the attempt to specify a biological explanation for phenotypic characteristics has not been entirely satisfactory, and the explana-
tions are becoming dated. For example, "arousal" cannot be considered to be a unitary physiological variable. Fourth, the attempt to account for socialization in terms of the greater conditionability of introverts is compromised by modifications in the 1967 model that restrict the conditioning advantage of introverts to certain conditions. Furthermore, the primacy of Eysenck's three-dimensional framework has not been demonstrated convincingly.

Given this overview, two summaries by Nathan Brody seem apt as conclusions: First, "it seems to this writer that no other personality theorist has come closer to understanding the form of a generally satisfactory theory of personality" (1972, p. 70). Second, "in the past 15 years the empirical inadequacies of Eysenck's biological theory have become more manifest, but it is still the case that there are virtually no competing theories of comparable scope" (1988, p. 158).
Emphasis on Perceived Reality

This section of the book focuses on two theorists, George Kelly and Carl Rogers. Both men have been described at various times as phenomenological, cognitive, humanistic, existential, and even learning theorists, although they themselves repudiated all these labels. Our section heading derives from the fact that the central issue in both theories is the manner in which an individual uses his or her experience to construct the reality to which he or she in turn responds. This emphasis is reflected in the high rating both theories receive in Table 3 on the psychological environment. Other similarities between Kelly and Rogers are apparent in Table 3, such as a strong emphasis on purpose and the field within which behavior occurs, plus a relative lack of emphasis on structure, heredity, early development, continuity, and biology. In addition, both models incorporate an explicit criticism of traditional approaches to motivation. Specific motives are discarded as unnecessary labels with no explanatory utility, although Rogers builds his model around a unitary force he calls the actualizing tendency and Kelly's model is predicated on an implicit motive to accurately anticipate outcomes.

We do not in general consider therapeutic strategies in this text, but it is worth noting that Rogers and Kelly adopt distinctive clinical postures. Rogers is well known for his client-centered approach, in which the therapist creates a nonthreatening environment in which the client feels free to explore problems and to provide his or her own answers. Kelly's approach is less well known but equally distinctive. He considers neurotics to be "bad scientists" who are stuck with theories about the world that lead to inaccurate predictions about
the consequences of their behavior. In contrast to Freud, who emphasizes fixation in a particular developmental stage, Kelly proposes that we become "hung up" on modes of construing the world that simply do not work. Indeed, as we shall see, Kelly probably is the most non-Freudian theorist in this book. Both Rogers and Kelly optimistically believe that people are not victims of their biographies and are free to choose to change. Kelly goes so far as to suggest that personality is like a suit of clothes; if it doesn't fit, get a new one! His fixed-role therapy suggests alternatives while providing safety in which people can try on new psychological outfits.

These therapeutic orientations lead to two major differences between Kelly and Rogers. First, Rogers's model relies heavily on the self-concept. He describes a "genetic blueprint" that predisposes us to certain characteristics, and he emphasizes the process through which social conditioning alienates us from our true self. Kelly, in stark contrast, views the self as a much more fluid phenomenon. Second, Rogers identifies particular characteristics of healthy
personalities, but for Kelly being healthy simply boils down to being successful at anticipating the consequences of behavior.

The two chapters that follow elaborate on these two distinctive theories. We also point out the numerous similarities, differences, and redefinitions of familiar concepts that Kelly and Rogers provide. In the process, we introduce the related positions advanced by Kurt Lewin, Kurt Goldstein, and Abraham Maslow.
George Kelly's Personal Construct Theory

<table>
<thead>
<tr>
<th>INTRODUCTION AND CONTEXT</th>
<th>GEORGE KELLY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KURT LEWIN</strong></td>
<td>PERSONAL HISTORY</td>
</tr>
<tr>
<td><strong>THE STRUCTURE OF PERSONALITY</strong></td>
<td><strong>BASIC ASSUMPTIONS</strong></td>
</tr>
<tr>
<td>The Life Space</td>
<td>Constructive Alternativism</td>
</tr>
<tr>
<td>Differentiation</td>
<td>Man-the-Scientist</td>
</tr>
<tr>
<td>Connections Between Regions</td>
<td>Focus on the Constructor</td>
</tr>
<tr>
<td>The Number of Regions</td>
<td>Motivation</td>
</tr>
<tr>
<td>The Person in the Environment</td>
<td>Being Oneself</td>
</tr>
<tr>
<td><strong>THE DYNAMICS OF PERSONALITY</strong></td>
<td><strong>PERSONAL CONSTRUCTS</strong></td>
</tr>
<tr>
<td>Energy</td>
<td>Scales</td>
</tr>
<tr>
<td>Tension</td>
<td><strong>FUNDAMENTAL POSTULATE AND ITS COROLLARIES</strong></td>
</tr>
<tr>
<td>Need</td>
<td><strong>THE CONTINUUM OF COGNITIVE AWARENESS</strong></td>
</tr>
<tr>
<td>Tension and Motoric Action</td>
<td><strong>CONSTRUCTS ABOUT CHANGE</strong></td>
</tr>
<tr>
<td>Valence</td>
<td><strong>CHARACTERISTIC RESEARCH AND RESEARCH METHODS</strong></td>
</tr>
<tr>
<td>Force or Vector</td>
<td><strong>CURRENT RESEARCH</strong></td>
</tr>
<tr>
<td>Locomotion</td>
<td><strong>CURRENT STATUS AND EVALUATION</strong></td>
</tr>
</tbody>
</table>

THE DEVELOPMENT OF PERSONALITY

394
The older sciences of physics and chemistry have often influenced the course of newer sciences like psychology by furnishing them ways of thinking about and conceiving of natural phenomena. As new viewpoints develop in physics and chemistry, it is almost inevitable, considering the basic unity of all sciences, that they should be taken over by the less mature sciences and applied in their special provinces. It is not surprising, therefore, that the field concept of physics, initiated by the work of Faraday, Maxwell, and Hertz on electromagnetic fields in the nineteenth century and culminating in Einstein's powerful theory of relativity in the twentieth century, has had an impact on modern psychological thought.

The first important manifestation of the influence of physical field theory in psychology appeared in the movement known as Gestalt psychology, which was initiated by three German psychologists, Max Wertheimer, Wolfgang Köhler, and Kurt Koffka, in the years immediately preceding World War I. The chief tenet of Gestalt psychology is that behavior is determined by the psychophysical field consisting of an organized system of stresses or strains...
(forces) analogous to a gravitational or an electromagnetic field. How we perceive an object, for example, is determined by the total field in which the object is embedded.

Although Gestalt psychology is a general psychological theory, it is primarily concerned with perception, learning, and thinking and not with personality. However, a field theory of personality was originated by Kurt Lewin (1935, 1936, 1951). Deeply influenced by Gestalt psychology as well as by psychoanalysis, his theory nonetheless is an entirely original formulation. We begin with a brief consideration of Lewin's theory of personality. We turn then to George Kelly, whose theory is the focus of this chapter.

KURT LEWIN
Kurt Lewin was born on September 9, 1890, in a small village in the Prussian province of Posen. The second of four children, his father owned and operated a general store. The family moved to Berlin in 1905, where Lewin completed his secondary schooling. He then entered the University of Freiburg, intending to study medicine, but soon gave up this idea and, after a semester at the University of Munich, returned to Berlin in 1910 to study psychology at the university there. His major professor was Carl Stumpf, a highly respected experimental psychologist. After obtaining the doctorate in 1914, Lewin served in the German army for four years as an infantryman, rising from private to lieutenant. At the end of the war, he returned to the University of Berlin as an instructor and a research assistant in the Psychological Institute. Max Wertheimer and Wolfgang Köhler, two of the three founders of Gestalt psychology, were also at the University of Berlin at this time. In 1926, Lewin was promoted to a professorship. While at the University of Berlin, Lewin and his students published a series of brilliant experimental and theoretical papers (De Rivera, 1976).

When Hitler came to power, Lewin was a visiting professor at Stanford University. He went back to Germany to settle his affairs and then returned to the United States, where he resided the rest of his life. He was professor of child psychology at Cornell University for two years (1933–1935) before being called to the State University of Iowa as professor of psychology in the Child Welfare Station. In 1945, Lewin accepted an appointment as professor and director of the Research Center for Group Dynamics at the Massachusetts Institute of Technology. At the same time, he became director of the Commission of Community Interrelations of the American Jewish Congress, which engaged in research on community problems. He died suddenly of a heart attack in Newtonville, Massachusetts, February 12, 1947, at the age of 56.

The principal characteristics of Lewin's field theory may be summarized as follows: (1) behavior is a function of the field that exists at the time the behavior occurs, (2) analysis begins with the situation as a whole from which the component parts are differentiated, and (3) the concrete person in a
concrete situation can be represented mathematically. Lewin also emphasized underlying forces (needs) as determiners of behavior and expressed a preference for psychological as opposed to physical or physiological descriptions of the field. A field is defined as "the totality of coexisting facts which are conceived of as mutually interdependent" (Lewin, 1951, p. 240).

The first step in defining the person as a structural concept is to represent him or her as an entity set apart from everything else in the world. This setting apart can be done in words as a dictionary definition does or it can be done by making a spatial representation of the person. Because spatial representations can be treated mathematically and ordinary verbal definitions cannot, Lewin preferred to define his structural concepts spatially. In this way, Lewin attempted to mathematize his concepts from the very beginning.

The separation of the person from the rest of the universe is accomplished by drawing an enclosed figure. The boundary of the figure defines the limits of the entity known as the person. Everything lying inside the boundary is $P$ (the person); everything lying outside the boundary is non-$P$.

The next step in the representation of psychological reality is to draw another bounded figure that is larger than and encloses the person. The shape and size of this enclosing figure are not important as long as it fulfills the two conditions of being bigger than and enclosing the person. For this representation Lewin preferred a figure that is roughly elliptical in form. An additional qualification is also necessary. The new figure cannot share any part of the boundary of the circle that represents the person. There must be a space left between the boundary of the person and the boundary of the larger figure. Aside from this restriction, the circle may be placed anywhere inside the ellipse. The sizes of the two forms relative to one another are immaterial.

We now have a picture of a circle enclosed by but not touching an ellipse (Figure 10.1). The region between the two perimeters is the psychological environment, $E$. The total area within the ellipse, including the circle, is the life space, $L$. The space outside the ellipse represents the nonpsychological

![Figure 10.1](image_url)

$E$ Nonpsychological $P$ $E$ Nonpsychological

$(P + E = \text{Life space, } L)$
aspects of the universe. For the sake of convenience, we shall call this region the physical world, although it is not restricted to physical facts alone. There are, for example, social facts as well in the nonpsychological world.

The Life Space

Although we began with the person and subsequently surrounded him or her with a psychological environment, it would have been more in keeping with Lewin’s rule of going from the general to the particular to have started with the life space and differentiated from it the person and the environment. For the life space is the psychologist’s universe; it is the whole of psychological reality. It contains the totality of possible facts that are capable of determining the behavior of an individual. It includes everything that has to be known in order to understand the concrete behavior of an individual human being in a given psychological environment at a given time. Behavior is a function of the life space, \( B = f(L) \): “The task of dynamic psychology is to derive univocally the behavior of a given individual from the totality of the psychological facts that exist in the life space at a given moment” (Lewin, 1936).

The fact that the life space is surrounded by the physical world does not mean that the life space is a part of the physical world. Rather, the life space and the space beyond it are differentiated and separate regions of a larger totality. Whether this larger totality, the universe, is finite or infinite, chaos or cosmos, is of no concern to psychology except in one very important respect. Facts that exist in the region outside and adjacent to the boundary of the life space, a region that Lewin calls “the foreign hull of the life space,” can materially influence the psychological environment. That is, nonpsychological facts can and do alter psychological ones. Lewin has suggested that the study of the facts in the foreign hull be called “psychological ecology” (1951, Chapter VIII). The first step in making a psychological investigation is to establish the nature of the facts that exist at the boundary of the life space since these facts help to determine what is and what is not possible, what might or might not happen in the life space.

Facts in the psychological environment can also produce changes in the physical world. There is two-way communication between the two realms. Consequently, it is said that the boundary between the life space and the outer world is endowed with the property of permeability. The implication of a permeable boundary between the life space and the physical world is of far-reaching significance. Since a fact in the nonpsychological world may radically change the whole course of events in the life space, prediction from a knowledge of psychological laws alone is usually futile. One can never be sure beforehand that a fact from the foreign hull may not penetrate the boundary of the life space and turn everything topsy-turvy in the psychological environment. A chance meeting, an unexpected telephone call, an automobile accident, have been known to change the course of one’s life. Therefore, as Lewin empha-
sizes, it is more feasible for a psychologist to try to understand the momentary, concrete psychological situation by describing and explaining it in field-theoretical terms than it is to attempt to predict how a person is going to behave at some future time.

Another property of the life space should be noted. Although the person is surrounded by the psychological environment, he or she is not a part of or included in the environment. The psychological environment stops at the perimeter of the circle just as the nonpsychological world stops at the perimeter of the ellipse. However, the boundary between the person and the environment is also a permeable one. This means that environmental facts can influence the person, \( P = f(E) \), and personal facts can influence the environment, \( E = f(P) \). Before considering the nature of this influence, a further differentiation within the structure of the person and of the environment must be made.

Up to this point, the person has been represented as an empty circle. Such a representation would be appropriate if the person were a perfect unity, which one is not. Lewin maintained that the structure of the person is heterogeneous, not homogeneous, that it is subdivided into separate yet intercommunicating and interdependent parts. To represent this state of affairs, the area within the circle is divided into zones.

One proceeds in the following manner. First, divide the person into two parts by drawing a concentric circle within the larger circle. The outer part represents the perceptual-motor region (P-M), the central part represents the inner-personal region. The inner-personal region is completely surrounded by the perceptual-motor area, so that it has no direct contact with the boundary separating the person from the environment. The second step is to divide the inner-personal region into cells (Figure 10.2). The cells adjacent to the perceptual-motor region are called peripheral cells, \( p \); those in the center of the circle are called central cells, \( c \).

In essence, the person is defined as a differentiated region in the life space. Now let us consider the psychological environment. A homogeneous or undifferentiated environment is one in which all the facts are equally influential upon the person. In such an environment the person would have perfect freedom of movement since there would be no barriers to impede him or her. Such complete freedom of movement obviously does not represent the true state of affairs. Therefore, it is necessary to subdivide the environment into part regions (Figure 10.3).

There is one difference between the differentiation of the environment and the differentiation of the person. It is not necessary to distinguish between different kinds of environmental regions. The environment does not contain anything comparable to a perceptual-motor stratum or an inner-personal sphere. All of the regions of the environment are alike. It should be pointed
out, however, that in the concrete representation of a particular person in a
concrete psychological situation at a given moment the exact number and
relative positions of the environmental subregions, as well as the precise
number and relative positions of the inner-personal sphere, must be known if
one is to understand behavior. A complete and accurate structural analysis
reveals the totality of possible psychological facts in the momentary situation.
Dynamical analysis, the topic of the next section of this chapter, tells us which
of the possible facts will actually determine the behavior.

The life space is now represented by a differentiated person surrounded by
a differentiated environment. This differentiation has been accomplished by
drawing lines that serve as boundaries between regions. It is not intended,
however, that these boundaries should represent impenetrable barriers that

Connections
Between Regions

Figure 10.3
divide the person and the environment into independent and unconnected regions. Permeability, as we have already pointed out, is one of the properties of a boundary. Since this is so, the life space consists of a network of interconnected systems.

What is signified by saying that regions are connected? In order to answer this question, let us assume that each of the subregions of the environment contains one psychological fact and that the same fact does not appear in more than one region at the same time. (Lewin’s use of the word fact in this context may sound strange to some ears. A fact, for Lewin, is not only an observable thing like a chair or a football game; it is also something that may not be directly observable but can be inferred from something that is observable. In other words, there are empirical or phenomenal facts and hypothetical or dynamic facts. Anything, either sensed or inferred, is a fact in Lewin’s eyes. An event, on the other hand, is the result of the interaction of several facts. A chair and a person are each facts, but a person seating him- or herself on a chair is an event.) Two regions are said to be connected when a fact in one region is in communication with a fact in another region. For example, the person is said to be connected with the environment because a fact in the environment can alter, modify, displace, intensify, or minimize facts within the person. In ordinary language, the environment can change the person, and vice versa. Lewin also says that two regions are connected when the facts of one region are accessible to the facts of another region. Accessibility is the spatial counterpart of influence.

Our immediate problem, then, is how to represent the extent of influence or accessibility between regions. There are several ways of doing this. One way is to place the regions close together when the influence of one upon the other is great and to place them far apart when the influence is weak. Influence decreases as the number of intervening regions increases. This type of representation may be called the nearness–remoteness dimension.

Two regions may be very close together, even to the extent of sharing a common boundary, and yet not influence or be accessible to each other at all. The degree of connectedness or interdependence is not only a matter of the number of boundaries that must be crossed; it also depends upon the strength of the resistance offered by the boundary. The resistance of a boundary, or its permeability, is represented by the width of the boundary line. A very thin line represents a weak boundary; a very thick line represents an impermeable boundary. This type of representation may be called the firmness–weakness dimension.

A third way of representing the interconnections between regions is to take into account the nature of the medium of a region. The medium of a region is its floor or surface quality. Lewin has distinguished several properties of the medium, the most important of which is the fluidity–rigidity dimension. A fluid medium is one that responds quickly to any influence that is brought to
bear upon it. It is flexible and pliant. A rigid medium resists change. It is stiff and inelastic. Two regions that are separated from each other by a region whose surface quality is extremely rigid will not be able to communicate with one another. It is analogous to a person trying to cross a swamp or make their way through heavy underbrush.

By utilizing the concepts of nearness—remoteness, firmness—weakness, and fluidity—rigidity, most of the possible interconnections in the life space can be represented.

These same concepts apply to the person as well. For example, an inaccessible person is firmly insulated from the environment by a thick wall. Figure 10.4 portrays a complexly structured person. Cells p₁ and p₂ are closely connected, while p₃ and p₄ are cut off from one another by an impermeable boundary. Region c has little or no accessibility to any other region. It is as though this area were dissociated from the rest of the person. The crosshatched cell is impervious to influence because of the turgid quality of its surface, while the dotted area is easily influenced. Region p₅ is remotely connected to p₁, p₂, and p₄. Figure 10.5 portrays a complexly structured psychological environment.
It should be kept in mind that these drawings represent momentary situations. There is nothing fixed or static about them, and they are constantly changing as a result of dynamic forces. One cannot characterize the person as being thus and so for any long period of time. A firm boundary can suddenly dissolve, a weak boundary grow tough. Regions that were far apart may come close together. A stiff medium softens while a pliant medium hardens. Even the number of regions can increase or decrease from moment to moment. Consequently, spatial representations are continually going out of date because psychological reality is forever changing. Lewin did not put much stock in fixed traits, rigid habits, or other constants of personality. Concepts of this sort are characteristic of Aristotelian thinking that Lewin deplored (1935, Chapter 1).

The number of regions in the life space is determined by the number of separate psychological facts that exist at any given moment of time. When there are only two facts, the person and the environment, there are only two regions in the life space. If the environment contains two facts, for example, the fact of play and the fact of work, then the environment has to be divided into a play area and a work area. If there are a number of different kinds of play facts, for instance, the fact of playing football, the fact of playing chess, and the fact of playing darts, then the play area must be divided into as many subregions as there are separate play facts. Similarly, there may be different kinds of work facts each of which has to have its own separate region. The number of regions in the person is also determined by the number of personal facts that exist. If the fact of feeling hungry is the only one that exists, then the inner-personal sphere will consist of only one region. But if in addition to the fact of hunger there is also a need to finish a given job, the inner-personal region has to be divided into two regions. As we shall see later, the principal facts of the inner-personal region are called needs, while the facts of the psychological environment are called valences. Each need occupies a separate cell in the inner-personal region and each valence occupies a separate region in the psychological environment.

Earlier when we were discussing the placing of the person in the environment, we said it did not make any difference where the circle was placed inside the ellipse just as long as their two boundaries did not touch. This holds true only for an undifferentiated, homogeneous environment where all the facts are in one and the same region, that is, where all the facts are identical. As soon as the environment becomes differentiated into bounded regions, it makes considerable difference where the circle is placed. For whatever region it is placed in, the facts of that region are closer to and have more influence on the person than do the facts of any other region. An understanding of a concrete
psychological situation requires, therefore, that we know where the person is in his or her psychological environment. Physically the person may be sitting in a schoolroom, but psychologically he or she may be replaying a baseball game on the playground. Some facts that exist in the schoolroom, such as what the teacher is saying, may not impinge upon a young boy at all, whereas others, for example, a note from a girl sitting at the next desk, may easily divert his thoughts from the ball game.

The way in which the regions that make up the life space are interconnected represents the degree of influence or accessibility between regions. Precisely how does this influence or accessibility express itself? In the preceding example of the boy who is accessible to the note from the girl but inaccessible to what the teacher is saying, accessibility means that the boy can move more easily into the region of the girl than into the region of the teacher. When the girl performs the action of passing the boy a note, he may move out of the baseball region and into her region. He has performed what Lewin calls a locomotion. Two regions are closely connected, accessible to one another, and mutually influential, if locomotions may be made easily between the regions.

A locomotion in the psychological environment does not mean that the person has to make a physical movement through space; in fact, most of the locomotions that are of interest to the psychologist involve very little physical movement. There are social locomotions such as joining a club, vocational locomotions such as being promoted, intellectual locomotions such as solving a problem, and many other types of locomotions.

We now see that an important property of the psychological environment is that it is a region in which locomotion is possible: “One can treat everything as environment in which, toward which, or away from which the person as a whole can perform locomotions” (Lewin, 1936, p. 167). In performing a locomotion, the person traverses a path through the environment. The direction of the path and the regions through which it passes are determined in part by the strength of the boundaries and the fluidity of the regions and in part by dynamic factors yet to be discussed.

We turn now to a discussion of Lewin’s dynamic concepts, which taken together constitute what Lewin calls vector psychology.
cannot explain concrete behavior in an actual psychological situation. For this kind of understanding dynamic concepts are needed. Lewin’s principal dynamic concepts are energy, tension, need, valence, and force or vector.

Lewin, in common with most personality theorists, assumes that the person is a complex energy system. The kind of energy that performs psychological work is called *psychical energy*. Since Lewin’s theory is exclusively psychological in character, it is not necessary for him to deal with the question of the relation of psychical energy to other kinds of energy.

Psychical energy is released when the psychic system (the person) attempts to return to equilibrium after it has been thrown into a state of disequilibrium. Disequilibrium is produced by an increase of tension in one part of the system relative to the rest of the system, either as a result of external stimulation or internal change. When tension throughout the system becomes equalized again, the output of energy is halted and the total system comes to rest.

Tension is a state of the person, or speaking more precisely, it is a state of an inner-personal region relative to other inner-personal regions. When Lewin referred to the dynamic properties of a region or cell of the inner-personal sphere, he called the region a system.

Tension in a particular system tends to equalize itself with the amount of tension in surrounding systems (cf. Carl Jung’s principle of entropy). The psychological means by which tension becomes equalized is called a process. A process may be thinking, remembering, feeling, perceiving, acting, or the like. For instance, a person who is faced with the task of solving a problem becomes tense in one of his or her systems. In order to solve the problem and thereby reduce the tension, he or she engages in the process of thinking. Thinking continues until a satisfactory solution is found, at which time the person returns to a state of equilibrium. Or the intention may be one of remembering a name. The memory process goes into action, recalls the name, and enables the tension to subside.

An increase of tension or the release of energy in an inner-personal region is caused by the arousal of a need. A need may be a physiological condition such as hunger, thirst, or sex; it may be a desire for something such as a job or a spouse; or it may be an intention to do something such as completing a task or keeping an appointment. A need is therefore a motivational concept and is equivalent to such terms as motive, wish, drive, and urge.
Lewin refrained from systematically discussing the nature, source, number, and kinds of needs because he was not at all satisfied with the concept. He felt that eventually the term need would be dropped from psychology in favor of a more suitable concept, one that is more observable and measurable. Nor did he feel that it is worthwhile to set forth a list of needs as so many psychologists do. In the first place, the list would be of almost infinite length, and in the second place, the only thing that really matters in the description of psychological reality is to represent those needs that actually exist in the momentary situation. These are the only needs that are producing effects. On an abstract level, it may be said that everyone is capable of feeling hungry, but it is only when the hunger drive is actually disturbing the equilibrium of a person that it has to be taken into account.

Lewin also distinguished between needs and quasi-needs. A need is due to some inner state, such as hunger, while a quasi-need is equivalent to a specific intention, like satisfying one's hunger by eating at a particular restaurant. Lewin felt that the needs of a person are determined to a large extent by social factors (1951, p. 289).

**Tension and Motoric Action**

Thus far, we have been concerned primarily with the internal dynamics of tension systems, that is, with the dynamic interdependence and communication between systems. What is the relation of tension to action? One might conjecture that energy flowing from an inner-personal region into the motoric would result directly in a psychological locomotion. Lewin, however, rejected such a position. Tension pressing on the outer boundary of the person cannot cause a locomotion. Therefore, instead of linking need or tension directly to action by way of the motoric, he linked need with certain properties of the environment that then determine the kind of locomotion that will occur. This is a very ingenious way of connecting motivation with behavior.

Two additional concepts are required in order to accomplish this purpose. They are valence and force.

**Valence**

A valence is a conceptual property of a region of the psychological environment. It is the value of that region for a person. There are two kinds of value, positive and negative. A region of positive value is one that contains a goal object that will reduce tension when the person enters the region. For example, a region that contains food will have a positive valence for a person who is hungry. A region of negative value is one that will increase tension. For a person who is afraid of dogs any region that contains a dog will have a negative valence. Positive valences attract, negative valences repel.

A valence is coordinated with a need. This means that whether a particular region of the environment has a positive or negative value depends directly
upon a system in a state of tension. Needs impart values to the environment. They organize the environment into a network of inviting and repelling regions. However, this network of valences depends also upon alien factors that do not fall within the scope of psychological laws. The presence or absence of the needed objects themselves obviously plays an important part in structuring the psychological environment. Whether food is present and recognizable, what kind of food it is and in what quantity, its availability and its proximity to objects that possess negative valence, are all nonpsychological factors that influence the valence of a region for a hungry person.

A valence is a variable quantity; it may be weak, medium, or strong. The strength of a valence depends upon the strength of the need plus all of the nonpsychological factors mentioned above.

A valence is not a force. It steers the person through his or her psychological environment but it does not supply the motive power for the locomotion. As we have already seen, neither does a system in a state of tension produce a locomotion. Another concept is needed. This is the concept of force or vector.

A locomotion occurs whenever a force of sufficient strength acts upon a person. A force is coordinated with a need, but it is not a tension. A force exists in the psychological environment while a tension is a property of an inner-personal system.

The conceptual properties of force are direction, strength, and point of application. These three properties are represented mathematically by a vector. The direction in which the vector points represents the direction of the force, the length of the vector represents the strength of the force, and the place where the tip of the arrow impinges upon the outer boundary of the person represents the point of application. A vector is always drawn on the outside of a person and never inside because psychological forces are properties of the environment and not of the person.

If there is only one vector (force) acting upon a person, then there will be a locomotion or a tendency to move in the direction of the vector. If two or more vectors are pushing the person in several different directions, the resulting locomotion will be the resultant of all of the forces.

Now we can see the relation of valence to vector. A region that possesses a positive valence is one in which the forces acting upon the person are directed toward this region. A region of negative valence is one in which the vectors are pointing in the opposite direction. In other words, the direction of a vector is directly determined by the location of a region with either positive or negative valence. The strength of a vector is related to the strength of a valence, to the psychological distance between the person and the valence, and to the relative potency of other valences.
Parenthetically, it may be observed that the concept of need is the one concept with which all of the other dynamical constructs are coordinated. A need releases energy, increases tension, imparts value, and creates force. It is Lewin's central or nuclear concept around which the other concepts cluster.

We are now in a position to represent the specific path that a person will transcribe in moving through his or her psychological environment. For example, a child passes a candy store, looks in the window, and wishes she had some candy. The sight of the candy arouses a need, and this need does three things. It releases energy and thereby arouses tension in an inner-personal region (the candy-wanting system). It confers a positive valence upon the region in which the candy is located. It creates a force that pushes the child in the direction of the candy.

Let us say that the child has to enter the store and buy the candy. This situation can be represented by Figure 10.6. Suppose, however, that the child does not have any money; then the boundary between her and the candy will be an impassable barrier. She will move as close to the candy as possible, perhaps putting her nose against the window, without being able to reach it (Figure 10.7).
She may say to herself, "If I had some money, I could buy some candy. Maybe mother will give me some money." In other words, a new need or quasi-need, the intention to get some money from her mother, is created. This intention, in turn, arouses a tension, a vector, and a valence that are represented in Figure 10.8. A thin boundary has been drawn between the child and the mother on the assumption that she has to go home, find her mother, and ask her for money. Another thin boundary has been drawn between the mother and the candy to represent the effort required to return to the store and make a purchase. The child moves to the candy by way of the mother.

If the mother refuses to give the child any money, she may think of borrowing it from a friend. In this case, the region containing the mother is surrounded by an impenetrable barrier, and a new path through the region containing the friend to the candy is transcribed (Figure 10.9).

This topological representation could be endlessly complicated by introducing additional environmental regions and boundaries of varying degrees of firmness and additional needs with their coordinate tension systems, valences, and vectors.
Although Lewin did not reject the idea that heredity and maturation play a role in development, nowhere in his writings did he discuss their possible influence in any detail, nor did he assign them any place in his conceptual representations. This is in keeping with Lewin's preference for a purely psychological theory. Since heredity and maturation fall within the realm of biological facts and consequently exist outside the life space along with physical and social phenomena, Lewin ignored them. Development is, for him, a continuous process in which it is difficult to recognize discrete stages. Lewin also believed that the use of an age scale for describing development is not really adequate for understanding psychological growth. The age scale will eventually have to be dropped in favor of degrees of differentiation, organization, integration, and the like. Moreover, psychology must address itself to the task of discovering the coexisting and dynamically related facts that represent the conditions for the change at the time the change takes place. It is not enough to say that six-year-olds do things that three-year-olds do not do. One must account for the change using the concepts of field theory.

**GEORGE KELLY**

The core of the Gestalt approach, including Lewin's Gestalt approach to personality, is the assumption that behavior is a function of the field within which that behavior occurs. The life space, or the individual's psychological reality, is what determines his or her behavior. In very similar fashion, George Kelly's approach to personality is predicated on the assumption that individuals construct the reality to which they respond, where that response is based on the individual's use of his or her experience in similar previous contexts to anticipate the consequences of behavior. Despite the obvious similarity between Lewin's and Kelly's approaches, basic differences quickly become apparent. For example, Kelly made the critical assumption that humans seek to accurately anticipate the consequences of their actions; indeed, this pursuit becomes a hallmark of healthy functioning. In addition, behavior is almost an afterthought for Kelly, whereas Lewin goes to great lengths to describe forces and vectors. Similarly, Kelly saw no value in discussing specific needs or other motives. The construction of reality, or "construal" in Kelly's terms, is based on the system of bipolar personal constructs the individual has evolved. Personality, in turn, is best understood in terms of individuals' distinctive construct systems; that is, personality reflects individual differences in construal tendencies rather than behavior tendencies. This unique approach requires that we redefine a number of familiar psychological concepts. Kelly's language can be difficult to understand, but the heuristic value of his model is well worth the student's effort.
Maher (1969) provides a brief biography of Kelly's life, and the reader also is referred to Sechrest (1977) and the obituary by Thompson (1968). What follows is based on those three sources. George Kelly was born on April 28, 1905, on a farm near Perth, Kansas. His father was trained for the ministry but moved to this farm shortly after his marriage. Kelly's early schooling was irregular, but his parents were serious about educating him in the home. They eventually decided to send Kelly away for high school in Wichita, and he lived away from home most of the time after he was 13. Kelly spent three years at Friends University, a Quaker school, and graduated with a B.A. in physics and mathematics from Park College in 1926. He had intended to pursue a career in mechanical engineering, but his growing interest in social problems, fueled by his participation in intercollegiate debates, led him to enroll in educational sociology at the University of Kansas. He received his M.A. in 1928, with a master's thesis on the distribution of leisure time activities among Kansas City workers. After a period of time during which he taught a variety of classes and tried his hand at being an aeronautical engineer, Kelly was awarded an exchange scholarship in 1929. He traveled to the University of Edinburgh, where he received the Bachelor of Education degree in 1930. Kelly then returned to the United States, where he enrolled in a graduate program in psychology at the State University of Iowa. He received his Ph.D. degree after only one year and married Gladys Thompson two days after commencement.

In the fall of 1931, Kelly moved to Fort Hays Kansas State College, where he remained for thirteen years. It was during this period that he turned to clinical psychology, eventually using legislative support to establish a program of traveling clinics that allowed him to serve distressed students in schools across the state and to develop new approaches to clinical problems. Kelly published a series of six papers on practical clinical questions from 1935 to 1940. In The autobiography of a theory, Kelly (1963) described how he came to a "psychology of man himself" with a focus on choice and personal initiation of actions. In the process, he returned to the Freudian perspective, which he had ridiculed during graduate school. Gradually, however, he became uncomfortable with his Freudian "insights," deciding instead that what his clients needed was a means to get a fresh approach to life and to future contingencies. He also became disenchanted with the importance of "the self," believing instead that the key issue is helping clients to "entertain some novel hypotheses about other ways of living" (1963, p. 55).

This emphasis on new commitments and redefinitions of oneself, of becoming something other than what one currently is, clearly set the stage for Kelly's eventual theory of personality. It was also during this period that Kelly came to the conclusion that the complaints teachers and parents made about their students and children were of little descriptive value in understanding the world of the person being diagnosed. Kelly also began to provide his clients with sketches of different people and to ask them to experiment by pretending
to be this other person. This became the basis for Kelly's fixed-role therapy, and it also led Kelly to establish his analogy of man-as-scientist. In short, this was a richly fertile time during which Kelly developed the foundation for the clinical and personality insights he subsequently published.

During World War II, Kelly received a commission in the Aviation Psychology Branch of the Navy's Bureau of Medicine and Surgery. After the war, Kelly accepted an associate professorship at the University of Maryland. In 1946, he became professor and director of clinical psychology at Ohio State University. Along with Julian Rotter, Kelly built the clinical psychology program at Ohio State to a position of national preeminence. It was here, in 1955, that Kelly published his major work, *The psychology of personal constructs*. Kelly left Ohio State in 1965 to assume the Riklis Chair of Behavioral Science at Brandeis University, where he died prematurely in 1967. During his career, Kelly served as president of both the Clinical and the Consulting Divisions of the American Psychological Association and the American Board of Examiners in Professional Psychology. He also lectured widely in the United States and around the world.

Kelly anchored his theory on a series of assumptions, and they provide an appropriate position from which to begin our discussion of the theory.

This is the title for the entire first chapter in Kelly's (1955) major presentation of his theory. Kelly assumed that there are various ways in which the world that surrounds us can be understood; that is, there always exist alternative perspectives for us to choose from in dealing with the world. As Kelly put it, "We assume that all of our present interpretations of the universe are subject to revision or replacement. . . . . there are always some alternative constructions available to choose among in dealing with the world. No one needs to paint himself into a corner; no one needs to be completely hemmed in by circumstances; no one needs to be the victim of his biography. We call this philosophical position *constructive alternativism*" (1955, p. 15). Notice how optimistic this position is, and how remarkably different it is from Freud's stance of childhood determinism or Skinner's position of reinforcement history and stimulus control. In many respects, Kelly's assumption is reminiscent of Alfred Adler's position that man's faults are "due to an erroneous conception of life, he must not be oppressed by them. He can change. The past is dead. He is free to be happy." Indeed, Kelly (1964) cited with favor Hans Vaihinger's "philosophy of 'as if,'" and he noted in the same article the parallel with Adler. Kelly was proposing that people are free to make choices about how they will view the world, and their behavior flows from those choices.
There are a number of important implications of this position. For example, it represents a combination of what is often termed free will and determinism: at any given point in time, our behavior is determined by our construction of reality, but we are free to change that construction across time. Kelly was not suggesting that alternative construals are right or wrong; rather, they have different implications for behavior. People differ, and individuals differ across time, because they are guided by alternative construals of the world. The student should note how similar this assumption is to Henry Murray’s (see Chapter 6) description of beta press. Note also how critical it becomes for a clinician to understand a client’s construction of reality.

Man-the-Scientist

Theorists often adopt metaphors in their attempt to understand behavior. For example, Freud employed the metaphor of mental life as a battlefield between impulses and prohibitions. Kelly adopted the metaphor of man-the-scientist. His point is that we should think of people living their lives in a manner analogous to how scientists formulate and test theories. That is, much like scientists, individuals develop hypotheses about the consequences of their behavior, and they evaluate the validity of those hypotheses in terms of the accuracy of their predictions: Did what I expected to happen when I acted that way in fact happen? Just like a scientist, an individual is trying to predict and control the consequences of behavior, to know what will happen. Scientists try to construct theories that lead to better and better predictions, and individuals try to construct anticipatory systems that give them a better and better sense of what is going to happen if they act a certain way. The good scientist changes hypotheses that are disconfirmed by data, and the healthy person changes personal constructs that give rise to predictions that are disconfirmed by experience. The unhealthy person, in contrast, is a “bad scientist”; he or she has a theory about consequences (particularly interpersonal consequences) that does not work, but the person cannot or will not change it. As Kelly put it, “A person lives his life by reaching out for what comes next and the only channels he has for reaching are the personal constructions he is able to place upon what may actually be happening” (1955, p. 228).

Kelly (1963, pp. 60–61) described how he reached this conclusion in the following passage:

One of my tasks in the 1930’s was to direct graduate studies leading to the Master’s degree. A typical afternoon might find me talking to a graduate student at one o’clock, doing all those familiar things that thesis directors have to do—encouraging the student to pinpoint the issues, to observe, to become intimate with the problem, to form hypotheses either inductively or deductively, to make some preliminary test runs, to relate his data to his predictions, to control his experiments so that he will know
what led to what, to generalize cautiously, and to revise his thinking in
the light of experience.

At two o'clock I might have an appointment with a client. During this
interview I would not be taking the role of the scientist, but rather helping
the distressed person work out some solutions to his life's problems. So
what would I do? Why, I would try to get him to pinpoint the issues, to
observe, to become intimate with the problem, to form hypotheses, to
make test runs, to relate outcomes to anticipations, to control his ven-
tures so that he will know what led to what, to generalize cautiously,
and to revise his dogma in the light of experience.

At three o'clock I would see a student again. Likely as not he was either
dragging his feet, hoping to design some world-shaking experiment before
looking at his first subject to see first-hand what he was dealing with,
or plunging into some massive ill-considered data-chasing expedition. So
I would again try to get him to pinpoint the issues, to observe open-
mindedly, to become intimate with the problem, to form hypotheses—all
the things that I had had to do at one o'clock.

At four o'clock another client! Guess what! He would be dragging his
feet, hoping to design a completely new personality before venturing his
first change in in behavior, or plunging into some ill-considered acting-
out escapade, etc., etc. But this, of course, was not my hour for science;
it was my hour for psychotherapy. And what I had done with that student
back in the hour before, that was obviously not psychotherapy; it was
science!

I must say that this sort of thing went on for a long time before it
ever occurred to me that I was really doing the same sort of thing all
afternoon long.

The key to understanding human behavior is recognizing that people are trying
to anticipate the consequences of their actions, and the key to personality is
identifying the personal constructs that people use to generate their predic-
tions.

As we have seen, Kelly's emphasis was on how an individual construes, or
understands, the world. In the process of coming to this understanding, how-
ever, we must be careful not to confuse how we or anyone else constructs
reality with how reality really is or how it ought to be seen. When a person
makes a statement about the world, we should understand that statement as
revealing more about the person who utters it than about reality. Kelly argued that statements about people or other features of the world are best considered as proposals or hypotheses, but psychologists and laypeople alike make the mistake of treating them as factual claims to be endorsed or rejected. Kelly was arguing that we become trapped by our language, and he made his point in the following distinctive passage:

On occasion I may say of myself... "I am an introvert." "I," the subject, "am an introvert," the predicate. The language form of the statement clearly places the onus of being an introvert on the subject—me. What I actually am, the words say, is an introvert... Yet the proper interpretation of my statement is that I construe myself to be an introvert, or, if I am merely being coy or devious, I am inveigling my listener into construing me in terms of introversion. The point that gets lost in the shuffle of words is the psychological fact that I have identified myself in terms of a personal construct—"introversion." If my listener is uncritical enough to be taken in by this quirk of language, he may waste a lot of time either in believing that he must construe me as an introvert or in disputing the fact... But more than this, if I say of myself that I am an introvert, I am likely to be caught in my own subject—predicate trap. Even the inner self—myself—becomes burdened with the onus of actually being an introvert or of finding some way to be rid of the introversion that has climbed on my back... I come up with the dilemma that I must continue to claim either to be an introvert or not an introvert—one or the other. But is this necessarily so: may not introversion turn out to be a construct which is altogether irrelevant?

... When I say that Professor Lindzey's left shoe is an "introvert," everyone looks at his shoe as if this were something his shoe was responsible for. Or if I say that Professor Cattell's head is "discursive," everyone looks over at him, as if the proposition had popped out of his head instead of out of mine. Don't look at his head! Don't look at that shoe! Look at me; I'm the one who is responsible for the statement. After you figure out what I mean you can look over there to see if you make any sense out of shoes and heads by construing them the way I do. It will not be easy to do this, for it means abandoning one of the most ancient ways of thinking and talking to ourselves. (1958, pp. 70–72)

The motivational components of personality theories are designed to explain the forces that compel people to act in certain ways. Much like Carl Rogers (see Chapter 11) and B. F. Skinner (see Chapter 12), however, Kelly proposed that "motivation" is an unnecessary and redundant construct. He had two
fundamental objections. First, motivational models are used to explain why a person is active rather than inert. But according to Kelly, people are active by definition, so we do not need to explain "why" they are active; they are active because they are alive! Motivation also is used to explain why people act in one manner rather than another. Kelly argued that people act as they do, not because of forces that act on them or in them, but because of the alternatives they perceive as a function of their contral of the world. As a consequence, we should direct our attention to understanding how the individual's construction of reality channels his or her behavior, not to motive forces that compel that behavior. Second, consistent with his emphasis on the construer, Kelly rejected motives as labels we impose on others. Those labels have greater utility in understanding the worldview of the person who offers them than the behavior of the person being labeled.

Kelly (1958, p. 81) summed up his position with respect to motivation as follows: "Motivational theories can be divided into two types, push theories and pull theories. Under push theories we find such terms as drive, motive, or even stimulus. Pull theories use such constructs as purpose, value, or need. In terms of a well-known metaphor, these are the pitch fork theories on the one hand and the carrot theories on the other. But our theory is neither of these. Since we prefer to look to the nature of the animal himself, ours is probably best called a jackass theory."

In one form or another, the individual’s self-concept occupies a central role in most theories of personality. There is no internal “agent” in Kelly’s theory, analogous to the ego in Freud’s or Murray’s approach, but he did talk about the core role constructs one uses to make sense of his or her own behavior. Beyond this, however, Kelly raised two objections to formulations about the self. First, they often function as masks behind which we hide from ourselves and others. To think of oneself as an “introvert” is to impose a self label that sets up expectations for behavior. In many respects, this is similar to Jung’s idea of "inflation of the persona." Second, Kelly thought of one’s self-image as fluid, not a predetermined reality or a truth that we must somehow reveal. If one’s construction of who he or she is proves problematic or ineffective, then the person should change it. Again, we will let Kelly (1964, pp. 157–158) make the point for himself:

A good deal is said these days about being oneself. It is supposed to be healthy to be oneself. While it is a little hard for me to understand how one could be anything else, I suppose what is meant is that one should not strive to become anything other than what he is. This strikes me as a very dull way of living; in fact, I would be inclined to argue that all of
us would be better off if we set out to be something other than what we are.

What I am saying is that it is not so much what man is that counts as it is what he ventures to make of himself. To make the leap he must do more than disclose himself; he must risk a certain amount of confusion. Then, as soon as he does catch a glimpse of a different kind of life, he needs to find some way of overcoming the paralyzing moment of threat, for this is the instant when he wonders what he really is—whether he is what he just was or is what he is about to be.

We have seen that Kelly's theory hinges on understanding the way individuals construe their world. The fundamental unit Kelly employed for this purpose is the personal construct: "A construct is a way in which some things are construed as being alike and yet different from others" (Kelly, 1955, p. 105). As we shall see later in this chapter, constructs are defined by identifying a distinction on which two objects are similar and different from a third object. For example, a person might think of his father and mother as intelligent but his best friend as unintelligent. To say that one person is intelligent implies that at least one other person is intelligent as well and that at least one other person is not intelligent.

This example illustrates the distinctive feature of constructs: They are bipolar. Thus, the example construct in the last paragraph is intelligent versus unintelligent. Our basic construal of the world is in terms of dichotomous, either-or alternatives, not in terms of scales or continua; our fundamental judgment is whether an object is good or bad, not how good it is. In addition, each construct has a limited range of application, or range of convenience. The intelligent versus unintelligent construct, for example, is useful in making predictions about people, about dogs and cats, and about laboratory rats, but not about trees; trees fall outside the range of convenience for this construct. Similarly, the focus of convenience for a construct refers to the class of objects to which it is most relevant (people, presumably, in our intelligent vs. unintelligent example). Constructs differ in permeability, or the ease with which they can be extended to new objects or events. Constructs also can be preemptive, constellatory, or propositional. In the case of a preemptive construct, nothing else about the object matters. In time of war, for example, the key distinction a soldier must make is enemy vs. friend. If one is construed to be an enemy, it does not matter whether that person is male or female or handsome or unhandsome. Using a constellatory construct triggers other constructs, without additional information. A person we call a sexist, for example, might jump from construing a person as female rather than male to also regarding that
person as passive rather than active, emotional rather than unemotional, and
flighty rather than logical. Someone else might use male versus female as a
propositional construct; in this case, designating a person as female would not
lead to any other judgments. A final distinction is between core and peripheral
constructs. Core constructs are central to a person’s sense of who he or she
is, and as such they are relatively resistant to change. Peripheral constructs
are less fundamental and as such are more amenable to change.

A person’s personal construct system is used to make sense out of the
world. Despite the fact that Kelly referred to constructs as templates, or as
analogous to goggles that distort and structure the world in certain ways, the
reader should not assume that they are merely perceptual devices. To the
contrary, they do not begin to capture the nuances involved in perception of
the physical world. The construct system structures reality in order that we
may anticipate events: “Forming constructs may be considered as binding sets
of events into convenient bundles which are handy for the person who has to
lug them. Events, when so bound, tend to become predictable, manageable,
and controlled” (1955, p. 126). Kelly is suggesting that a construct provides
a “pathway of movement,” in the sense of a dichotomous choice between
alternative perceptions or alternative actions. Constructs limit our possibili-
ties, and they provide us with “pathways of freedom of movement.”

The dichotomous nature of constructs seems contrary to experience, because
we all have the sense that we construe the world in terms of gradations, not
either–or alternatives. Our acquaintances vary in intelligence, friendliness,
dominance, etc. (a set of differences on which trait models of personality are
based), and it seems artificial to ignore such distinctions. An analogy to the
computer may help here. A computer is based on either–or distinctions: a bit
has either a positive or a negative charge, and there are no gradations involved.
By combining bits, however, we can construct computer programs of incredible
complexity. Similarly, Kelly (1955, pp. 142–145) described how dichotomous
constructs can be used to construct superordinate, continuous scales. Suppose
we employ the intelligent versus unintelligent construct to observe three people
on ten occasions each. The first person may have shown intelligent behavior
on eight of the occasions, the second person on five of the occasions, and the
third person on two of the occasions; the combination of occasions allows us
to scale these three people in terms of their degree of intelligent behavior,
building what Kelly terms an “accumulation scale.”

Consider also a more complicated type of scale. Suppose a person has a
superordinate construct of good versus bad that subsumes subordinate con-
structs of young versus old, Republican versus Democrat, male versus female,
and psychologist versus nonpsychologist, where in each case the first alterna-
tive is “good.” If we assign each person one point on a “goodness” scale for
each good characteristic, then a young-male-Republican-psychologist has a total score of 4. a young-female-Democratic-psychologist receives a score of 2, and an old-female-Democratic-nonpsychologist gets a score of 0. In this manner, the person has converted a set of bipolar constructs into what Kelly terms an “additive scale.” Kelly provided a number of other examples of scales, but this important and reasonable extension of his basic model often is ignored.

FUNDAMENTAL POSTULATE AND ITS COROLLARIES

Kelly (1955, pp. 46–104) stated his theory in the form of a fundamental postulate and eleven corollaries (see Table 10.1). We previously considered material covered by the dichotomy, range, and modulation corollaries, and we shall treat each of the remaining nine statements in turn.

**Fundamental Postulate:** A person’s processes are psychologically channelized by the ways in which he or she anticipates events.

**Table 10.1**

<table>
<thead>
<tr>
<th>Kelly’s fundamental postulate and eleven corollaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamental postulate: A person’s processes are psychologically channelized by the ways in which he or she anticipates events.</td>
</tr>
<tr>
<td>Construction corollary: A person anticipates events by construing their replications.</td>
</tr>
<tr>
<td>Individuality corollary: Persons differ from each other in their construction of events.</td>
</tr>
<tr>
<td>Organization corollary: Each person characteristically evolves, for convenience in anticipating events, a construction system embracing ordinal relationships between constructs.</td>
</tr>
<tr>
<td>Dichotomy corollary: A persons’ construction system is composed of a finite number of dichotomous constructs.</td>
</tr>
<tr>
<td>Choice corollary: A person chooses that alternative in a dichotomized construct through which he or she anticipates the greater possibility for extension and definition of his or her system.</td>
</tr>
<tr>
<td>Range corollary: A construct is convenient for the anticipation of a finite range of events only.</td>
</tr>
<tr>
<td>Experience corollary: A person’s construction system varies as he or she successively construes the replications of events.</td>
</tr>
<tr>
<td>Modulation corollary: The variation in a person’s construction system is limited by the permeability of the constructs within whose range of convenience the variants lie.</td>
</tr>
<tr>
<td>Fragmentation corollary: A person may successively employ a variety of construction subsystems that are inferentially incompatible with each other.</td>
</tr>
<tr>
<td>Commonality corollary: To the extent that one person employs a construction of experience that is similar to that employed by another, his or her psychological processes are similar to those of the other person.</td>
</tr>
<tr>
<td>Sociality corollary: To the extent that one person construes the construction processes of another, he or she may play a role in a social process involving the other person.</td>
</tr>
</tbody>
</table>

*Source: Based on Kelly, 1955, pp. 103–104.*
This postulate is the core of Kelly’s position. In it, he proposed that a person’s understanding of the world and behavior in that world (“processes”) are directed (“channelized”) by an existing network of expectations about what will happen if he or she acts a certain way (“anticipates events”). Several other aspects of the postulate are noteworthy. First, Kelly was not suggesting that this is how people truly are; rather, he was saying, “let us suppose” that this is how people work, and see how well we can account for behavior. Second, he took the focus on a person seriously; The postulate focuses on the individual, not on “any part of the person, or any group of persons, or any particular process manifested in the person’s behavior” (1955, p. 47). In this attitude, Kelly is consistent with other personality theorists. Finally, Kelly referred to anticipation because he was committed to the assumption that individuals, like the prototypes of scientists that they are, seek prediction: “Anticipation is both the push and pull of the psychology of personal constructs” (1955, p. 49).

Construction Corollary: A person anticipates events by construing their replications.

Kelly clarified his basic position in this corollary. The two key terms here are “construing” and “replications.” By construing, Kelly meant using the system of personal constructs to place an interpretation on an event, where that interpretation gives meaning to the event. By replication, Kelly meant using experience to identify recurrent themes in meanings of events. We then use our understanding of this event to make predictions about what is likely to happen, based on what happened in similar events in the past. Constructing expectations based on experience, not the simple categorization of events, is the heart of Kelly’s model. One could think of this as a “cognitive” version of Skinner’s reinforcement history. An even better analogy is to the anticipations and expectancies introduced by the social learning theorists (see Chapter 14).

Organization Corollary: Each person characteristically evolves, for convenience in anticipating events, a construction system embracing ordinal relationships between constructs.

Each individual arranges his or her constructs into a hierarchical system that characterizes that personality. That system continuously changes or evolves with experience. The key term in this corollary is “ordinal relationships,” by which Kelly meant that one construct may subsume another as one of its elements. He used a good versus bad construct to illustrate two ways in which this may occur (see Figure 10.10). First, good versus bad may subsume the construct of intelligent versus stupid by “extending its cleavage.” In this instance, “good” would include all intelligent things as well as other features like moral and brave. “Bad” would include all things stupid as well as immoral and cowardly. In Kelly’s terminology, good versus bad is a superordinal construct and intelligent versus stupid is a subordinal construct. Alternatively, a
superordinal construct of evaluative versus descriptive may "abstract across the cleavage line" of the subordinal intelligent versus stupid construct. In this case, the entire intelligent versus stupid construct is subsumed as an "evaluative" type of construct. In contrast, another construct of light versus dark might be considered "descriptive" only.

Kelly was suggesting that people systematize their constructs by organizing them into hierarchies. This organization is fluid, and the ordinal relationships may even reverse themselves across time. The issue for Kelly was not self-consistency of psychological structures but evolving a system that best allows for the accurate anticipation of events by identifying replicative themes.

**Fragmentation Corollary:** A person may successively employ a variety of construction subsystems that are inferentially incompatible with each other.

The construct system is continually in flux, and the evolution of the construct system is such that a person's specific constructs and resulting specific behaviors may not be completely consistent across time. Because the person continually strives for a construct system that produces better anticipation, behavior at one time may appear incompatible with immediately preceding behavior because governing constructs have changed. Kelly regarded this as an important corollary, because it makes clear that the only way to understand behavior is in terms of the current or "regnant" construct system, not the immediately antecedent behavior. Behavior will not always be consistent across time or situations, but it will always be consistent with the current construct system.

**Experience Corollary:** A person's construction system varies as he or she successively construes the replications of events.

The constructions we place on events represent hypotheses about the consequences of behavior, and we use the actual outcomes to "validate" the construct system, just as a scientist uses data to validate a theory. We continu-
ally revise our anticipations in the face of outcomes, and the construct system undergoes a progressive evolution in the process. Kelly used "experience" to refer to this successive construing of events, not the sequence of events themselves: "It is not what happens around him that makes a man experienced; it is the successive construing and reconstruing of what happens, as it happens, that enriches the experience of his life" (1955, p 73). The replication of events on which behavior depends involves the experience of abstracting recurrent themes from a sequence of unique events. Unexpected outcomes and the violation of expectations force us to modify our construct systems. As a final point here, the reader should note that Kelly's discussion of experience subsumed the usual topic of learning. Much like motivation, learning is part of the general process of anticipation and reconstrual in Kelly's system.

**Choice Corollary:** A person chooses that alternative in a dichotomized construct through which he or she anticipates the greater possibility for extension and definition of his or her system.

This is the most difficult of Kelly's corollaries. The fundamental postulate describes how behavior is channelized by constructs, and the choice corollary reveals that behavior reduces to a choice between further defining the existing construct system or acting in a manner that extends the range of convenience of the construct system. Consider a student who must choose which of two courses to take. One course is in her major field of study, so she has a fairly good idea what to expect. Selecting this course would be the "secure" choice because it would further define her existing ability to anticipate outcomes. The other course is in a field about which the student has no knowledge. Selecting this course would be risky or "adventuresome," because it would immerse her in a situation where she has little basis for anticipating outcomes, but it would greatly extend the range of situations in which she can anticipate outcomes. Once events have been assigned to the poles of constructs, we confront the "elaborative choice" to be guided by either the secure or the adventuresome behavior/pole. As Kelly (1955, p. 65) put it, the individual "places relative values upon the ends of his dichotomies" and then must choose one of the alternatives. Life is not merely construal; it is choice based on that construal, and the choice will be made in favor of the alternative that appears at the moment to provide the best basis for improving the subsequent anticipation of events. This corollary clearly set Kelly apart from other theorists; he maintained that pursuit of better and better anticipation of events, not pleasure or reinforcement or self-defense or self-consistency, is "the essence of human life itself" (1955, p. 68). Note also how similar Kelly's "extension and definition" terminology is to Carl Rogers's (see Chapter 11) discussion of the way in which the actualizing tendency serves to "maintain and enhance" the organism.

The means individuals use to make the elaborative choice are unclear, but Kelly did describe a C-P-C cycle (circumspection-preemption-control)
that people typically go through in deciding how to act. Let us return to the student attempting to decide whether to enroll in a particular course. Her first step is one of circumspection, or identifying all possible available constructs. For example, is the course introductory or upper level, hard or difficult, familiar or unfamiliar, and so on. The second step is preemption, or identifying one dimension as the critical one. Our student, for example, might decide that the most important issue is whether this course is familiar or unfamiliar. The final step is one of control, in which a choice is made between the opposing poles of the selected construct. The student may decide that she wants to broaden her perspective and therefore take the course because it is unfamiliar.

Kelly also described a creativity cycle for generating new constructs. This sequence begins when a person "loosens" his or her current construction of the world in order to try out new and flexible interpretations of the world. In therapy, this exploration process can be facilitated by use of dreams, fantasy, or free association. In any case, the person tentatively explores a novel approach. The trick, Kelly wrote, "is to deliver these nascent constructions alive without losing track of what they are or becoming frightened by their monstrous implications" (1965, p. 128). At the other end of the cycle, the person begins to "tighten" the construct by testing its consistency against existing constructs and by validating the resulting behavioral anticipations. Kelly went on to suggest that this cyclical process is deeply involved in the enterprise of psychological research.

**Individuality Corollary:** Persons differ from each other in their construction of events.

The fundamental differences among individuals reside in their alternative construal of events and anticipation of consequences, as controlled by their distinctive construct systems. In other words, people differ not only because they have been exposed to different events, but because they have developed different approaches to anticipation of the same events.

**Commonality Corollary:** To the extent that one person employs a construction of experience that is similar to that employed by another, his or her psychological processes are similar to those of the other person.

Just as dissimilar constructions of events lead to individual differences, similar construction of events leads people to behave in similar ways. Note that Kelly is proposing that similar actions follow not from exposure to identical events but from similar constructions of events. Using this approach, Kelly accounted for within-cultural similarities in terms of similar expectations, both expectations about what others will do and expectations about what other people expect one to do.

**Sociality Corollary:** To the extent that one person construes the construction processes of another, he or she may play a role in a social process involving the other person.
To a large extent, Kelly's (1955) major presentation of his position emphasized interpersonal and therapeutic relationships, and the sociality corollary is critical to understanding such relationships. In contrast to the commonality corollary, this corollary discusses understanding rather than actual similarity. Kelly believed that people can engage in a meaningful relationship only if they understand one another's construal processes. The absence of such understanding precludes effective communication and interaction. The so-called generation gap between parents and adolescents can be understood nicely in these terms.

Kelly (1955, p. 97) defined a role as "a psychological process based upon the role player's construction of aspects of the construction systems of those with whom he attempts to join in a social enterprise." In other words, a role is a pattern of behavior that reflects someone's understanding of how others in a group think. An elaboration of Kelly's concept of role is beyond the scope of this text, but it provides the basis for his fixed-role therapy and the Role Construct Repertory Test discussed later in this chapter.

Kelly made it quite clear that not all constructs exist in a verbal form, and they may not be readily available to consciousness. Rather than revert to a notion of the unconscious, however, he introduced what he called a continuum of "cognitive awareness." Preverbal constructs, submerged constructs, and suspended elements are all characterized by low cognitive awareness and might otherwise be described as "unconscious."

Constructs typically are represented and modified as words. Much as Henry Murray described preverbal complexes, however, Kelly indicated that it is possible for personal constructs to be established before a person has the linguistic capability to represent them. Because such preverbal constructs are not coded in linguistic form, they cannot be articulated, but they continue to exert an influence on behavior. Given the time period in which they were established, such constructs tend to focus on dependence, trust, and other infantile concerns.

Each construct is defined in terms of two poles, but occasionally people act as if one pole of the construct is not available. For example, a person may construe the world in terms of unhappiness, without apparent recognition that a happiness pole logically must exist as well. When one pole is considerably less available than the other, Kelly said that it has been submerged. Because this pole is unavailable, it is possible to consider it unconscious.

A construct pole must be submerged for a reason, and such a construct sounds much like the Freudian concept of repression as motivated forgetting, but Kelly preferred to conceptualize repression in terms of suspended elements. In Kelly's system, ideas and memories are only available if constructs exist with which to represent them. As the construct system changes, some elements
may no longer be available to consciousness because the person has no way to retrieve and represent them. The element will continue to exist in suspended form, and it may be retrieved if subsequent changes in the construct system provide access to it. For example, a man may employ a construct of good versus bad to construe a memory of his father yelling at him. If that construct changes, the memory may no longer be available, but it may reemerge when the man later evolves a construct of abusive versus supportive. Once again, however, it is not affect that guides the suspension process, as it is in the Freudian model: “Our theory does not place the emphasis upon remembering what is pleasant or forgetting what is unpleasant; rather, it emphasizes that one remembers what is structured and forgets what is unstructured. In contrast with some notions of repression, suspension implies that the idea or element of experience is forgotten simply because the person can, at the moment, tolerate no structure within which the idea would have meaning” (1955, p. 473). In summary, Kelly proposed that constructs differ in level of cognitive awareness, ranging from those that are clearly articulated with two salient poles and no suspended elements to those whose structure renders them relatively inaccessible.

Kelly also proposed redefinitions of a number of familiar terms concerning affect in terms of inadequacy of the existing construct system and subsequent change. For example, he defined anxiety as “the recognition that the events with which one is confronted lie outside the range of convenience of one’s construct system” (Kelly, 1955, p. 495). Anxiety results from confronting not an aversive event but an unknowable event. Furthermore, anxiety may provide the impetus for reorganization and healthy growth in the construct system or it may lead the person to defensive maneuvers that result in submerged poles or suspended elements, as discussed in the previous section. The unease that college students often experience when they first confront the new reality of college life nicely fits Kelly’s conception of anxiety. A less obvious instance of anxiety might occur when a student who is used to receiving mediocre grades receives an A on an exam; that certainly is not a bad event, but it is sufficiently unexpected that it also might lead to a state of anxiety. Similarly, hostility reflects not assertiveness in a violent sense, but rather assertiveness in a cognitive sense: “the continued effort to extort validational evidence in favor of a type of social prediction which has already proved itself a failure” (1955, p. 510). Threat refers to “the awareness of imminent comprehensive change in one’s core structures” (1955, p. 489). Perhaps most interestingly of all, Kelly defined guilt as the “perception of one’s apparent dislodgment from his core role structure” (1955, p. 502). Core role structures refer to the ways a person understands his or her relationship to significant other people; there-
fore, guilt exists when one perceives that he or she has violated an important role relationship or expectation. A new parent who perceives that she has not treated her child in an acceptable manner or a son who perceives that he has betrayed an aging parent will experience the guilt that Kelly describes. The reader should notice how similar the dynamics of guilt are to the processes Freud describes in terms of the superego (see Chapter 2), Rogers in terms of anxiety (see Chapter 11), and Bandura in terms of the self-system (see Chapter 14). These are provocative redefinitions, and they powerfully illustrate the heuristic value of Kelly's approach.

Kelly produced little empirical work himself, but he did describe a unique assessment device for identifying personal constructs. That device, the Role Construct Repertory Test, or Rep Test (Figure 10.11 illustrates the grid form of the test), has in turn provoked a substantial amount of research.

The Rep Test was designed to reveal the role constructs a person employs to structure his or her expectations for social interactions. In other words, what constructs does one employ to construe significant social others? The first step in completing a Rep Test is for the subject to identify other people who fill a number of roles. Twenty roles that might be employed in the test are listed as the rows in Figure 10.11. The subject's first task is to identify a separate person who fills each of the roles. Second, the person administering the test selects three of the people and asks the subjects to think of an important way in which any two of the people are similar and different from the third. The columns in Figure 10.11 illustrate a number of such triples. The triple in the column adjacent to the roles asks the subject to compare self, father, and mother. For example, a respondent might say that his father and mother are both assertive (the "emergent" pole) but he is passive. In that case, assertive versus passive is written at the bottom of the column as the respondent's first role construct. The second comparison is among the self, an attractive person, and a successful person. The respondent might identify himself and the successful person as thoughtful and the attractive person as shallow, thereby producing the second construct. This process continues until the person administering the test believes that a sufficient number of constructs have been elicited. At this point, the test taker has identified a set of salient role constructs. He typically would be asked to consider all the role occupants on each construct, placing an X in the cell for any person to whom the emergent pole of the construct applies. Thus, any of the target people who are considered assertive would receive an X in the first column.

The completed Rep Test contains a wealth of information. The constructs themselves reveal the respondent's construal mechanisms for making sense of other people, and the columns of the grid indicate how each construct is
Figure 10.11.
Kelley's Role Construct Repertory Test.

<table>
<thead>
<tr>
<th>Self</th>
<th>Mother</th>
<th>Father</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brother</td>
<td>Sister</td>
<td></td>
</tr>
<tr>
<td>Spouse</td>
<td>Ex-name</td>
<td></td>
</tr>
<tr>
<td>Best Friend</td>
<td>Ex-friend</td>
<td></td>
</tr>
<tr>
<td>Pitted Person</td>
<td>Threatening Person</td>
<td></td>
</tr>
<tr>
<td>Attractive Person</td>
<td>Accepted Teacher</td>
<td></td>
</tr>
<tr>
<td>Rejected Teacher</td>
<td>Boss</td>
<td></td>
</tr>
<tr>
<td>Successful Person</td>
<td>Happy Person</td>
<td></td>
</tr>
<tr>
<td>Ethical Person</td>
<td>Envied Person</td>
<td></td>
</tr>
<tr>
<td>Intelligent Person</td>
<td>Construct</td>
<td></td>
</tr>
</tbody>
</table>
applied to a representative set of target individuals. The rows, in turn, demonstrate how this test taker conceptualizes those target individuals. The reader may wish to experience the Rep Test by completing the blank grid in Figure 10.11.

There are a variety of alternative versions of and more complicated scoring systems for the Rep Test (e.g., Bannister & Mair, 1968; Landfield & Epting, 1987). For example, a person may identify two distinct constructs but employ them in a redundant manner. If our example respondent indicated that virtually every target person who was assertive was also thoughtful and each person who was passive was also shallow, then the two constructs are functionally redundant. The more unique constructs a person employs, the more cognitive complexity that person exhibits (e.g., Bieri, 1955).

On the twentieth anniversary of Kelly's death, Jankowicz (1987; see also Davidson, 1978) published an article entitled, "Whatever became of George Kelly?" Jankowicz's (p. 483) answer is that "Kelly's ideas survive as a central organizing theme for a small group of enthusiasts." This group primarily is centered in England, where the leading figure has been one of Kelly's former graduate students, Donald Bannister (e.g., Bannister, 1977, 1985; Bannister & Fransella, 1966, 1971; Bannister & Mair, 1968; Fransella & Bannister, 1977; see also Fransella & Dalton, 1990; Fransella & Thomas, 1988; Winter, 1992). Within the United States, the central figure has been A. W. Landfield (Landfield, 1982, 1988; Landfield & Epting, 1987; Landfield & Leitner, 1980; see also Epting, 1984). Several other systematic research programs exist for applying a personal construct approach in therapeutic domains, such as the work by Viney (Viney, 1993; Viney, Crooks, & Walker, 1995; Viney, Walker, Robertson, Lilley, & Ewan, 1994; see also Neimeyer & Neimeyer, 1990).

The researchers mentioned above largely have adopted an applied focus. In recent years, however, a number of researchers have adopted a personal construct approach to laboratory research. For example, Leitner and Cado (1982) found that individuals who had the most negative attitudes toward homosexuals were those who saw homosexuality as invalidating important personal constructs. These are the individuals who, from Kelly's perspective, should feel the greatest potential threat or stress from homosexuality. Leitner and Cado measured homosexual stress, or the amount of change homosexuality implies for how the self is construed, as the difference between how the self is construed "as I am right now" and "as I would be if I were homosexual." Similarly, Tobacyk and Downs (1986) found and replicated a significant relationship between Kellian threat scores and subsequent increases in state anxiety that attended a major musical performance. In this research, threat was measured as the discrepancy between placement of "self" and "self if you
had just performed poorly on your most important music jury’ on forty bipolar
core constructs. As an aside, the reader should note the similarity between
this methodology and the self–ideal self discrepancy scores employed in some
Rogieran research (see Chapter 11). It is also, in many respects, the mirror
image of Bandura's approach to measuring self-efficacy (see Chapter 14).

Finally, Baldwin, Critelli, Stevens, and Russell (1986) employed a version
of the Rep Test designed to elicit sex role constructs. Subjects completed a
version of the Rep Test in which the role targets included “three people whom
you consider very feminine” and “three people whom you consider very masu-
cline.” They were asked to describe “a feminine way” in which two of the
designated feminine people were alike and different from a third person. Six
such comparisons were made to elicit six feminine constructs. In similar
fashion, six masculine constructs were elicited. Each of the twelve role targets
ten was assigned a rating on each construct, and subjects indicated how
desirable each construct was for themselves. The summed self-ratings across
the femininity and masculinity constructs generated femininity and masculinity
scores for the subjects. These “Sex-Rep” scores are distinct from masculinity
and femininity scores on the Bem Sex Role Inventory in that they reflect “an
individual's extent of identification with his or her own unique conception
of masculinity and femininity” (p. 1086), rather than traditional or cultural
standards. The authors also were able to demonstrate some validity for these
scores, as in the finding that Sex-Rep femininity scores correlated significantly
with self-reported adjustment by new mothers. Taken as a set, these studies
demonstrate the potential utility of Kelly’s conceptual and measurement strat-
egies.

There is much to commend in Lewin's theory. There is, first of all, the tremen-
dous amount of investigatory activity that has been stimulated by Lewin's ideas.
He opened many new doors for the psychologist, doors that have led into
regions of the personality and social behavior that were previously closed to
the experimenter. The work on substitution, level of aspiration, the effects of
interruption on memory, regression, conflict, and group dynamics was initiated
by Lewin. The importance of many of these psychological phenomena had been
established by the observations of psychoanalysts, but it remained for Lewin
to provide a congenial theoretical atmosphere and to devise methods by which
the phenomena could be investigated.

Lewin possessed the valuable talent of being able to make explicit and
concrete some of the more implicit and elusive assumptions regarding person-
ality. He saw, for example, the necessity of spelling out in detail the basic
assumptions made by psychoanalytic theorists regarding the substitution of
one activity for another. When this was done in terms of an organization
of segregated tension systems whose boundaries possessed the property of permeability, the way was provided for experimental attack. This capacity for fairly rigorous and clarifying thinking about significant concepts was one of Lewin’s strong points, and he illuminated many problems that had languished in the shade of incomplete conceptualization and fuzzy theorizing. He was convinced that the science of psychology, if it was to be of use to humans, would have to penetrate and explore experimentally the significant dimension of human conduct. Although Lewin could be abstruse in his theorizing, he rarely failed to get down ultimately to concrete cases and practical prescriptions for research.

Moreover, he clearly recognized that a theory that would encompass the vital aspects of human behavior would have to be multidimensional in scope. In other words, it would have to be a field theory, one that embraced a network of interacting variables rather than pairs of variables. It was this field emphasis that was needed in the 1920s and 1930s to counteract the influence and prestige of an oversimplified and naive stimulus–response psychology. While Gestalt psychology was assaulting and overwhelming the ramparts of structural psychology that stood for mental analysis into elements, Lewin’s topological and vector psychology was vying with a rather barren form of behaviorism that reduced human conduct to simple stimulus–response connections. Lewin’s theory helped to make a subjective frame of reference scientifically respectable at a time when objectivism was the dominant voice in psychology. The so-called inner determinants of conduct, such things as aspirations, values, and intentions, had been summarily cast out by an “objective” psychology in favor of conditioned reflexes, rote learning, and the automatic stamping in and out of stimulus–response bonds. Behaviorism had almost succeeded in reducing a human being to an automaton, a mechanical puppet who danced to the tune of external stimuli or jerked to the promptings of internal physiological drives, a robot bereft of spontaneity and creativity, a hollow person.

Lewin’s theory was one of those that helped to revive the conception of the individual as a complex energy field, motivated by psychological forces, and behaving selectively and creatively. The hollow man was replenished with psychological needs, intentions, hopes, and aspirations. The robot was transformed into a living human being. The crass and dreary materialism of behaviorism was replaced by a more humanistic picture of people. While “objective” psychology tailored many of its empirical propositions to be tested on dogs, cats, and rats, Lewin’s theory led to research on human behavior as expressed in more or less natural settings. Children at play, adolescents in group activities, workers in factories, people planning meals, these were some of the natural life situations in which hypotheses derived from Lewin’s field theory were empirically tested. With such vital research being done under the persuasive aegis of field theory, it is not surprising that Lewin’s viewpoint became widely popular. The heuristic power of the theory, irrespective of its formal
adequacy or its pretensions of being a mathematical model, justifies the high esteem in which Lewin's field theory has been held.

Somewhat paradoxically, Lewin has been widely ignored by the current generation of psychologists, probably in part because his topological approach seems so foreign. Despite this, his ideas and insights remain fresh and appropriate. Evidence of this fertility was provided by the three symposia that comprised the Preconference conducted by the Society of Personality and Social Psychology at the 1996 annual convention of the American Psychological Society. The Preconference was titled, "Up to the roots: The role of Lewian thought in contemporary personality and social psychology." As illustrated in those papers (e.g., Funder, 1996; McAdams, 1996; Steele, 1996), Lewin's approach remains relevant.

George Kelly's personal construct approach to personality has enjoyed a rebirth of sorts in recent years. In part, this is attributable to the cognitive Zeitgeist that pervades psychology today. Beyond the fact that we now have an orientation with which to retrieve this previously "suspended" theory, however, there is much that is appealing within Kelly's approach. His basic premise that individuals differ fundamentally in how they construe reality and in the outcomes they anticipate as a consequence, rings true. It seems undeniable that we do impose our expectations on the world, and those expectations serve to channel our behavior. Kelly provided a service in directing our attention to the manner in which we create the world to which we respond. There are, however, a number of points on which one may object to his theory.

First, Kelly's great strength is the assistance he provides in understanding how individuals construe reality. He said much less about the manner in which individuals acquire their constructs and how those constructs give rise to behavior. The experience corollary speaks to the acquisition of constructs, but only in a very general way. We are told that people develop constructs that allow them to anticipate outcomes, but we have no way of knowing what direction this acquisition process will follow. Supporters of Kelly's theory may argue that this is analogous to complaining that learning theory does not specify what is learned, but it remains the case that Kelly tells us little about what governs the nature of the constructs one forms, the manner in which one assigns objects and events to poles, or the likelihood that one will respond to inaccurate predictions and anxiety with constructive change as opposed to suspension, submersion, or hostility. It is as if we are told that good scientists are "born, not made." Similarly, we learn that we base behavior on anticipated consequences, following the choice corollary and the C–P–C cycle, but we are not told what governs these choices or movement through the cycle. One is reminded of the objection that cognitive models of learning leave the rat "lost in thought."

Second, there is an emotional poverty in Kelly's model of personality. Perhaps as a function of the clients with whom he worked, Kelly emphasized
logic and rationality. In the process of articulating this facet of human behavior, we cannot ignore the passions, which also play a central role in human lives. Much of the endearing appeal of Freudian theory is the salience it affords to human passion, and there is none of that in Kelly. This lack of attention to emotionality and arousal mechanisms leaves a thin and colorless image of human behavior. Similarly, Kelly suggested that healthy people always act in their own best interest, but much of the intrigue in human behavior stems from instances where this assumption seems not to hold.

Finally, the plasticity Kelly ascribed to personality is troubling. Core role constructs exist to provide structure to the personality, but there is little else that can be counted on to endure. There are no goals, no values, no structural units, and no behavioral tendencies. In short, there is no bedrock for personality. Whether they emphasize physiological predispositions or social conditioning, other theorists paint a much clearer picture of a substantive and enduring person: Kelly's portrait is fuzzy. The fluidity that Kelly ascribes to people is a provocative and optimistic feature of his theory, but it also leaves us not knowing where we stand.

All theories have limitations, however, and Kelly articulated a provocative and distinctive perspective on personality. No one has provided us with more insight into the process whereby individuals construct the world to which they respond. The theory may have a limited range of convenience, but it offers considerable utility within that range: Individuals are distinctive because their particular ways of understanding social and physical reality lead them to distinctive expectations about the consequences of their actions.
Carl Rogers's Person-Centered Theory

INTRODUCTION AND CONTEXT
KURT GOLSTEIN
THE STRUCTURE OF THE ORGANISM
THE DYNAMICS OF THE ORGANISM
  Equalization
  Self-Actualization
  "Coming to Terms" with the Environment
THE DEVELOPMENT OF THE ORGANISM
ABRAHAM MASLOW
ASSUMPTIONS ABOUT HUMAN NATURE
HIERARCHY OF NEEDS
SYNDROMES
SELF-ACTUALIZERS
CARL ROGERS
PERSONAL HISTORY
THE STRUCTURE OF PERSONALITY
  The Organism

The Self
Organism and Self: Congruence and Incongruence
THE DYNAMICS OF PERSONALITY
THE DEVELOPMENT OF PERSONALITY
CHARACTERISTIC RESEARCH AND RESEARCH METHODS
  Qualitative Studies
  Content Analysis
  Rating Scales
  Q-Technique Studies
  Experimental Studies of the Self-Concept
  Other Empirical Approaches
CURRENT RESEARCH
  Cognitive Dissonance Theory
  Self-Discrepancy Theory
  The Dynamic Self-Concept
CURRENT STATUS AND EVALUATION
We begin this chapter with a brief account of organismic theory as developed by Kurt Goldstein. We then consider two other formulations of organismic theory, one by Abraham Maslow and the other by Carl Rogers. Rogers will serve as the major figure in this chapter.

In the seventeenth century, Descartes split the individual into two separate yet interacting entities, body and mind. In the nineteenth century, Wundt, subscribing to the tradition of British associationism, atomized the mind by reducing it to the elementary particles of sensations, feelings, and images. In the intervening years, there have been recurrent attempts to put the mind and the body back together and to treat the organism as a unified, organized whole. One notable attempt that has attracted a large following within recent years is known as the organismic or holistic viewpoint. This viewpoint has found expression in the psychobiology of Adolf Meyer (Meyer, 1948; Rennie, 1943), in the medical orientation called psychosomatics (Dunbar, 1954), and in the fundamental work of Coghll on the development of the nervous system in relation to behavior (1929). The most important medical forerunners of the organismic concept are Hughlings Jackson, the preeminent English neurologist (1931), and Claude Bernard, the famous French physiologist (1957). Jan Smuts, the South African statesman and soldier, was the leading philosophical proponent of organismic theory, and his notable book Holism and Evolution (1926) has been very influential. General Smuts coined the word holism from the Greek root holos meaning complete, whole, entire. In psychology, organismic theory has been expounded by J. R. Kantor (1924, 1933, 1947), R. H. Wheeler (1940), Heinz Werner (1948), and Gardner Murphy (1947). Organismic theory drew nourishment from John Dewey's epoch-making article. The reflex arc concept in psychology (1896). Aristotle, Goethe, Spinoza, and William James have been mentioned as providing the seedbed from which organismic theory germinated. Although not all of these authors presented full-fledged organismic theories, their concepts are pointed in that direction.

Closely related to the organismic point of view is the Gestalt movement initiated by Wertheimer, Koffka, and Köhler, who in the years just prior to World War I led a revolt against the type of mental analysis then being performed by Wundt and his followers. This movement stood for a new kind of analysis of conscious experience. Starting with the perceptual field as a whole, they proceeded to differentiate it into figure and background and then studied the properties of each of these components and their mutual influences. In the area of learning, they replaced the doctrine of association with the concept of insight. A person learns a task as a meaningful whole rather than in a piecemeal fashion. Although Gestalt psychology has had a tremendous influ-
ence upon modern thought and is certainly congenial to organismic theory, it cannot be regarded, strictly speaking, as an organismic psychology. The reason for this is that Gestalt psychology as developed by Wertheimer, Koffka, and Köhler has tended to restrict its attention to the phenomena of conscious awareness and has said very little about the organism or personality as a whole. Organismic theory has borrowed many of its concepts from Gestalt psychology, and the two viewpoints are on the friendliest terms. Organismic psychology may be regarded as the extension of Gestalt principles to the organism as a whole.

Kurt Goldstein, the eminent neuropsychiatrist, provides a useful introduction to organismic theories. Largely as a result of his observations and investigations of brain-injured soldiers during World War I and his earlier studies of speech disturbances, Goldstein came to the conclusion that any particular symptom displayed by a patient could not be understood solely as the product of a particular organic lesion or disease but had to be considered as a manifestation of the total organism. The organism always behaves as a unified whole and not as a series of differentiated parts. Mind and body are not separate entities, and the mind does not consist of independent faculties or elements and the body of independent organs and processes. The organism is a single unity. What happens in a part affects the whole. The psychologist studies the organism from one perspective, the physiologist from another. However, both disciplines need to operate within the framework of organismic theory because any event, be it psychological or physiological, always occurs within the context of the total organism unless it has become artificially isolated from this context. The laws of the whole govern the functioning of the differentiated parts of the whole. Consequently, it is necessary to discover the laws by which the whole organism functions in order to understand the functioning of any member component. This is the basic tenet of organismic theory.

The principal features of organismic theory as they pertain to the psychology of the person may be summarized as follows:

1. Organismic theory emphasizes the unity, integration, consistency, and coherence of the normal personality. Organization is the natural state of the organism; disorganization is pathological and is usually brought about by the impact of an oppressive or threatening environment or by intraorganic anomalies.

2. Organismic theory starts with the organism as an organized system and proceeds to analyze it by differentiating the whole into its constituent members. A member is never abstracted from the whole to which it belongs and studied as an isolated entity; it is always considered to have membership character in the total organism. Organismic theorists believe that it is impossible to understand the whole by directly studying isolated parts and segments because the whole functions according to laws that cannot be found in the parts.
3. Organismic theory assumes that the individual is motivated by one sovereign drive rather than by a plurality of drives. Goldstein's name for this sovereign motive is self-actualization or self-realization, which means that humans strive continuously to realize their inherent potentialities by whatever avenues are open. This singleness of purpose gives direction and unity to one's life.

4. Although organismic theory does not regard the individual as a closed system, it tends to minimize the primary and directive influence of the external environment on normal development and to stress the inherent potentialities of the organism for growth. The organism selects the features of the environment to which it will react and—except in rare and abnormal circumstances—the environment cannot force the individual to behave in a manner that is foreign to his or her nature. If the organism cannot control the environment, it will try to adapt itself to it. In general, organismic theory feels that the potentialities of the organism, if allowed to unfold in an orderly way by an appropriate environment, will produce a healthy, integrated personality, although malignant environmental forces may at any time destroy or cripple the person. There is nothing inherently "bad" in the organism; it is made "bad" by an inadequate environment.

5. Organismic theory feels that there is more to be learned from a comprehensive study of one person than from an extensive investigation of an isolated psychological function abstracted from many individuals. For this reason, organismic theory has tended to be more popular with clinical psychologists who are concerned with the total person than it has been with experimental psychologists who are primarily interested in separate processes or functions, like perception and learning.

We now turn to an account of the organismic theory developed by Kurt Goldstein.

KURT GOLDSTEIN

Kurt Goldstein received his training in neurology and psychiatry in Germany and rose to a position of eminence as a medical scientist and professor before migrating to the United States in 1935 after the Nazis came to power. He was born in Upper Silesia, then a part of Germany but now a part of Poland, November 6, 1878, and earned a medical degree at the University of Breslau, Lower Silesia, in 1903. He served an apprenticeship with several outstanding medical scientists for several years prior to accepting a teaching and research position at the Psychiatric Hospital in Koenigsberg. During his eight years in this post he did a great deal of research and wrote numerous papers that established his reputation and led to his appointment at the age of thirty-six as professor of neurology and psychiatry and director of the Neurological Institute of the University of Frankfurt. During World War I, he became director of the Military Hospital for Brain-
Injured Soldiers and was instrumental in establishing an institute for research on the aftereffects of brain injuries. It was in this institute that Goldstein made the fundamental studies that laid the basis for his organismic viewpoint (Gelb & Goldstein, 1920). In 1930 he went to the University of Berlin as professor of neurology and psychiatry and also served as director of the Department of Neurology and Psychiatry at Moabit Hospital. When Hitler took over Germany, Goldstein was jailed and then released on the condition that he leave the country. He went to Amsterdam where he completed his most important book, Der aufbau des organismus, which was translated into English under the title The organism (1939). Coming to the United States in 1935 he worked for a year at the New York Psychiatric Institute, following which he became chief of the Laboratory of Neurophysiology at Montefiore Hospital, New York City, and clinical professor of neurology at the College of Physicians and Surgeons of Columbia University. During this period he lectured on psychopathology in the Department of Psychology at Columbia and was invited to give the William James lectures at Harvard University, which were published under the title Human nature in the light of psychopathology (1940). During the war years he was clinical professor of neurology at Tufts Medical School in Boston and published a book on the aftereffects of brain injuries in war (1942). In 1945 he returned to New York City to engage in the private practice of neuropsychiatry and psychotherapy. He became associated with Columbia University and the New School for Social Research and was guest professor at Brandeis University commuting weekly to Waltham. There he was associated with two other holistic theorists, Andras Angyal and Abraham Maslow. His last book was on language and language disturbances (1948), an area in which he had done research throughout his professional life. In his later years, Goldstein became more closely identified with phenomenology and existential psychology. He died in New York City September 19, 1965, at the age of 86. His autobiography (1967) appeared posthumously. A memorial volume (Simmel, 1968) contains a complete bibliography of Goldstein's writings.

The organism consists of differentiated members that are articulated together; these members do not become detached and isolated from one another except under abnormal or artificial conditions, for example, strong anxiety. The primary organization of organismic functioning is that of figure and ground. A figure is any process that emerges and stands out against a background. In terms of perception, it is that which occupies the center of attentive awareness. When, for instance, a person is looking at an object in a room, the perception of the object becomes a figure against the background of the rest of the room. In terms of action, the figure is the principal, ongoing activity of the organism. When one is reading a book, the reading is the figure that stands out from such other activities as twisting one's hair, chewing one's pencil, hearing the
rumble of voices in the next room, and breathing. A figure has a definite boundary or contour that encloses it and separates it from the surroundings. The background is continuous; it not only surrounds the figure but extends behind it.

What causes a figure to emerge from the background of the total organism? It is determined by the task that the nature of the organism at the time requires. Thus, when a hungry organism is confronted by the task of getting food, any process that will aid in performing the task becomes elevated as a figure. It may be a memory of where food has been found in the past, a perception of food objects in the environment, or an activity that will produce food. However, if the organism should change, for example, when a hungry person becomes frightened, a new process will emerge as figure appropriate to the task of dealing with the fear. New figures emerge as the tasks of the organism change.

Although Goldstein did not have much to say regarding the structure of the organism aside from differentiating between figure and ground, he did point out that there are three different kinds of behavior. These are the performances that are voluntary, consciously experienced activities, attitudes that are feelings, moods, and other inner experiences, and processes that are bodily functions that can be experienced only indirectly (1939, pp. 307 ff.).

Goldstein also made great use of the structural distinction between concrete and abstract behavior. Concrete behavior consists of reacting to a stimulus in a fairly automatic or direct manner while abstract behavior consists of action upon the stimulus by the organism. For example, in concrete behavior one perceives the stimulus configuration and reacts to it as it appears at the moment whereas in abstract behavior the person thinks about the stimulus pattern, what it means, its relation to other configurations, how it can be used, and what its conceptual properties are. The difference between concrete and abstract behavior is the difference between a direct reaction to a stimulus and reacting to it after thinking about the stimulus. These two kinds of behavior depend upon contrasting attitudes toward the world.

The main dynamic concepts presented by Goldstein are (1) the equalization process or the centering of the organism, (2) self-actualization or self-realization, and (3) "coming to terms" with the environment.

Equalization

Goldstein postulated an available energy supply that is fairly constant and that tends to be evenly distributed throughout the organism. This constant, evenly distributed energy represents the "average" state of tension in the organism, and it is to this average state that the organism always returns or tries to return following a stimulus that changes the tension. This return to the average
state is the equalization process. For example, one hears a sound coming from the right and turns one's head in that direction. The turning of the head equalizes the distribution of energy in the system that has been unbalanced by the sound. Eating when hungry, resting when tired, and stretching when cramped are other familiar examples of the equalization process.

The goal of a normal, healthy person is not simply to discharge tension but to equalize it. The level at which tension becomes balanced represents a centering of the organism. This center is one that enables the organism to perform most effectively its work of coping with the environment and of actualizing itself in further activities according to its nature. Full centering or complete balance is an ideal holistic state and is probably rarely achieved.

The principle of equalization explains the consistency, coherence, and orderliness of behavior in spite of disturbing stimuli. Goldstein did not believe that the sources of disturbance are primarily intraorganic except under abnormal and catastrophic circumstances that produce isolation and inner conflict. In an adequate environment, the organism will always remain more or less in balance. Energy redistributions and imbalance of the system result from environmental interferences and sometimes from inner conflict. As a result of maturation and experience, the person develops preferred ways of behaving that keep the interferences and conflicts to a minimum and preserve the balance of the organism. An individual's life becomes more centered and less subject to the fortuitous changes of the inner and outer world as he or she grows older.

This is Goldstein's master motive; in fact, it is the only motive that the organism possesses. What appear to be different drives such as hunger, sex, power, achievement, and curiosity are merely manifestations of the sovereign purpose of life, to actualize oneself. When people are hungry, they actualize themselves by eating; when they crave power, they actualize themselves by obtaining power. The satisfaction of any particular need is in the foreground when it is a prerequisite for the self-realization of the total organism. Self-actualization is the creative trend of human nature. It is the organic principle by which the organism becomes more fully developed and more complete. The ignorant person who desires knowledge feels an inner emptiness; he or she has a sense of incompleteness. By reading and studying, the desire for knowledge is fulfilled and the emptiness disappears. A new person has been created, thereby, one in whom learning has taken the place of ignorance. The desire has become an actuality. Any need is a deficit state that motivates the person to replenish the deficit. It is like a hole that demands to be filled in. This replenishment or fulfillment of a need is what is meant by self-actualization or self-realization.

Although self-actualization is a universal phenomenon in nature, the specific ends toward which people strive vary from person to person. This is so
because people have different innate potentialities that shape their ends and
direct the lines of their individual development and growth as well as different
environments and cultures to which they must adjust and from which they
must secure the necessary supplies for growth.

How can an individual’s potentialities be determined? Goldstein said that
this can best be done by finding out what the person prefers and what he or
she does best. Their preferences correspond to their potentialities. This means
that if we are to know what people are trying to actualize, we must familiarize
ourselves with what they like to do and what they have a gift for doing. The
baseball player is actualizing those potentialities that are developed by playing
baseball, the lawyer those potentialities that are realized by the practice of law.

In general, Goldstein stressed conscious motivation over unconscious moti-
vation. The unconscious, in his eyes, is the background into which conscious
material recedes when it is no longer useful for self-realization in a definite
situation and from which it emerges when it again becomes suitable and
appropriate for self-realization: “All the peculiarities which Freud enumerates
as characteristic for the unconscious, correspond completely to the changes
which normal behavior undergoes through isolation by disease” (1939, p. 323).

“Coming to Terms”
with the
Environment

Although Goldstein as an organismic theorist emphasized the inner determi-
nants of behavior and the principle that the organism finds the environment
that is most appropriate for self-actualization, he did not adopt the extreme
position that the organism is immune to the events in the external world. He
recognized the importance of the objective world both as a source of distur-
bance with which the individual must cope and as a source of supplies by
means of which the organism fulfills its destiny. That is, the environment
intrudes upon the organism by stimulating or overstimulating it so that the
organic equilibrium is upset, while on the other hand the upset organism
searches in the environment for what it needs to equalize the inner tension.
In other words, there is an interaction between the organism and the environ-
ment.

The person has to come to terms with the environment both because it
affords the means by which self-actualization can be achieved and because it
contains obstructions in the form of threats and pressures that hinder self-
realization. Sometimes the threat from the environment may be so great that
the individual’s behavior becomes frozen by anxiety and he or she is unable
to make any progress toward the goal. At other times, self-actualization may
be hampered because the environment lacks those objects and conditions that
are necessary for actualization.

Goldstein tells us that a normal, healthy organism is one “in which the
tendency towards self-actualization is acting from within, and overcomes the
disturbance arising from the clash with the world, not out of anxiety but out
of the joy of conquest" (1939, p. 305). This moving statement suggests that coming to terms with the environment consists primarily of mastering it. If this cannot be done, then the person has to accept the difficulties and adjust as best as possible to the realities of the outer world. If the discrepancy between the organism's goals and the realities of the environment is too great, the organism either breaks down or has to give up some of its aims and try to actualize itself on a lower level of existence.

Although the concept of self-actualization suggests that there are patterns or stages of development through which the person progresses, Goldstein did not have much to say concerning the course of growth, except for some generalities to the effect that behavior becomes more even and orderly and more fitted to the environment as the person grows older. Goldstein hinted that there are tasks peculiar to certain age levels but he did not specify what these tasks are or whether they are the same for all individuals. The importance of heredity is also implied but its relative contribution is not made explicit. Nor did Goldstein present a theory of learning. He did talk about the "reorganization" of old patterns into new and more effective patterns, the "repression of attitudes and urges that are in opposition to the development of the whole personality," the acquisition of preferred ways of behaving, the emergence of figure from background, the fixation of patterns of behavior by traumatic stimuli or by repetitive practice with isolated stimuli, adjustmental shifts, and substitute formations, but these notions are not brought together into a systematic theory of learning. They are most congenial to a Gestalt theory of learning.

Goldstein did say that if a child is exposed to situations with which it can cope, it will develop normally through maturation and training. As new problems arise, it will form new patterns to deal with them. Reactions no longer useful for the goal of self-actualization will drop out. However, if the conditions of the environment are too arduous for the child's capacities, it will develop reactions inconsistent with the principle of self-actualization. In this case, the process tends to become isolated from the person's pattern of life. Isolation of a process is the primary condition for the development of pathological states. For example, humans are neither aggressive nor submissive by nature, but in order to fulfill their nature, they sometimes have to be aggressive and at other times submissive, depending upon circumstances. However, should a strong, fixated habit of either aggression or submission be formed, it will tend to have a disruptive influence upon personality by asserting itself at inappropriate times and in ways that are contrary to the interests of the whole person.

We cannot do justice here to the richness of Goldstein's empirical data; nor is it possible to convey to the reader the full measure of his insights
into the reasons for human conduct. Instead, we provide the following set of directions to the investigator who wishes to conduct research in the organismic manner. (1) Study the whole person. (2) Make intensive studies of individual cases using tests, interviews, and observations under natural conditions. Do not depend upon just one type of evidence. (3) Try to understand the behavior of the person in terms of such system principles as self-actualization, coming to terms with the environment, and abstract versus concrete attitudes rather than as specific responses to specific stimuli. (4) Use both qualitative and quantitative methods in the collection and analysis of the data. (5) Do not employ experimental controls and standardized conditions that destroy the integrity of the organism and make the behavior unnatural and artificial. (6) Always bear in mind that the organism is a complex structure and its behavior is the resultant of a vast network of determiners.

ABRAHAM MASLOW
Abraham Maslow [see especially Motivation and personality (1954, revised edition, 1970), Toward a psychology of being (1968a), and The farther reaches of human nature (1971)] espoused a holistic–dynamic point of view that has much in common with that of Goldstein, who was his colleague at Brandeis University. Maslow considered that his position fell within the broad province of humanistic psychology, which he characterized as a "third force" in American psychology, the other two being behaviorism and psychoanalysis.

Maslow was born in Brooklyn, New York, on April 1, 1908. All of his degrees were earned at the University of Wisconsin, where he did research on primate behavior. For fourteen years (1937–1951) he was on the faculty of Brooklyn College. In 1951, Maslow went to Brandeis University, where he remained until 1969, when he became resident fellow of the Laughlin Foundation in Menlo Park, California. Maslow suffered a fatal heart attack on June 8, 1970.

Since his death a number of books about his life and work have appeared. Among these are a memorial volume containing eulogies, some unpublished notes by Maslow, and a complete bibliography of his writings (B. G. Maslow, 1972) and an intellectual portrait by a close associate (Lowry, 1973a). Lowry (1973b) has also brought together in one volume the germinal papers by Maslow. Other books on Maslow have been written by Goble (1970) and Wilson (1972), and Lowry has published Maslow's journals (Maslow, 1982).

Rather than analyze Maslow's theory in terms of structure, dynamics, and development, we shall single out for discussion four distinctive features of his views regarding personality: his assumptions about human nature, his hierarchy of needs, his description of syndromes, and his study of self-actualizers. It is important to bear in mind that Maslow, unlike Goldstein, drew upon his investigations of healthy and creative persons to arrive at certain formulations regarding personality.
Assumptions about Human Nature

Maslow upbraided psychology for its "pessimistic, negative and limited conception" of humans. He felt that psychology had dwelled more upon human frailties than upon human strengths: that it had thoroughly explored the sins while neglecting the virtues. Psychology had seen life in terms of an individual making desperate attempts to avoid pain rather than in taking active steps to gain pleasure and happiness. Where is the psychology, Maslow asked, that takes account of gaiety, exuberance, love, and well-being to the same extent that it deals with misery, conflict, shame, and hostility? Psychology "has voluntarily restricted itself to only half of its rightful jurisdiction, and that the darker, meaner half." Maslow attempted to supply the other half of the picture, the brighter, better half, and to give a portrait of the whole person.

He wrote:

Now let me try to present briefly and at first dogmatically the essence of this newly developing conception of the psychiatrically healthy man. First of all and most important of all is the strong belief that man has an essential nature of his own, some skeleton of psychological structure that may be treated and discussed analogously with his physical structure, that he has needs, capacities and tendencies that are genetically based, some of which are characteristic of the whole human species, cutting across all cultural lines, and some of which are unique to the individual. These needs are on their face good or neutral rather than evil. Second, there is involved the conception that full healthy and normal and desirable development consists in actualizing this nature, in fulfilling these potencies, and in developing into maturity along the lines that this hidden, covert, dimly seen essential nature dictates, growing from within rather than being shaped from without. Third, it is now seen clearly that psychopathology in general results from the denial or the frustration or the twisting of man’s essential nature. By this conception what is good? Anything that conduces to this desirable development in the direction of actualization of the inner nature of man. What is bad or abnormal? Anything that frustrates or blocks or denies the essential nature of man. What is psychopathological? Anything that disturbs or frustrates or twists the course of self-actualization. What is psychotherapy, or for that matter any therapy of any kind? Any means of any kind that helps to restore the person to the path of self-actualization and of development along the lines that his inner nature dictates. (1954, pp. 340–341)

In a further statement of his basic assumptions, Maslow added this important one:

This inner nature is not strong and overpowering and unmistakable like the instincts of animals. It is weak and delicate and subtle and easily
overcome by habit, cultural pressure, and wrong attitudes toward it. Even though weak, it rarely disappears in the normal person—perhaps not even in the sick person. Even though denied, it persists underground forever pressing for actualization. (1968a, p. 4)

Maslow also wrote, "All the evidence that we have (mostly clinical evidence, but already some other kinds of research evidence) indicates that it is reasonable to assume in practically everyone human being, and certainly in almost every newborn baby, that there is an active will toward health, an impulse toward growth, or towards the actualization of human potentialities" (1967b).

In these eloquent and representative passages, Maslow made a number of striking assumptions regarding the nature of humans. Most notably, people have an inborn nature that is essentially good or at least neutral. It is not inherently evil. It is not the case that instincts are bad or antisocial and must be tamed by training and socialization.

As personality unfolds through maturation in a benign environment and by active efforts on the part of the person to realize their nature, the creative powers of humans manifest themselves ever more clearly. When humans are miserable or neurotic, it is because the environment has made them so through ignorance and social pathology or because they have distorted their thinking. Maslow believed that many people are afraid of and draw back from becoming fully human (self-actualized). Destructiveness and violence, for example, are not indigenous to humans. They become destructive when their inner nature is twisted or denied or frustrated. Maslow (1968b) distinguished between pathological violence and healthy aggression that contends against injustice, prejudice, and other social ills.

Maslow suggested that we interpret neurosis as a "failure of personal growth." That is, neurosis entails "a falling short of what one could have been, and even, one could say, of what one should have been, biologically speaking, that is, if one had grown and developed in an unimpeded way" (Maslow, 1971, p. 33).

Maslow asked himself the obvious question that growth theorists must confront. If we all carry the impulse to actualizing our potential, then what interferes with it? Why aren't we all self-actualizing? We have already seen that exposure to an unhealthy environment provides one answer to this question (later in this chapter we will see that Carl Rogers answered this question in a similar manner, but he attempted to identify the process in the environment that makes it unhealthy). This position led Maslow squarely to a consideration of the relationship between humans and society. He wrote, "(1) since a man is to be called sick who is basically thwarted, and (2) since such basic thwarting is made possible ultimately only by forces outside the individual, then (3) sickness in the individual must come ultimately from a sickness in the society. The good or healthy society then would be defined as one that permit-
ted man's highest purposes to emerge by satisfying all his basic needs” (1970, p. 58). In part, as we shall see, all this occurs because growth motivation is weak (i.e., less "prepotent") compared to the motivation to gratify basic needs.

Two inner defenses also keep us out of touch with ourselves. First, the *Jonah complex* refers to our tendency to fear and attempt to evade our "constitutionally suggested" destiny and possibilities. We fear the "godlike possibilities" in ourselves, and we refuse to allow ourselves to be great. Maslow's response when students felt embarrassed by this attitude was to ask, "If not you, then who else?" (1971, p. 36). Greatness in others, and the potential for greatness in ourselves, is often overwhelming, and it produces what the Greeks called a fear of *hubris*, or sinful pride. We evade our own growth and set low levels of aspiration as a consequence. Second, *desacralizing* occurs when people have learned to deny the awesome, symbolic, and poetic qualities of people or activities. Lack of trust and lack of respect follow. In a manner reminiscent of Jung's discussion of intuition, Maslow suggested that healthy or self-actualizing individuals must learn to resacralize their worlds.

Maslow (1967a, 1970) proposed a theory of human motivation based on a *hierarchy of needs* (see Figure 11.1). The lower a need is in the hierarchy, the more *prepotent* or dominant that need is. In other words, when several needs are active, the lowest need will be the most compelling. As needs are satisfied, new and higher needs emerge. In addition, needs at the lower levels of the hierarchy entail *deficiency motivation*, because they are triggered by some deficit or lack within the person, while needs at the highest level entail

![Figure 11.1](image-url)
growth motivation, because they entail the person's striving after goals and personal growth. This progression in many respects is analogous to the progression from opportunistic to protractive functioning described by Gordon Allport. Maslow regarded the needs in his hierarchy as *instinctoid*, or "weak instincts." That is, we inherit the urges, but we learn their goals or modes of expression. Healthy gratification of these needs does not occur through arbitrary associations but through "intrinsically proper" satisfiers. In many respects, Maslow's instinctoid needs are similar to the "drive fragments" described by Erikson.

The lowest level in Maslow's hierarchy is the *physiological* needs. This includes hunger, sex, thirst, and other drives with a somatic basis. To the extent that these physiological needs are unsatisfied, they come to dominate the person. Such needs are preemptive, in the sense that they push all other needs into the background. The absence or disappearance of all other needs in a person who is preoccupied by hunger, for example someone who is a casualty of war or natural disaster, is not paradoxical; rather, it is a consequence of the prepotency of the physiological needs. Notice that such needs correspond in many respects to the instincts described by Freud. As the physiological needs are gratified, higher needs emerge. As Maslow stated, "a want that is satisfied is no longer a want. The organism is dominated and its behavior organized only by unsatisfied needs. If hunger is satisfied, it becomes unimportant in the current dynamics of the individual" (1970, p. 38).

The next set of needs to emerge are the *safety* needs. These include security, stability, dependency, protection, freedom from fear, need for structure, etc. Such needs are most obvious in infants and children, as in the young child's fear of strangers. The safety needs are largely satisfied for most adults living in an hospitable society. Such needs are seen only during natural or social disasters or in neurotic behavior such as obsessive-compulsive disorder.

The third set of needs to emerge are the *belongingness and love* needs. These represent the need for friends, family, and "affectionate relations with people in general." Maslow referred these needs to "our deeply animal tendency to herd, to flock, to join, to belong" (1970, p. 44). The increasing urbanization and depersonalization of recent generations may be contributing to the frustration of these needs. In a manner reminiscent of Erik Erikson's discussion of the basic conflict of Intimacy versus Isolation, Maslow suggested that "the thwarting of these needs is the most commonly found core in cases of maladjustment and more severe pathology" (1970, p. 44).

The fourth level of the hierarchy includes two sets of *esteem* needs, representing our needs for self-esteem and for esteem from others. The first set includes desires for strength, achievement, mastery and competence, confidence, and independence. The second set includes the needs for respect and esteem from others, incorporating the desires for fame, status, dominance, attention, and dignity. These needs, as Maslow pointed out, are similar to
constructs found in the theories of Adler, Horney, Allport, and Rogers. The
dynamics also are similar, as in Maslow’s Adler-like suggestion that thwarting
of the self-esteem need produces feelings of inferiority, which in turn give rise
to compensatory or neurotic trends. Similarly, he followed Carl Rogers in
pointing out the “dangers of basing self-esteem on the opinions of others rather
than on real capacity, competence, and adequacy to the task” (1970, p. 46).

The highest level need is for self-actualization. Maslow stated that when
all four of the basic, deficiency needs have been satisfied, “a new discontent
and restlessness will soon develop, unless the individual is doing what he,
individually, is fitted for . . . . What a man can be, he must be” (1970,
p. 46). Maslow borrowed this term from Goldstein, and he acknowledged its
relationship to such other constructs as Jung’s self archetype and Rogers’s
actualizing tendency. In Maslow’s specific use of the term, self-actualization
refers to “the desire to become more and more what one idiosyncratically is,
to become everything that one is capable of becoming” (1970, p. 46). It is
important to recognize that self-actualization does not entail a deficiency or
a lack of something external; rather, it represents “intrinsic growth of what
is already in the organism . . . . development then proceeds from within rather
than from without, and paradoxically the highest motive is to be unmotivated

Self-actualizing people are not primarily motivated by basic needs; rather,
they are metamotivated by metaneeds or Being-values. Maslow was suggesting
that self-actualizers, whom he termed “more fully human,” are guided by
intrinsic values, not by the quest for goal objects. Notice how reminiscent this
description is of Adler’s “striving for superiority.” Maslow’s study of self-
actualization began with his “high-IQ devotion” to two of his teachers, Ruth
Benedict and Max Wertheimer. It is only in such eminent people that we see
expression of the deepest and most authentic facet of human nature, the Being-
values. The metaneeds are instinctoid, or biologically necessary, just as the
four basic needs are. That is, the metaneeds are necessary to avoid illness,
or “metapathology,” and to achieve full humanness. Table 11.1 provides Mas-
low’s list of Being-values and corresponding pathologies. Interestingly, Maslow
described Table 11.1 as a “kind of periodic table” useful for identifying patholo-
gies not yet discovered. As a final point, Maslow noted that, while the basic
needs are prepotent to the metaneeds, the metaneeds are equally potent. They
do not exist in a generalized hierarchy of prepotency. Individuals, however,
seem to develop their own hierarchies of the metaneeds based on the other
components of their personalities.

Maslow provided a number of qualifications to the hierarchy of needs
described above. For example, in addition to the conative needs contained in
the hierarchy, we also possess cognitive needs, most notably the desires to
know and to understand as well as a truly basic aesthetic need. It is not
completely clear how these ancillary needs fit into the hierarchy, but their
<table>
<thead>
<tr>
<th>B-values</th>
<th>Pathogenic deprivation</th>
<th>Specific metapathologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Truth</td>
<td>Dishonesty</td>
<td>Disbelief; mistrust; cynicism; skepticism; suspicion</td>
</tr>
<tr>
<td>2. Goodness</td>
<td>Evil</td>
<td>Utter selfishness; hatred, repulsion, disgust; reliance only upon self and for self; nihilism; cynicism</td>
</tr>
<tr>
<td>3. Beauty</td>
<td>Ugliness</td>
<td>Vulgarity; specific unhappiness, restlessness; loss of taste, tension, fatigue; philistinism; bleakness</td>
</tr>
<tr>
<td>4. Unity; wholeness</td>
<td>Chaos: Atomism, loss of connectedness.</td>
<td>Disintegration: &quot;the world is falling apart&quot;; arbitrariness</td>
</tr>
<tr>
<td>4A. Dichotomy-transcendence</td>
<td>Black-and-white dichotomies; loss of gradations, of degree; forced polarization; forced choices</td>
<td>Black-white thinking, either/or thinking; seeing everything as a duel or a war, or a conflict; low synergy; simplistic view of life</td>
</tr>
<tr>
<td>5. Aliveness; process</td>
<td>Deadness; mechanizing of life</td>
<td>Deadness; robotizing; feeling oneself to be totally determined; loss of emotion; boredom (?) ; loss of zest in life; experiential emptiness</td>
</tr>
<tr>
<td>6. Uniqueness</td>
<td>Sameness; uniformity; interchangeability</td>
<td>Loss of feeling of self and of individuality; feeling oneself to be interchangeable, anonymous, not really needed</td>
</tr>
<tr>
<td>7. Perfection</td>
<td>Imperfection; sloppiness; poor workmanship, shoddiness</td>
<td>Discouragement (?) ; hopelessness; nothing to work for</td>
</tr>
<tr>
<td>7A. Necessity</td>
<td>Accident; occasionalism; inconsistency</td>
<td>Chaos, unpredictability; loss of safety; vigilance</td>
</tr>
<tr>
<td>8. Completion; finality</td>
<td>Incompleteness</td>
<td>Feelings of incompleteness with perseveration; hopelessness; cessation of striving and coping; no use trying</td>
</tr>
<tr>
<td>9. Justice</td>
<td>Injustice</td>
<td>Insecurity; anger; cynicism; mistrust; lawlessness; jungle world-view; total selfishness</td>
</tr>
<tr>
<td>9A. Order</td>
<td>Lawlessness; chaos, breakdown of authority</td>
<td>Insecurity; wariness; loss of safety, of predictability; necessity for vigilance, alertness, tension, being on guard</td>
</tr>
<tr>
<td>10. Simplicity</td>
<td>Confusing complexity; disconnectedness; disintegration</td>
<td>Overcomplexity; confusion; bewilderment, conflict, loss of orientation</td>
</tr>
<tr>
<td>11. Richness; totality; comprehensiveness</td>
<td>Poverty; coarctation</td>
<td>Depression; uneasiness; loss of interest in world</td>
</tr>
<tr>
<td>12. Effortlessness</td>
<td>Effortfulness</td>
<td>Fatigue, strain, striving, clumsiness, awkwardness, gracelessness, stiffness</td>
</tr>
<tr>
<td>13. Playfulness</td>
<td>Humorlessness</td>
<td>Grimness; depression; paranoid</td>
</tr>
<tr>
<td>14. Self-sufficiency</td>
<td>Contingency; accident; occasionalism</td>
<td>Humorlessness; loss of zest in life; cheerlessness; loss of ability to enjoy</td>
</tr>
<tr>
<td>15. Meaningfulness</td>
<td>Meaninglessness</td>
<td>Dependence upon (?) the perceiver (?) ; it becomes his or her responsibility</td>
</tr>
</tbody>
</table>

Meaninglessness; despair; senselessness of life

similarity to the metaneeds suggests that they serve as a component of or a precondition for self-actualization. In addition, there may be exceptions to the order of the basic needs. The most common reversal occurs when self-esteem is more important to a person than love. There occasionally also are "apparently innately creative people" in whom the drive to creativeness emerges not as part of self-actualization but in spite of the lack of gratification of the basic needs. Alternatively, the less prepotent needs may simply be lost in people who have experienced life at a very low level. People may choose to risk deprivation of a lower need in the service of a higher need, as in a person who gives up a job to preserve his or her self-respect. Eventually, however, the more prepotent need will reassert itself. Finally, Maslow introduced what he called "increased frustration-tolerance through early gratification. People who have been satisfied in their basic needs throughout their lives, particularly in their earlier years, seem to develop exceptional power to withstand present or future thwarting of these needs" (1970, p. 53).

Maslow also qualified his statement that a higher need emerges when the next lower need is satisfied. In fact, one need does not have to be completely satisfied before the next need emerges; rather, Maslow proposed "decreasing percentages of satisfaction as we go up the hierarchy of prepotency." For example, it is as if the average person is satisfied about 85% in physiological needs, 70% in safety needs, 50% in love needs, 40% in self-esteem needs, and 10% in self-actualization needs.

Finally, Maslow offered a number of reasonable complications to his model. First, he did not commit to needs being either completely conscious or unconscious. Although we typically are not aware of our basic needs, we may become conscious of them with effort. Echoing Cattell, Maslow suggested that our everyday conscious desires are "surface indicators of more basic needs" (1970, p. 56). Second, Maslow recognized the reality of cultural diversity, and he did not claim that his hierarchy was universal. He did suggest, however, that the hierarchy is more universal and more basic than the superficial conscious desires and behaviors to which we usually attend. Third, Maslow agreed with Freud that most behavior is overdetermined or multimotivated by all the basic needs. Drawing on his early research with animals, he offered eating and sexual behavior as illustrations. Finally, some behavior is not motivated but is determined by the external field or is a reflection of the person's style.

**SYNDROMES**

Maslow believed that the organization of personality could best be understood by using the concept of the personality syndrome, a term he borrowed from medicine. He described a syndrome as "a structured, organized complex of apparently diverse specificities (behaviors, thoughts, impulses to action, perceptions, etc.) which, however, when studied carefully and validly are found
to have a common unity that may be phrased variously as a similar dynamic meaning, expression, "flavor," function, or purpose" (1970, p. 303). To borrow a term from Allport, a syndrome leads to a group of "functionally equivalent" feelings and behaviors that are relatively resistant to change. Maslow indicated that each syndrome consists of many levels of generality. He suggested that we think of a large box containing smaller boxes, which in turn contain even smaller boxes, and so on. For example, he described a security syndrome. It may contain fourteen subsyndromes, one of which might be power-submission. An insecure person might express the need for power in many ways, one of them being prejudice. A tendency to prejudice then would be one subsyndrome of the need for power. The analysis could continue to identify subsyndromes underlying prejudice, and so on. Unfortunately, Maslow's concept of personality syndromes is little discussed in the rest of his work, and there are ambiguities in it. For example, how do syndromes develop, and what are the possible types of syndrome? Maslow's examples of self-esteem and security syndromes suggest that the needs in his hierarchy provide the nuclei for syndromes. Such a strategy would allow the student to draw parallels between syndromes and Freudian character types or Jungian complexes.

Maslow's analysis of syndromes also follows many of the other theories in this book in recognizing the artificiality of requiring that one analyze either general or specific personality characteristics. Specific characteristics are nested within more general characteristics, and one may profitably work at any particular level without distorting the structure of the whole person. As Maslow writes, such a strategy "allows us to be sophisticated both about particulars and about wholes without falling into either meaningless particularism or vague and useless generality... it allows us to study uniqueness and commonness simultaneously and effectively" (1970, pp. 317–318).

Maslow is perhaps best known for his studies of self-actualizing individuals. He believed, that if psychologists study crippled, stunted, neurotic people exclusively, they are bound to produce a crippled psychology. In order to develop a more complete and comprehensive science of the human person, it is also incumbent upon psychologists to study people who have realized their potentialities to the fullest. Maslow did just this: he made an intensive and far-reaching investigation of a group of self-actualizing people. They are rare birds, as Maslow found when he was securing his group. Some of his subjects were historical personages, such as Lincoln, Jefferson, Walt Whitman, Thoreau, and Beethoven. Others were living at the time they were studied, like Eleanor Roosevelt, Einstein, and friends and acquaintances of the investigator. These people were investigated clinically to discover what characteristics distinguished them from the ordinary run of people. These turned out to be their
distinguishing features: (1) They are realistically oriented. (2) They accept themselves, other people, and the natural world for what they are. (3) They have a great deal of spontaneity. (4) They are problem centered rather than self-centered. (5) They have an air of detachment and a need for privacy. (6) They are autonomous and independent. (7) Their appreciation of people and things is fresh rather than stereotyped. (8) Most of them have had profound mystical or spiritual experiences although not necessarily religious in character. (9) They identify with mankind. (10) Their intimate relationships with a few specially loved people tend to be profound and deeply emotional rather than superficial. (11) Their values and attitudes are democratic. (12) They do not confuse means with ends. (13) Their sense of humor is philosophical rather than hostile. (14) They have a great fund of creativeness. (15) They resist conformity to the culture. (16) They transcend the environment rather than just coping with it.

Maslow also investigated the nature of what he calls "peak experiences." Reports were obtained in answer to the request to think of the most wonderful experiences in one's life. It was found that persons undergoing peak experiences feel more integrated, more at one with the world, more their own boss, more spontaneous, less aware of space and time, more perceptive, and so on (Maslow 1968a, Chapters 6 and 7).

In summary, note that Maslow (1966) was critical of science. He felt that classical mechanistic science as represented by behaviorism is not suitable for studying the whole person. He advocated a humanistic science, not as an alternative to mechanistic science, but as a complement to it. Such a humanistic science would deal with questions of value, individuality, consciousness, purpose, ethics, and "the higher reaches of human nature."

It appears that Maslow's unique contribution to the organismic viewpoint lies in his preoccupation with healthy people rather than sick ones and his feeling that studies of these two groups generate different types of theory. Goldstein, as a medical specialist and psychotherapist, came into contact with defective and disorganized people, yet in spite of this biased sample fashioned a theory that embraces the whole organism, and one that applies to the sick as well as to the healthy. Maslow chose the more direct course of studying healthy people whose wholeness and unity of personality are readily apparent. As self-actualizers, these people whom Maslow observed are the embodiment of organismic theory.

**CARL ROGERS**

In previous editions, we called Rogers's viewpoint "self theory" but that no longer seems to us to characterize accurately Rogers's position. It is clear now that the emphasis should fall on the organism, not the self. Indeed, the self or self-concept, as we shall see, is apt to be a distorted picture of the person's authentic nature.
Rogers also identified himself with the humanistic orientation in contemporary psychology. Humanistic psychology opposes what it regards as the bleak pessimism and despair inherent in the psychoanalytic view of humans on the one hand and the robot conception of humans portrayed in behaviorism on the other hand. Humanistic psychology is more hopeful and optimistic about humans. It believes that the person, any person, contains within him- or herself the potentialities for healthy and creative growth. The failure to realize these potentialities is due to the constricting and distorting influences of parental training, education, and other social pressures. These harmful effects can be overcome, however, if the individual is willing to accept the responsibility for his or her own life.

Rogers’s theory also has something in common with existential psychology. It is basically phenomenological, in that Rogers placed a strong emphasis on the experiences of the person, their feelings and values, and all that is summed up by the expression “inner life.”

Rogers’s theory of personality, like those of Freud, Jung, Adler, Sullivan, and Horney, grew out of his experiences in working with individuals in the therapeutic relationship. The major stimulus to his psychological thinking, he acknowledged, was “the continuing clinical experience with individuals who perceive themselves, or are perceived by others to be, in need of personal help. Since 1928, for a period now approaching thirty years, I have spent probably an average of 15 to 20 hours per week, except during vacation periods, in endeavoring to understand and be of therapeutic help to these individuals. . . . From these hours, and from my relationships with these people, I have drawn most of whatever insight I possess into the meaning of therapy, the dynamics of interpersonal relationships, and the structure and functioning of personality” (1959, p. 188).

In the eyes of the psychological world, Carl Rogers is identified with a method of psychotherapy that he originated and developed. This type of therapy is called nondirective or client-centered. In the words of its originator, successful client-centered therapy conducted under optimal conditions

. . . would mean that the therapist has been able to enter into an intensely personal and subjective relationship with this client—relating not as a scientist to an object of study, not as a physician expecting to diagnose and cure—but as a person to a person. It would mean that the therapist feels this client to be a person of unconditional self-worth: of value no matter what his condition, his behavior or his feelings. It would mean that the therapist is genuine, not hiding behind a defensive facade, but meeting the client with the feelings the therapist is experiencing. It would mean that the therapist is able to let himself go in understanding this client; that no inner barriers keep him from sensing what it feels like to be the client at each moment of the relationship; and that he can
convey something of his empathic understanding to the client. It means that the therapist has been comfortable in entering this relationship fully, without knowing cognitively where it will lead; satisfied with providing a climate which will permit the client the utmost freedom to be himself.

For the client, this optimal therapy would mean an exploration of increasingly strange and unknown and dangerous feelings in himself, the exploration proving possible only because he is gradually realizing that he is accepted unconditionally. Thus he becomes acquainted with elements of his experience which have in the past been denied to awareness as too threatening, too damaging, to the structure of the self. He finds himself experiencing these feelings fully, completely, in the relationship, so that for the moment he is his fear, or his anger, or his tenderness, or his strength. And as he lives these widely varied feelings, in all their degrees of intensity, he discovers that he has experienced himself, that he is all these feelings. He finds his behavior changing in constructive fashion in accordance with his newly experienced self. He approaches the realization that he no longer needs to fear what experience may hold, but can welcome it freely as a part of his changing and developing self. (1961, p. 185)

From these experiences, Rogers initially developed a theory of therapy and personality change. The principal feature of this conceptualization of the therapeutic process is that when clients perceive that the therapist has unconditional positive regard for them and an empathic understanding of their internal frame of reference, a process of change is set in motion. During this process, clients become increasingly more aware of their true feelings and experiences and their self-concept becomes more congruent with the total experiences of the organism (1959, pp. 212–221).

If complete congruence should be achieved, the client would then be a fully functioning person. Being such a person includes such characteristics as openness to experience, absence of defensiveness, accurate awareness, unconditional self-regard, and harmonious relations with others (1959, 1961).

Rogers viewed the therapeutic process as one instance of interpersonal relationships and communications. This led him to formulate a general theory of interpersonal relationship (1959, 1961). The main postulate of the theory was stated by Rogers as follows:

Assuming (a) a minimal willingness on the part of two people to be in contact; (b) an ability and minimal willingness on the part of each to receive communication from the other; and (c) assuming the contact to continue over a period of time; then the following relationship is hypothesized to hold true.
The greater the congruence of experience, awareness and communication on the part of one individual, the more the ensuing relationship will involve a tendency toward reciprocal communication with a quality of increasing congruence; a tendency toward more mutually accurate understanding of the communications; improved psychological adjustment and functioning in both parties; mutual satisfaction in the relationship. (1961, p. 344)

It will be noted that only one of the persons in the relationship needs to feel congruence for changes to occur in the other person.

The foregoing theories have been applied by Rogers to family life (1972), to education and learning (1969), to encounter groups (1970), and to group tension and conflict (1977).

Nondirective therapy has enjoyed considerable popularity among psychological counselors, partly because it is tied historically to psychology rather than to medicine. It is said to be fairly easy to learn and requires little or no knowledge of personality diagnosis and dynamics to use it. Moreover, the course of treatment is relatively brief compared, for example, to psychoanalysis, and some clients are said to be benefited after a few therapy sessions.

However, psychotherapy is not our concern in this book, and we have mentioned it only because Rogers's theory of personality evolved out of his experiences as a client-centered therapist. His therapeutic observations provided Rogers with a "precious vein of observational material of unusual value for the study of personality" (1947, p. 358). The formulation of a personality theory helped also to illuminate and elucidate Rogers's therapeutic practices.

Carl Rogers was born in Oak Park, Illinois, on January 8, 1902. "the middle child in a large, closeknit family, where hard work and a highly conservative (almost fundamentalist) Protestant Christianity were about equally revered" (1959, p. 186). When Carl was twelve years old, his family moved to a farm and he became interested in scientific agriculture. This interest in science carried over to college, where during his first years he was fond of the physical and biological sciences. After his graduation from the University of Wisconsin in 1924, he attended Union Theological Seminary in New York City, where he became exposed to a liberal, philosophical viewpoint regarding religion. Transferring to Teachers College of Columbia University, he fell under the philosophical influence of John Dewey and was introduced to clinical psychology by Leta Hollingworth. He was awarded the master's degree in 1928 and the doctorate in 1931 by Columbia. His first practical experience in clinical psychology and psychotherapy was obtained as an intern at the Institute for Child Guidance, which had a strongly Freudian orientation. Rogers observes
that, "the sharp incompatibility of the highly speculative Freudian thinking of
the Institute with the highly statistical and Thorndikean views at Teachers
College was keenly felt." (1959, p. 186).

After receiving his doctor's degree in psychology, Rogers joined the staff
of the Rochester Guidance Center and later became its director:

*The staff was eclectic, of diverse background, and our frequent and
continuing discussion of treatment methods was based on our practical
everyday working experience with the children, adolescents and adults
who were our clients. It was the beginning of an effort, which has had
meaning for me ever since, to discover the order which exists in our
experience of working with people. The volume on the Clinical Treatment
of the Problem Child (1939) was one outcome of this effort. (Rogers,
1959, pp. 186–187)*

During this period, Rogers was influenced by Otto Rank, a psychoanalyst who
had by that time broken away from the orthodox teachings of Freud.

In 1940, Rogers accepted an invitation to become professor of psychology
at Ohio State University. This shift from a clinical setting to an academic
environment proved to be a sharp one for Rogers. Under the stimulus provided
by intellectually curious and critical graduate students, Rogers felt impelled
to make his views on psychotherapy more explicit, which he did in his book
*Counseling and psychotherapy* (1942). In 1945 Rogers went to the University
of Chicago as professor of psychology and executive secretary of the Counseling
Center. There he elaborated his client-centered method of psychotherapy,
formulated a theory of personality, and conducted research on psychotherapy
(Rogers, 1951: Rogers & Dymond, 1954). From 1957 to 1963, Rogers was
professor of psychology and psychiatry at the University of Wisconsin. During
those years, he headed a research group that made an intensive, controlled
study of psychotherapy with schizophrenic patients in a mental hospital (Rogers,
1967a). Beginning in 1964, he became associated with the Center for
Studies of the Person in La Jolla, California. Rogers died February 4, 1987,
of a heart attack following an operation for a broken hip. Rogers received
numerous honors including the presidency of the American Psychological
Association, its Distinguished Scientific Contribution Award, and its Distinguished
Professional Contribution Award. Both awards were received in the first year
that the American Psychological Association began to offer them. Despite this
remarkable professional recognition, Rogers's description of himself as a "gad-
dfly" within psychology seems most appropriate. Rogers's autobiography ap-
peared in Volume 5 of the *History of psychology in autobiography* (1967b).

We turn now to consider Rogers's theory of personality. This theory was
originally presented in *Client-centered therapy* (1951), elaborated and formal-
ized in a chapter written for *Psychology: a study of a science* (1959), and more
informally described in *On becoming a person* (1961), *Carl Rogers on personal power* (1977), *Freedom to learn* (1983), and *A way of being* (1980). This last volume is a useful overview of Rogers's activities and observations in his later years. Rogers's conception of the way in which theorizing should proceed is graphically revealed in the following statement:

I came to the conclusion which others have reached before, that in a new field perhaps what is needed first is to steep oneself in the events, to approach the phenomena with as few preconceptions as possible, to take a naturalist's observational, descriptive approach to those events, and to draw forth those low-level inferences which seem most native to the material itself. (1961, p. 128)

The following quotation reveals that Rogers also viewed his own theory, as well as theories proposed by others, as tentative:

At the time of its formulation every theory contains an unknown (and perhaps at that point an unknowable) amount of error and mistaken inference... I am distressed at the manner in which small-caliber minds immediately accept a theory—almost any theory—as a dogma of truth. If theory could be seen for what it is—a fallible, changing attempt to construct a network of gossamer threads which will contain the solid facts—then a theory would serve as it should, as a stimulus to further creative thinking... For Freud, it seems quite clear that his highly creative theories were never more than that. He kept changing, altering, revising, giving new meaning to old terms—always with more respect for the facts he observed than for the theories he had built. But at the hands of insecure disciples (so it seems to me), the gossamer threads became iron chains of dogma. (1959, pp. 190–191, italics added)

As a final introductory point, it is important to note the paradox that, although the dynamics Rogers described are strikingly similar to those seen in other theories, his assumptions about human nature are similar only to those of Abraham Maslow. For example, Rogers's phenomenology and his radical position on motivation are quite similar to the orientation adopted by George Kelly, but his assumption that the key challenge for humans is "to be that self which one truly is" is diametrically opposed to Kelly's fluid approach to theory and therapy. Even more intriguing are the parallels between Rogers and Freud and between Rogers and Skinner, three theorists who typically would be regarded as strange bedfellows indeed. As we shall see, Rogers and Freud both employed a model for psychopathology in which conflict triggers anxiety, which leads in turn to defense. The models work very differently, however, because of the theorists' different assumptions about human nature.
Rogers (1961, pp. 194–195), in a passage that clearly refers to Freud, wrote that "the basic nature of the human being, when functioning freely, is constructive and trustworthy. For me this is an inescapable conclusion from a quarter-century of experience in psychotherapy. . . . I have little sympathy with the rather prevalent concept that man is basically irrational, and that his impulses, if not controlled, will lead to destruction of others and self. Man's behavior is exquisitely rational, moving with subtle and ordered complexity toward the goals his organism is endeavoring to achieve. The tragedy for most of us is that our defenses keep us from being aware of this rationality, so that consciously we are moving in one direction, while organismically we are moving in another." Similarly, Rogers's search for "functional relationships" is analogous to Skinner's "functional analysis," and Rogers's "conditions of worth" are clearly powerful social reinforcers. Rogers assumed, however, that individuals have characteristics and potentials that reinforcers can force them to deny. Furthermore, Rogers wrote that it is "impossible for me to deny the reality and significance of human choice. To me it is not an illusion that man is to some degree the architect of himself" (1980, p. 57). He went on to emphasize that social change is based on "the human desire and potentiality for change, not on conditioning" and to acknowledge "the essential freedom and dignity of the unique human person, and his capacity for self-determination" (1980, pp. 57–59). As a consequence of these differing assumptions, Rogers is less pessimistic than Freud and less mechanistic than Skinner.

Although Rogers did not appear to emphasize structural constructs, preferring to devote his attention to change and development of personality, there are two such constructs that are of fundamental importance to his theory and may even be regarded as the footings upon which the whole theory rests. These are the organism and the self.

The organism, psychologically conceived, is the locus of all experience. Experience includes everything potentially available to awareness that is going on within the organism at any given moment. This totality of experience constitutes the phenomenal field. The phenomenal field is the individual's frame of reference that can only be known to the person. "It can never be known to another except through empathic inference and then can never be perfectly known" (Rogers, 1959, p. 210). How the individual behaves depends upon the phenomenal field (subjective reality) and not upon the stimulating conditions (external reality).
The phenomenal field, it should be noted, is not identical with the field of consciousness: "Consciousness (or awareness) is the symbolization of some of our experience" (Rogers, 1959, p. 198). Thus, the phenomenal field at any given moment is made up of conscious (symbolized) and unconscious (unsymbolized) experiences. The organism may, however, discriminate and react to an experience that is not symbolized. Following Mc Cleary and Lazarus (1949), Rogers called this subception.

Experience may not be correctly symbolized, in which case the person will behave inappropriately. However, a person tends to check his or her symbolized experiences against the world as it is. This testing of reality provides one with dependable knowledge of the world so that one is able to behave realistically. However, some perceptions remain untested or are inadequately tested, and these untested experiences may cause one to behave unrealistically and even to one's own detriment. Although Rogers did not deal with the issue of a "true" reality, it is apparent that people must have some conception of an external or impersonal standard of reality, for otherwise they could not perform the act of testing an inner picture of reality against an "objective" one. The question then arises as to how people can differentiate between a subjective image that is not a correct representation of reality and one that is. What enables people to separate fact from fiction in their subjective world? This is the great paradox of phenomenology.

Rogers resolved the paradox by leaving the conceptual framework of pure phenomenology. What a person experiences or thinks is actually not reality for the person; it is merely a tentative hypothesis about reality, a hypothesis that may or may not be true. The person suspends judgment until he or she puts the hypothesis to a test. What is this test? It consists of checking the correctness of the information received and upon which the person's hypothesis is based with other sources of information. For example, a person who wishes to salt his food is confronted with two identical shakers, one of which contains salt, the other pepper. The person believes that the shaker with the larger holes contains salt, but not being dead sure shakes a little of the contents on the back of the hand. If the particles are white rather than black, the person feels reasonably sure that it is salt. A very cautious person may even then put a little to the lips because it might be white pepper instead of salt. What we have here is a testing of one's ideas against a variety of sensory data. The test consists of checking less certain information against more direct knowledge. In the case of salt, the final test is its taste; a particular kind of sensation defines it as salt.

Of course, the foregoing example describes an ideal condition. In many cases, a person accepts his or her experiences as faithful representations of reality and fails to treat them as hypotheses about reality. As a consequence, the person often ends up with a lot of misconceptions about him- or herself and about the external world: "The whole person," Rogers wrote, "is one who
is completely open to the data from internal experiencing and the data from experiencing of the external world" (1977, p. 250).

A portion of the phenomenal field gradually becomes differentiated. This is the self. Self, or self-concept, denotes

the organized, consistent conceptual gestalt composed of perceptions of
the characteristics of the "I" or "me" and the perceptions of the relations-
ships of the "I" or "me" to others and to various aspects of life, together
with the values attached to these perceptions. It is a gestalt which is
available to awareness though not necessarily in awareness. It is a fluid
and changing gestalt, a process, but at any given moment it is a specific
entity. (Rogers, 1959, p. 200)

The self is, of course, one of the central constructs in Rogers's theory,
and he has given an interesting account of how this came about:

Speaking personally, I began my work with the settled notion that the
"self" was a vague, ambiguous, scientifically meaningless term which
had gone out of the psychologist's vocabulary with the departure of
the introspectionists. Consequently I was slow in recognizing that when
clients were given the opportunity to express their problems and their
attitudes in their own terms, without any guidance or interpretation, they
tended to talk in terms of the self. . . . It seemed clear . . . that the
self was an important element in the experience of the client, and that
in some odd sense his goal was to become his "real self." (1959, pp.
200–201)

In addition to the self as it is (the self structure), there is an ideal self,
which is what the person would like to be.

The basic significance of the structural concepts for Rogers's theory, organism
and self, becomes clear in his discussion of congruence and incongruence
between the self as perceived and the actual experience of the organism (1959,
pp. 203, 205–206). When the symbolized experiences that constitute the self
faithfully mirror the experiences of the organism, the person is said to be
adjusted, mature, and fully functioning. Such a person accepts the entire range
of organismic experience without threat or anxiety. He or she is able to think
realistically. Incongruence between self and organism makes individuals feel
threatened and anxious. They behave defensively, and their thinking becomes
constricted and rigid.
Implicit in Rogers's theory are two other manifestations of congruenceincongruence. One is the congruence or lack of it between subjective reality (the phenomenal field) and external reality (the world as it is). The other is the degree of correspondence between the self and the ideal self. If the discrepancy between self and ideal self is large, the person is dissatisfied and maladjusted.

How incongruence develops and how self and organism can be made more congruent were Rogers's chief concerns, and it is to the illumination of these vital questions that he devoted so much of his professional life. How he dealt with these questions will be discussed in the section on the development of personality.

According to Rogers, "the organism has one basic tendency and striving—to actualize, maintain, and enhance the experiencing organism" (1951, p. 487). This actualizing tendency is selective, paying attention only to those aspects of the environment that promise to move the person constructively in the direction of fulfillment and wholeness. On the one hand, there is a single motivating force, the self-actualizing drive; on the other hand, there is a single goal of life, to become self-actualized or a whole person.

Rogers's model hinges on the assumption that organisms have a fundamental motive to enhance themselves. Drawing on his agricultural roots, Rogers offered the following analogy:

The actualizing tendency can, of course, be thwarted or warped, but it cannot be destroyed without destroying the organism. I remember that in my boyhood, the bin in which we stored our winter's supply of potatoes was in the basement, several feet below a small window. The conditions were unfavorable, but the potatoes would begin to sprout—pale white sprouts, so unlike the healthy green shoots they sent up when planted in the soil in the spring. But these sad, spindly sprouts would grow 2 or 3 feet in length as they reached toward the distant light of the window. The sprouts were, in their bizarre, futile growth, a sort of desperate expression of the directional tendency I have been describing. They would never become plants, never mature, never fulfill their real potential. But under the most adverse circumstances, they were striving to become. . . . In dealing with clients whose lives have been terribly warped . . . I often think of those potato sprouts. So unfavorable have been the conditions in which these people have developed that their lives often seem abnormal, twisted, scarcely human. Yet, the directional tendency in them can be trusted. (1980, pp. 118–119)
The organism actualizes itself along the lines laid down by heredity. It becomes more differentiated, more expanded, more autonomous, and more socialized as it matures. This basic tendency of growth—to actualize and expand oneself—is seen to best advantage when an individual is observed over a long period of time. There is a forward movement in the life of every person; it is this ongoing tendency that is the only force that the therapist can really rely upon to effect an improvement in the client.

Rogers's endorsement of the actualizing tendency led him to the interesting position of rejecting specific motivational constructs. He wrote:

Science has not made progress by positing forces, attractions, repulsions, causes, and the like, to explain why things happen. . . . science has progressed and found itself on more fruitful paths when it restricts itself to the question of "how" things happen. When the theory was offered that nature abhors a vacuum, and that this explained why air rushes in to fill any vacuum or partial vacuum, this led to little effective research. But when science began to describe, in empirical terms, the functional relationships which hold between a partial vacuum and the atmospheric pressure outside the container, significant results accrued. . . . I doubt if psychologists make progress in their science so long as their basic theory focuses on the formulation that man seeks food because he has a hunger motive or drive. . . . I believe that when we have developed and tested hypotheses as to the conditions which are necessary and sufficient antecedents to certain behaviors, when we understand the complex variables which underlie various expressions of the actualizing tendency of the organism, then the concept of specific motives will disappear. (1963, pp. 7–8)

True to this position, Rogers identified the "functional relationship" between certain conditions and therapeutic improvement (or any psychological growth): The therapist must be genuine or congruent; accepting, caring, or prizing of the client (providing what we later will term "unconditional positive regard" for the client); and empathic understanding of the client. These conditions create a "climate for change" in which clients become free to acknowledge and to act on their actualizing tendency.

Rogers added a new feature to the concept of growth when he observed that the forward-moving tendency can only operate when the choices are clearly perceived and adequately symbolized. A person cannot actualize him- or herself unless able to discriminate between progressive and regressive ways of behaving. There is no inner voice that tells one which is the path of progress, no organismic necessity that thrusts one forward. People have to know before they can choose, but when they do know, they always choose to grow rather than to regress.
Rogers wrote that "behavior is basically the goal-directed attempt of the organism to satisfy its needs as experienced, in the field as perceived" (1951, p. 491). This proposition, referring as it does to plural "needs," does not contradict the notion of a single motive. Although there are many needs, each of them is subservient to the basic tendency of the organism to maintain and enhance itself.

Rogers remained faithful to his phenomenological position by employing the qualifying terms "as experienced" and "as perceived." However, in discussing this proposition, Rogers admitted that needs may evoke appropriate behavior even though the needs are not consciously experienced (adequately symbolized). In fact, Rogers (1977) played down the role of consciousness or self-consciousness in the functioning of the healthy individual. He wrote: "In the person who is functioning well, awareness tends to be a reflexive thing, rather than a sharp spotlight of focused attention. Perhaps it is more accurate to say that in such a person awareness is simply a reflection of something of the flow of the organism at that moment. It is only when the functioning is disrupted that a sharply self-conscious awareness arises" (pp. 244–245).

In 1959, Rogers introduced a distinction between the actualizing tendency of the organism and a self-actualizing tendency:

Following the development of the self-structure, this general tendency toward actualization expresses itself also in the actualizing of that portion of the experience of the organism which is symbolized in the self. If the self and the total experience of the organism are relatively congruent, then the actualizing tendency remains relatively unified. If self and experience are incongruent, then the general tendency to actualize the organism may work at cross purposes with the subsystem of that motive, the tendency to actualize the self. (1959, pp. 196–197)

Despite the monistic character of Rogers's motivational theory, he singled out for special attention two needs: the need for positive regard and the need for self-regard. Both are learned needs. The former develops in infancy as a consequence of the baby's being loved and cared for; the latter is established by virtue of the baby's receiving positive regard from others (1959, pp. 223–224). These two needs, as we shall see in the next section, may also work at cross purposes with the actualizing tendency by distorting the experiences of the organism.

Organism and self, although they possess the inherent tendency to actualize themselves, are subject to strong influences from the environment and especially from the social environment. Rogers, unlike such other clinic-rooted
theorists as Freud, Sullivan, and Erikson, did not provide a time table of significant stages through which a person passes in traveling from infancy to maturity. Instead, he focused upon the ways in which evaluations of an individual by others, particularly during childhood, tend to favor distancing between experiences of the organism and experiences of the self.

If these evaluations were exclusively positive in sign (what Rogers called unconditional positive regard), then no distancing or incongruity between organism and self would occur. Rogers said, "If an individual should experience only unconditional positive regard, then no conditions of worth would develop. self-regard would be unconditional, the needs for positive regard and self-regard would never be at variance with organismic evaluation, and the individual would continue to be psychologically adjusted, and would be fully functioning" (1959, p. 224).

But because evaluations of the child's behavior by its parents and others are sometimes positive and sometimes negative, the child learns to differentiate between actions and feelings that are worthy (approved) and those that are unworthy (disapproved). Unworthy experiences tend to become excluded from the self-concept even though they are organismically valid. This results in a self-concept out of line with organismic experience. The child tries to be what others want it to be instead of trying to be what it really is: "He values an experience positively or negatively solely because of these conditions of worth which he has taken over from others, not because the experience enhances or fails to enhance his organism" (1959, p. 209).

This is what happens in the following case. A boy has a self-picture of being a good boy and of being loved by his parents but he also enjoys tormenting his little sister, for which he is punished. As a result of this punishment, he is called upon to revise his self-image and his values in one of the following ways: (a) "I am a bad boy," (b) "My parents don't like me," or (c) "I don't like to tease my sister." Each of these self-attitudes may contain a distortion of the truth. Let us suppose that he adopts the attitude "I don't like to tease my sister," thereby denying his real feelings. Denial does not mean that the feelings cease to exist; they will still influence his behavior in various ways even though they are not conscious. A conflict will then exist between the introjected and spurious conscious values and the genuine unconscious ones. If more and more of the "true" values of a person are replaced by values taken over or borrowed from others, yet which are perceived as being one's own, the self will become a house divided against itself. Such a person will feel tense, uncomfortable, and out of sorts. She will feel as if she does not really know what she is and what she wants.

Gradually, then, throughout childhood the self-concept becomes more and more distorted due to evaluations by others. Consequently, an organismic experience that is at variance with this distorted self-concept is felt as a threat and evokes anxiety. In order to protect the integrity of the self-concept, these
threatening experiences are denied symbolization or are given a distorted symbolization.

Denying an experience is not the same thing as ignoring it. Denial means falsifying reality either by saying it does not exist or by perceiving it in a distorted way. People may deny their aggressive feelings because they are inconsistent with the picture they have of themselves as peaceful and friendly. In such a case, the denied feelings may be allowed to express themselves by means of a distorted symbolization, for example, by projecting them onto other people. Rogers pointed out that people will often stoutly maintain and enhance a self-picture that is completely at variance with reality. The person who feels that he or she is worthless will exclude from awareness evidence that contradicts this picture or will reinterpret the evidence to make it congruent with their sense of worthlessness. For example, someone who receives a promotion at work will say that "the boss felt sorry for me" or "I don't deserve it." Some people may even do poorly in the new position to prove to themselves and to the world that they are no good.

How can one deny a threat to the self-picture without first being aware of the threat? Rogers proposed that there are levels of discrimination below the level of conscious recognition and that the threatening object may be unconsciously perceived or "subcepted" before it is perceived. The threatening object or situation, for example, may produce visceral reactions such as a pounding heart, which are consciously experienced as sensations of anxiety, without the person being able to identify the cause of the disturbance. Feelings of anxiety evoke the mechanism of denial, which prevents the threatening experience from becoming conscious.

Not only does the breach between self and organism result in defensiveness and distortion, but it also affects a person's relations with other people. People who are defensive are inclined to feel hostile toward other people whose behavior, in their eyes, represents their own denied feelings.

How can this breach between self and organism and between self and others be healed? Rogers advanced the three following propositions.

First "under certain conditions, involving primarily complete absence of any threat to the self-structure, experiences which are inconsistent with it may be perceived, and examined, and the structure of self revised to assimilate and include such experiences" (Roger 1951, p. 517).

In client-centered therapy the person finds him- or herself in a nonthreatening situation because the counselor is completely accepting of everything the client says. This warm accepting attitude on the part of the counselor encourages clients to explore their unconscious feelings and to bring them into awareness. Slowly and tentatively they explore the unsymbolized feelings that threaten their security. In the safety of the therapeutic relationship these hitherto threatening feelings can now be assimilated into the self-structure. The assimilation may require rather drastic reorganization in the self-concept.
of the client in order to bring it into line with the reality of organismic experience: "He will be, in more unified fashion, what he organismically is, and this seems to be the essence of therapy" (1955, p. 269). Rogers admitted that some people may be able to accomplish this process without undergoing therapy.

An important social benefit gained from the acceptance and assimilation of experiences that have been denied symbolization is that the person becomes more understanding and accepting of other people. This idea is presented in the next proposition: "When the individual perceives and accepts into one consistent and integrated system all his sensory and visceral experiences, then he is necessarily more understanding of others and is more accepting of others as separate individuals" (1951, p. 520). When a person feels threatened by sexual impulses, he or she may tend to criticize others whom they perceive as behaving in sexual ways. On the other hand, if one accepts one's own sexual and hostile feelings, one will be more tolerant of their expression by others. Consequently social relationships will improve and the incidence of social conflict will decrease. Rogers believed that the social implications of this proposition "are such as to stretch the imagination" (p. 522). It may even contain the key to the eventual abolition of international strife.

In his last proposition, Rogers pointed out how important it is for wholesome adjustment to maintain a continuous examination of one's values: "As the individual perceives and accepts into his self-structure more of his organic experiences, he finds that he is replacing his present value system—based so largely upon introjections which have been distortedly symbolized—with a continuing valuing process" (1951, p. 522). The emphasis falls upon the two words system and process. A system carries the connotation of something that is fixed and static, whereas a process signifies that something is taking place. For healthy, integrated adjustment one must constantly be evaluating experiences to see whether they require a change in the value structure. Any fixed set of values will tend to prevent the person from reacting effectively to new experiences. One must be flexible to adjust appropriately to the changing conditions of life.

In this connection Rogers raised the question as to whether a continuing process of evaluating one's experiences in purely personal terms may not lead to social anarchy. He believed not. All people have "basically the same needs, including the need for acceptance by others" (p. 524). Consequently their values will possess a "high degree of commonality" (p. 524).

The following passage from Rogers (1959, pp. 226–227) provides an apt summary of his developmental model:

It is thus because of the distorted perceptions arising from the conditions of worth that the individual departs from the integration which characterizes his infant state. . . . This, as we see it, is the basic estrangement in man. He has not been true to himself, to his own natural organismic
valuing of experience, but for the sake of preserving the positive regard of others has now come to falsify some of the values he experiences and to perceive them only in terms based upon their value to others. Yet this has not been a conscious choice, but a natural—and tragic—development in infancy. The path of development toward psychological maturity, the path of therapy, is the undoing of this estrangement in man’s functioning, the dissolving of conditions of worth, the achievement of a self which is congruent with experience, and the restoration of a unified organismic valuing process as the regulator of behavior.

According to Rogers’s model, psychopathology or emotional distress occurs in individuals who have been exposed to conditional positive regard. The associated conditions of worth lead to self-experience incongruence. This incongruence, which is analogous to the id-superego conflict in Freud’s model, generates anxiety as it approaches awareness. The individual responds with denial or distortion, because awareness of the incongruence would jeopardize receipt of positive regard from self and others. The goal of defense thus is maintenance of the (artificial or inaccurate) self-concept. This model fits nicely a number of apparently paradoxical behaviors. Consider the battered wife who persists in what is clearly a pathological relationship. Why does she end the marriage? Why does she rationalize her husband’s behavior? According to this analysis, she persists because to acknowledge the depravity of her relationship would jeopardize her only existing avenue for receiving positive regard. Ironically, she may deny her feelings and distort her husband’s behavior and motives in order to preserve her only channel for receiving attention.

In contrast, individuals who experience unconditional positive regard maintain or reinstate self-experience congruence. Because of the absence of conflict or incongruence, such individuals have no need to rely on defenses. Rogers characterized such healthy people as fully functioning. As was true for Maslow’s definition of the self-actualizing person, the fully functioning person exhibits a process or a way of living rather than a goal or end state. Individuals who are living this “good life” appear to have three characteristics (Rogers, 1961, pp. 184–192): First, because there is no need to defend against any experience, the person develops an increasing openness to experience. That is, there is no defensiveness, and the person is able to acknowledge and express all his or her feelings. Second, such people exhibit increasingly existential living. There is no rigidity and no preconceptions about what he or she should do or be; rather, the person “lives fully in each moment.” Finally, fully functioning people have increasing trust in the organism. Such people make and rely on their own decisions. They have developed a sense that “doing what ‘feels right’ proves to be a competent and trustworthy guide to behavior which is truly satisfying.” As they become more open to all of their experiences, they are able to do what they “feel like” doing, not in a hostile or arrogant way, but in
a confident way. In essence, such people are open to their feelings and free of defenses. They are free to act on their inclinations, because they can accept the consequences and can correct them if they are not satisfying.

In concluding this account of the principal features of Rogers’s theory, the reader might wonder why it is called “person-centered” and not “organismic-centered.” The answer is quite simple. In a fully functioning individual the person is the organism. In other words, it does not make any difference which it is called. Person is preferred because it has more of a psychological connotation. The person is the experiencing organism. Person and self are also the same when the self is completely congruent with the organism. It all comes down to this: The organism, a living, growing, holistic system, is the basic psychological reality. Any deviation from this reality threatens the integrity of the person.

Rogers was a pioneer investigator in the area of counseling and psychotherapy and deserves a great deal of credit for stimulating and conducting research into the nature of the processes that occur during clinical treatment. Well-controlled studies of psychotherapy are exceedingly difficult to design and carry out because of the subtle and private nature of the psychotherapeutic setting. Therapists have been reluctant to subordinate the welfare of the patient to the needs of research by permitting any invasion of the privacy of the treatment room. Rogers, however, demonstrated that recording of therapy sessions, with the permission of the patient, is not injurious to the course of treatment. In fact, both patient and therapist soon ignore the presence of the microphone and behave quite naturally. The accumulation of a set of exact transcriptions of therapy sessions by Rogers and his associates made it possible to study the course of treatment objectively and quantitatively. Largely through his efforts, psychologists learned a great deal about the processes of psychotherapy. (See, for example, Rogers, 1967a; Rogers & Dymond, 1954; Seeman & Raskin, 1953; Cartwright & Lerner, 1963; and for a critical review, Wylie, 1978.)

Although the empirical studies undertaken by Rogers and his associates were aimed primarily at understanding and elucidating the nature of psychotherapy and evaluating its results, many of their findings bear directly upon the theory of personality developed by Raimy (1943) and Rogers. In fact, Rogers’s systematic formulation of his theory was dictated by the research findings; it was not a preconceived viewpoint that determined the nature and direction either of the therapy or of the research. On this point, Rogers said, “The self has for many years been an unpopular concept in psychology, and those doing therapeutic work from a client-centered orientation certainly had
no initial leanings toward using the self as an explanatory concept” (1951, p. 136).

**Qualitative Studies**

Many of Rogers’s ideas about personality have been explicated by a qualitative, pointing-to procedure that consists of demonstrating by extracts from the record of the client’s verbalizations what his or her self-picture is and what changes occur in it during therapy. The literature on nondirective or client-centered therapy is filled with examples of this type (Rogers, 1942, 1946, 1951, 1961, pp. 73–106, 1967a, pp. 401–418; Rogers & Dymond, 1954; Rogers & Wallen, 1946; Muench & Rogers, 1946; Snyder et al., 1947). Rogers himself seemed to have a preference for this mode of presenting his ideas, although, of course, he did not regard excerpts from case records as proof of the validity of his personality theory. They were used more for the purpose of acquainting the reader with typical phenomena that occur during therapy sessions and to point out the kinds of experiences that are in need of explanation.

**Content Analysis**

This research method consists of formulating a set of categories by means of which the verbalizations of a client can be classified and counted. In a pioneer study, Porter (1943) laid the groundwork for much of the later work on the categorization of the recorded content of counseling interviews by showing that this method of analysis yields reliable results. In another early study by a student of Rogers (Raimy, 1948), an analysis of the characteristic changes in self-references during therapy was undertaken. For this purpose, Raimy used the following categories: positive or approving self-reference, negative or disapproving self-reference, ambivalent self-reference, ambiguous self-reference, references to external objects and persons, and questions. The transcribed records of fourteen cases who had had from two to twenty-one interviews were itemized and sorted into the foregoing six classes, and the number in each category at successive stages of counseling was counted. It was found that at the start of therapy the clients gave a preponderance of disapproving or ambivalent self-references, and that as counseling progressed, fluctuations in self-approval occurred with mounting ambivalence. At the conclusion of counseling those clients who were judged to be improved were making a preponderant number of self-approving statements while those who had not improved were still being ambivalent and disapproving of themselves.

In another group of studies employing content analysis an attempt was made to test the proposition that as people become more accepting of themselves they also become more accepting of other people. Categories of positive, negative, and ambivalent feelings toward self and others were formulated and applied to cases in therapy. In one study (Seeman, 1949), the number
of positive self-references increased and the number of negative self-references decreased during therapy without any concomitant change in the feelings toward others. Another investigator (Stock, 1949), using a similar method of content analysis, could find no evidence that changes in self-feeling occur prior to and produce changes in feelings toward others. In a third investigation (Sheerer, 1949), some positive support for the proposition was obtained, although the changes in attitudes toward others were neither as marked nor as regular as the increases in the acceptance of self. An investigation of the proposition by Gordon and Cartwright (1954) in which various tests and scales were employed in place of content analysis failed to support the hypothesis that increasing acceptance of self leads to an increasing acceptance of others.

It is of interest, however, that there is a fairly significant correlation, .51 in Sheerer’s study and .66 in Stock’s study, between conceptions of self and conceptions of others. This means that an individual who thinks well of himself or herself is likely to think well of others and that one who disapproves of oneself is likely to disapprove of others. Correlations of about the same magnitude have been found by Phillips (1951) in an investigation of self-feelings and feelings toward others of various groups of people not in therapy.

Medinnus and Curtis (1963) observed that the majority of studies on self-acceptance and acceptance of others had been conducted on college students or people receiving therapy. In order to increase generalizability, they performed an investigation with normal mothers. Mothers who accepted themselves were more likely to accept their children than were nonaccepting mothers. After surveying a number of studies, Wylie (1961, 1978) concluded that the available evidence generally supports the hypothesis that self-acceptance is associated with acceptance of others, although she feels that most of the studies are so seriously flawed as to render the findings equivocal.

One of Rogers’s and his collaborators’ principal contributions to the investigation of psychotherapy is the measurement of process and change during therapy by the use of rating scales. Although not ruling out the importance of assessing the outcome of therapy, Rogers felt more is to be learned about therapeutic effectiveness by studying the attitudes and behavior of the therapist in relation to changes in the client. For this purpose, two types of rating scales have been developed: those that measure the therapist’s attitudes and those that measure change in the client. An example of the former is the following congruence scale developed by Kiesler (Rogers, 1967a, pp. 581–584):

Stage 1. There is clear evidence of a discrepancy between the therapist’s experiencing of the client and the current communication.
Stage 2. The therapist communicates information to the client in response to the client's questioning, but the response has a phony, deceptive, or "half-truth" quality.

Stage 3. The therapist does not contradict his or her feelings about the client, but neither does he or she communicate their exact feelings toward the client.

Stage 4. The therapist communicates information to the client, either spontaneously or in response to the client's questioning rather than withholding it for personal or professional reasons.

Stage 5. The therapist communicates openly and freely his or her feelings, both positive and negative, about the client at a given moment—without traces of defensiveness, or retreat into professionalism.

An example of a scale for measuring therapeutic process is one developed by Gendlin (Rogers, 1967a, pp. 603–611) for assessing the quality of the relationship:

Stage 1. Refusal of a relationship.

Stage 2. Physical acceptance of a relationship without overt acceptance.

Stage 3. Partial acceptance of relationship quality or intermittent parallel relationship quality.

Stage 4. Parallel and together, the relationship as a context of therapy.

Stage 5. The relationship as specific therapy, rather than only as general context for therapy.

Stage 6. The relationship is ready to be a permanent reality and therefore could be approaching termination.

The most ambitious use of these scales was in a study of psychotherapy with schizophrenics (Rogers, 1967a). Although Rogers and his associates were interested in finding out whether client-centered therapy would work with state hospital patients, it was primarily a study of therapeutic relationships and not of schizophrenia. Rating scales were filled out by the therapists, patients, and judges who had no information about the cases other than excerpts from the transcripts of therapy sessions. The findings are much too extensive to be summarized here. Several of the more important ones may be noted, however.

The rating scales proved to have satisfactory reliability except for the one that measured unconditional positive regard. Independent judges were able to make reliable ratings after reading a fairly short series of excerpts from the whole therapy transcription. There was a negative correlation between the therapist's evaluation of the therapeutic relationship and either the patient's...
own evaluation or that of an unbiased rater. Rogers commented on this unex-
pected result:

*It is a sobering finding that our therapists—competent and conscientious
as they were—had over-optimistic and, in some cases, seriously invalid
perceptions of the relationships in which they were involved. The patient,
for all his psychosis, or the bright young college student with no knowl-
dge of therapy, turned out to have more useful (and probably more
accurate) perceptions of the relationship. (1967a, p. 92)*

There was generally little process movement (improvement) during therapy
with this group of eight chronic and eight acute schizophrenics.

The appearance of the English psychologist William Stephenson at the Uni-
versity of Chicago proved to be a great boon to Rogers and his associates. The
methods of research that he developed were uniquely adapted for investigating
the self-concept by the single-case method. These methods are referred to by
Stephenson as Q-technique.

There is a difference between Stephenson’s Q-technique and the logical
basis upon which it rests, which Stephenson calls Q-methodology. Logical
hypotheses are derived from theory by Q-methodology, and these hypotheses
may then be tested by Q-technique. However, the investigator may employ Q-
technique without using Q-methodology. This is what Rogers and his associates
have done. The difference between the type of research fostered by Stephenson
and that done under the influence of Rogers is brought out clearly by comparing
the studies of Nunnally (1955), a student of Stephenson’s, with those of Butler
and Haigh (1954), students of Rogers. Both of them investigated the changes
in self-conceptions before and after therapy. Nunnally used Q-methodology in
designing his experiment and the full complement of Q-techniques, including
factor analysis, whereas Butler and Haigh used only the Q-sorting device and
intrapersonal correlations. Moreover, Nunnally employed a single case, as
Stephenson recommends, and Butler and Haigh employed a number of cases.

What is Q-technique? Essentially, it is a method of studying systematically
the notions of a person about him- or herself, although it can be used for other
purposes as well. The person is given a packet of statements and is asked to
sort them into a prearranged distribution along a continuum from those most
characteristic of the person doing the sorting to those least characteristic of
the person. The distribution approximates a normal distribution and is exactly
the same for all subjects in a given experiment. This constant feature expedites
the statistical handling of the results since all sortings are forced into a
distribution whose mean and standard deviation are the same.
Sortings may be made not only for how people see themselves at the present time but also for how they would like to be, called the ideal sort, how they were at the age of fifteen, how their mothers see them, and so on. There may be as many different sortings or variates, as they are named, as the investigator chooses to use. Bowdlear (1955), for example, used twenty-five sortings in his study of an epileptic patient undergoing psychotherapy. The results of such a multivariate design may be analyzed by correlational methods, factor analysis, and analysis of variance.

The items for a Q-sort may be made up in various ways. They may be formulated so as to conform to a particular theory of personality of which many examples are given in Stephenson’s book (1953) or they may be selected from a population of items obtained from therapeutic protocols, self-descriptions, personality inventories, and the like.

In order to illustrate the way in which Rogers and his associates used Q-technique, let us consider the study performed by Butler and Haigh (1954). These investigators set out to test the assumption that people who come for counseling are dissatisfied with themselves and that following successful counseling their dissatisfaction will be reduced. The Q-sort items for this study were chosen at random from a number of therapeutic protocols. They consisted of such items as “I am a submissive person,” “I am a hard worker,” “I am likable,” and “I am an impulsive person.” Prior to the beginning of counseling each client was asked to sort the statements in two ways, according to the following instructions:

Self-sort. Sort these cards to describe yourself as you see yourself today, from those that are least like you to those that are most like you.

Ideal-sort. Now sort these cards to describe your ideal person—the person you would most like within yourself to be.

The distributions of these two sortings were then correlated for each person. The average correlation between self-sort and ideal-sort for the group of subjects was zero, which shows that there is no congruence between the way people see themselves and the way they would like to be. A control group of subjects who were matched with the client group but who were not interested in being counseled made the same two sortings. The average correlation for this group between self-sort and ideal-sort was .58, which proves that a non-treatment group is much better satisfied with itself than a group seeking therapy is. Following the completion of the counseling (there were an average of thirty-one sessions per client), the clients were again asked to make a self-sort and an ideal-sort. The average correlation between the two sorts turned out to be .34, a significant increase over what it had been prior to counseling.
although still short of the control group correlation. The control group was also retested after an interval of time equivalent to that for the client group and their average self-ideal correlation had not changed. Another group that had sought therapy but who were asked to wait sixty days before starting treatment showed no change in their self–ideal correlations during the waiting period.

As a check upon the permanence of the change that had taken place in the client's self-esteem during therapy, a follow-up study was made of the clients from six months to one year after therapy had been terminated. The average correlation between self-sort and ideal-sort was about the same as it had been at the close of counseling,.31 versus .34. The investigators conclude that self-esteem, which they define as the congruence between self- and ideal-sorts, increases as a direct result of client-centered counseling. It may occur to the reader that the increase in the average correlation from zero to .34 could have been the result of a change of the self-concept in the direction of the ideal or of a change in the ideal in the direction of the self-concept or of changes in both directions. In another study (Rudikoff, 1954), it was found that the ideal was somewhat lowered in the direction of the self-image during therapy, which suggests that both kinds of changes do occur.

It is of interest to note a few of the changes in individual correlations that occur between precounseling, postcounseling, and follow-up. Some of the correlations start out fairly low, increase markedly during therapy, and remain that way during the follow-up period. The following person, identified as Oak, exemplifies this pattern:

<table>
<thead>
<tr>
<th></th>
<th>Precounseling</th>
<th>Postcounseling</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oak</td>
<td>.21</td>
<td>.69</td>
<td>.71</td>
</tr>
</tbody>
</table>

Others remain low throughout as Baac’s do:

<table>
<thead>
<tr>
<th></th>
<th>Precounseling</th>
<th>Postcounseling</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baac</td>
<td>-.31</td>
<td>.04</td>
<td>-.19</td>
</tr>
</tbody>
</table>

Still others start out low, increase following counseling, and then regress during the follow-up period:

<table>
<thead>
<tr>
<th></th>
<th>Precounseling</th>
<th>Postcounseling</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beel</td>
<td>.28</td>
<td>.52</td>
<td>-.04</td>
</tr>
</tbody>
</table>

For another type of person, the correlation starts out low, increases during therapy, and continues to increase after therapy has been concluded:
Precounseling  Postcounseling  Follow-up
Bett  -.37  .39  .61

One might think that these different patterns of changes would be related to the amount of improvement shown during therapy. This is not the case. When the subjects were divided into an improved group and a nonimproved group, as judged by counselors and from projective test protocols, the two groups did not differ in respect to their self–ideal correlations at the termination of counseling, although at the time of the follow-up administration of the Q-sorts there was a tendency for the improved group to have somewhat higher correlations.

Butler and Haigh explained this failure to find a relationship between increased self–ideal correlations and improvement in terms of what they call "defensive sortings." A defensive sorting is one in which people give a distorted picture of themselves so that it appears as if they are well adjusted when actually they are not. For example, in another study the highest self–ideal correlation that was found, an extremely high .90, was secured by a person who was clearly pathological.

The question of defensiveness has received considerable attention from Rogers and his associates because it raises some serious problems regarding the validity of self-reports. Is it true, for example, that when one says one is satisfied with oneself one really is? Does the internal frame of reference give an accurate picture of personality? Haigh (1949) made special studies of defensive behavior and found that it may assume many forms, including denial, withdrawal, justification, rationalization, projection, and hostility. During client-centered therapy some clients show a decrease in defensiveness whereas others show an increase. However, Haigh tended to minimize the importance of defensive behavior. He assumed that most of it consists of intentional deception on the part of the client to save face. This view is in marked contrast to the psychoanalytic theory of defense mechanisms, which assumes that they operate unconsciously.

A study undertaken by Friedman (1955) shed some further light upon the problem of defensiveness. Three groups of white males classified as normal, psychoneurotic, and paranoid schizophrenic made self and ideal Q-sorts. The median correlation for the sixteen normal subjects was .63, for the sixteen neurotic subjects .03, and for the sixteen psychotic patients .43. In other words, the psychotic patients displayed considerably more self-esteem than did the neurotics and not a great deal less than the normal subjects. Friedman concluded that "to employ a high correlation between the self and ideal-self conceptions as a sole criterion of adjustment, however, would lead to the categorization of many maladjusted people, particularly paranoid schizophrenics, as adjusted" (p. 73).
Friedman's finding that paranoid schizophrenics show almost as much congruence in their self-ideal-sorts as normal subjects do has been confirmed by Havener and Izard (1962). In a study of adolescent girls with behavior problems, Cole, Oetting, and Hinkle (1967) discovered that some of the subjects rated the self higher than the ideal-self. This would appear to be another indication of defensive sorting.

Another study in which a measure of defensiveness was correlated with self-attitudes and the assessment of personality by outside observers was conducted by Chodorkoff (1954). Chodorkoff secured self-reports from thirty college students by having them sort 125 items into thirteen piles from most characteristic to least characteristic. Four judges who had access to biographical information, Rorschach protocols and a summary of Rorschach scores, word association test data, and Thematic Apperception Test (TAT) protocols made a Q-sort for each subject using the same 125 items. A measure of perceptual defense was obtained by exposing threatening and neutral words beginning with a subliminal exposure speed and increasing it gradually until the subject was able to recognize all of the words. Measures of perceptual defense were computed by finding the difference between the recognition thresholds for the neutral words and the thresholds for the threatening words.

Chodorkoff was interested in testing the following hypotheses: (1) the greater the agreement between the person's self-description and description of the person by others, the less perceptual defense he or she will manifest; (2) the greater the agreement between the person's self-description and an appraisal made by judges, the more adequate will be the individual's personal adjustment; and (3) the more adequate the personal adjustment, the less perceptual defense the person will show. Two measures of adjustment were employed: (1) the Munroe Inspection Rorschach check list and (2) the ratings made by judges on eleven adjustment scales.

The results confirmed all of the hypotheses. The higher the agreement between self-descriptions and descriptions by others, the less perceptual defense there was and the better was the personal adjustment. The better adjusted subjects also displayed less perceptual defense.

These studies indicate that defensiveness is an important variable in the self-judgments of people and that self-reports cannot be relied upon to give the same picture of personality that is obtained from outside judges.

Another variable that affects self-ratings is social desirability (Milgram & Helper, 1961). A trait that is regarded as desirable is given a higher self-rating than one regarded as undesirable. This factor of social desirability influences the discrepancy between self- and ideal-self-ratings. For example, in a study of child molesters, Frisbie, Vanasek, and Dingman (1967) found that trait terms that were evaluative in character showed no discrepancy between self- and ideal-ratings whereas purely descriptive nonevaluative terms produced large discrepancies.
A critical and comprehensive survey of self-ideal Q-sort studies has been made by Wylie (1974, pp. 128–149).

Current interest in the self-concept has transcended its original locus in the therapy situation and has become a subject for investigation under laboratory conditions. Moreover, testable hypotheses regarding the self-concept have been derived from theories other than Rogers's. For example, Pilisuk (1962) predicted, on the basis of Heider's theory of cognitive balance, that subjects who were adversely criticized for their performance on a task would not change their self-evaluations. This prediction was confirmed. Subjects used a variety of rationalizations to sustain a favorable self-image in the face of criticism.

That the self-concept can be changed under certain conditions is brought out by other studies. Proceeding from Festinger's dissonance theory, Bergin (1962) performed the following experiment. Subjects first made self-ratings of their masculinity. They were then informed that their masculinity was viewed by others in a way that was discrepant with their self-evaluations. When the discrepant communication was a highly credible one, the subjects changed their self-ratings to make them more consonant with the opinion of others. When the communicated opinion could be discredited, their self-evaluations did not change substantially.

Although qualitative descriptions, content analysis of therapeutic protocols, and the use of Q-technique constitute the principal empirical approaches of Rogers and his associates to the study of personality, they have also employed a number of other methods. These methods consist of approaching the person from an external frame of reference. Such standard tests as the Rorschach (Carr, 1949; Haimowitz, 1950; Haimowitz & Haimowitz, 1952; Mosak, 1950; Muench, 1947; Rogers, 1967a), the TAT (Dymond, 1954; Grummon & John, 1954; Rogers, 1967a), the Minnesota Multiphasic (Mosak, 1950; Rogers, 1967a), the Bell Adjustment Inventory (Muench, 1947; Mosak, 1950), and the Kent-Rosanoff Word Association (Muench, 1947) tests have been used with clients in therapy. One of Rogers's students has also used physiological indices for measuring tension and emotion (Thetford, 1949, 1952).

As we have seen, Rogers generated or stimulated a substantial amount of research. That flow has slowed in recent years, but it has not stopped. A series of studies by Cramer (e.g., 1990), for example, looked at the relationship between psychological adjustment (operationalized as self-esteem) and levels of facilitative social support (operationalized as level and unconditionality of
acceptance, empathy, and congruence of the other person) for college students in a close current relationship. Consistent with Rogers's analysis of the conditions that generate psychological growth, Cramer reported that initial facilitativeness (especially unconditionality of acceptance) of the partner was associated with subsequent self-esteem.

Even more impressive is a longitudinal analysis by Harrington, Block, and Block (1987) of Rogers's theory of creativity. According to Rogers, constructive creativity is most likely to occur in the presence of three conditions: openness to experience, internal locus of evaluation, and the ability to toy with elements and concepts. These internal conditions in turn are fostered by two external conditions, psychological safety and psychological freedom. Harrington et al. (1987) investigated the extent to which measures of child-rearing practices by parents of children 4.5 years old in 106 families correlated with the children's subsequent indices of creative potential. The three child-rearing indices correlated significantly with preschool creative potential and with adolescent creative potential (correlations ranged from .38 to .49) in a pattern consistent with Rogers's theory. Furthermore, the relationship with adolescent creative potential remained even after the influences of sex, preschool creative potential, and preschool intelligence were removed. The authors conclude that these results "are obviously consistent with Rogers' theory of creative environments" (1987, p. 855).

In addition to these direct tests of Rogers's model, his implicit assumption that people strive for self-consistency is linked to a number of influential current research programs. These programs fall within a gray area between personality and social psychology in that they deal with the self but do not focus on the entire person, but their contribution to the attempt to understand personality and to refine theories of personality is clear. There is a great deal of contemporary research on the self, but we limit our discussion in this chapter to two programs that emphasize consistency: Festinger's cognitive dissonance theory and Higgins's analysis of self-discrepancies. We also introduce recent social psychological work on the existence and function of a dynamic self-concept.

Leon Festinger (1957) proposed that people who possess two inconsistent beliefs, or what he termed dissonant cognitions, experience an unpleasant tension state that they are motivated to reduce. For example, a man may tell himself and others that he believes in equal rights for women, but he may also never vote for a woman candidate. These two cognitions are dissonant, and the theory predicts that they will combine to make their holder feel uneasy, motivating him to resolve the inconsistency. He may do so by changing his voting behavior, by changing his belief, or by attempting to justify the discrepancy. Such justification might occur if the man decided that he would have
voted for a woman if a qualified one had been available, or if he asserted that the integrity of the traditional family unit requires that we not rush into distribution of jobs to women. These statements might be true, but the point is that the man embraces them in a motivated, defensive manner. As with Rogers (and Freud), we encounter a situation where an outside observer cannot easily know whether behavior is defensive or legitimate. As an alternative example, consider a student who believes that cheating is wrong but who finds herself cheating on an examination when given the opportunity. Her attitude and her action are dissonant. She cannot change the behavior (she did cheat), but she needs to reduce the discrepancy in order to remove the unpleasant tension state. She may attempt to justify the behavior by saying that the exam was not important or that it only happened because she was not prepared this time or that it does not really matter because the course was not in her major. More interestingly, however, she may reduce the dissonance by changing her behavior, by concluding that cheating is not always so bad.

Festinger’s point is that people are better described as rationalizing than as rational. The inconsistent cognitions are analogous to self and experience in Rogers’s model, the tension state is analogous to anxiety in Rogers’s conflict model, and the justification is analogous to Rogers’s defenses of distortion or denial. This analogy is far from perfect, of course, because the dissonant cognitions may be something quite different from what Rogers means by self and experience. The basic reliance on self-consistency, as provoked by an arousal state, however, is quite similar.

The parallel becomes even more intriguing in the light of findings that a negative arousal state is a prerequisite for dissonance to occur. For example, Zanna and Cooper (1974) gave subjects a placebo pill before a dissonance induction, telling different groups of subjects that the pill would make them feel tense or relaxed or have no effect. Subjects then were induced to write a counterattitudinal essay. Subjects changed their attitude in the direction of the essay they had written, as dissonance theory would predict, when told that the pill would have no effect. No dissonance effect occurred for subjects who were told that the pill would arouse them, presumably because they “misattributed” their arousal from writing the essay to the pill. Finally, subjects told that the pill would relax them showed even more attitude change than members of the first group, presumably because they expected to be relaxed and therefore were even more distressed by the arousal they felt. Cooper, Zanna, and Taves (1978) replicated this experiment by telling all subjects they were receiving a placebo, when in fact some received a tranquilizer, some a stimulant, and some a placebo. Dissonance effects occurred when subjects received the placebo, did not occur when they received a tranquilizer, and were enhanced when they received the stimulant. Apparently an arousal state is necessary for dissonance to occur, just as anxiety is a necessary trigger for defense in Rogers’s model.
Additional linkage with Carl Rogers is suggested by two modifications of dissonance theory. Aronson (1969) proposed that the most arousing component of a dissonant cognition is its inconsistency with the self-concept. As a consequence, the motivation to restore consistency through self-justification should be most pressing when the inconsistency jeopardizes a central facet of the self-definition. Alternatively, self-justification provoked by dissonance should be most prevalent among individuals with high self-esteem. Such a "consistency view holds that one's general level of self-esteem operates as a standard against which the evaluative consistency of an act is assessed. The more inconsistent an act is with that standard, the more pressure there will be to justify it as a means of restoring self-evaluative consistency" (Steele, Spencer, & Lynch, 1993, p. 886). In contrast to this self-consistency approach to dissonance, Steele (e.g., Steele & Liu, 1983; Steele, Spencer, & Lynch, 1993) has offered a self-affirmation account. Self-affirmation theory postulates a motive to maintain the perception of global integrity of the self-system. As a consequence, the self-justification described by dissonance theory represents an attempt not to restore consistency but to restore the integrity of the self-image. Because people high in self-esteem possess "more standing resources with which to affirm" their threatened self-image, they should be "more resilient to the self-image threat" produced by postdecisional dissonance and therefore should be less likely to engage in self-justification (Steele et al., 1993, p. 886). Thus, there are individual differences in resilience to threat. Consistent with this model, Steele et al. (1993) found that individuals high in self-esteem, when reminded of their resources, exhibited less self-justification after an image-threatening decision. Steele concludes that "dissonance is not fundamentally the distress of psychological inconsistency, or more particularly the distress of self-inconsistency, but the distress of a threatened sense of self-integrity" (Steele et al., 1993, p. 893).

The heart of Rogers's model is the existence of two versions of congruence/incongruence: between self and experience, where the former represents the individual's self-definition and the latter represents the individual's mental reality, and between self and ideal self, where the latter denotes "the self-concept which the individual would most like to possess, upon which he places the highest value for himself" (Rogers, 1959, p. 200). E. T. Higgins's (1987, 1989) self-discrepancy theory is constructed around the pairwise discrepancies that exist between three alternative domains of the self: "(a) the actual self, which is your representation of the attributes that someone (yourself or another) believes you actually possess; (b) the ideal self, which is your representation of the attributes that someone (yourself or another) would like you, ideally, to possess (i.e., a representation of someone's hopes, aspirations, or wishes for you); and (c) the ought self, which is your representation of the
attributes that someone (yourself or another) believes you should or ought to possess (i.e., a representation of someone’s sense of your duty, obligations, or responsibilities” (1987, pp. 320–321). Higgins’s example of the distinction between the ideal self and the ought self is the conflict some women experience between their own wish to be a successful professional and someone else’s belief that they ought to be a housewife and mother. Notice that Higgins provides for two origins for each domain of the self: your own personal standpoint and the standpoint of some other significant person (Rogers’s distinction between the need for positive regard and the need for self-regard essentially refers to these two standpoints). Combining the three domains with the two standpoints generates the possibility of “six basic types of self-state representations: actual/own, actual/other, ideal/own, ideal/other, ought/own, and ought/other.” (Notice that Rogers’s “condition of worth” and Horney’s “tyranny of the should” represent the internalization or transformation of Higgins’s “ought/other” into the “ought/own.”) To return to Higgins’s example, a woman’s wish to be a successful professional would be an ideal/own representation, and her parents’ insistence that she stay home as a wife and mother would be an ought/other representation. The first two representations comprise what Higgins terms the self-concept, and the remaining four representations are what he terms self-guides. Self-discrepancy theory states that “we are motivated to reach a condition where our self-concept matches our personally relevant self-guides” (Higgins, 1987, p. 321).

Self-discrepancy theory follows Rogers and dissonance theory in suggesting that discrepancies have emotional and motivational consequences. If the arousal becomes too strong, the person may attempt to reduce it by changing his or her behavior or by reconceptualizing current or past events. The theory is distinctive, however, in proposing that chronic discrepancies between particular pairs of representations are associated with particular motivational predispositions. For example, actual/own versus ideal/own and actual/own versus ideal/other discrepancies render a person vulnerable to dejection-related emotions. More specifically, an actual/own versus ideal/own discrepancy is likely to lead to disappointment and dissatisfaction because the person believes that his or her hopes and wishes have not been fulfilled. On the other hand, an actual/own versus ideal/other discrepancy produces vulnerability to shame and embarrassment, because the person has failed to meet the hopes or wishes of a significant other. An instance of the former discrepancy would occur if a person who had expected to go to graduate school failed to gain admission, while the latter might occur if a person failed to be admitted by the only school her parents thought worthy of her. In contrast, discrepancies between actual/own and ought/own or ought/other representations make a person vulnerable to agitation-related emotions. An actual/own versus ought/own discrepancy is predicted to produce a vulnerability to guilt and/or self-contempt because the person has violated a personally accepted moral standard, but an actual/
own versus ought/other discrepancy should leave a person feeling fearful, threatened, or resentful because of anticipated sanctions or punishment. An example of an actual/own versus ought/own discrepancy would arise if a student failed to earn the grades she felt capable of achieving, but failing to earn the grades her parents expected would illustrate an actual/own versus ought/other discrepancy.

Higgins's self-discrepancy theory is complicated, particularly when he introduces parameters governing the availability and accessibility of the discrepancies. He has, however, published a number of supportive findings, and his self-discrepancy theory remains a provocative contemporary extension of Rogers's original model.

Space constraints preclude extensive discussion of other recent work that challenges the assumption of a unitary self-concept. Markus and Wurf (1987) provide the best introduction to this work on what they term the dynamic self-concept. Markus and Wurf note the connection between this contemporary research and Rogers's personality theory as well as the theories proposed by Erikson, Horney, Maslow, Murray, and Sullivan. For example, Markus and Nurius (1986, p. 954) suggest that possible selves "represent individuals' ideas of what they might become, what they would like to become, and what they are afraid of becoming." In this approach, the working self-concept refers to "the set of self-conceptions that are presently active in thought and memory" (p. 957). As a further example, Markus and Kitayama (1991) distinguish between independent and interdependent construals of the self. The independent view, prevalent in Western cultures, is based on the assumption that each individual has unique attributes he or she should discover and express. The interdependent construal is based not on the assumption of the autonomy of the individual but on the individual's role in the larger social unit. Under this latter view, what is unique to the individual is not his or her inner self but his or her configuration of relationships. According to Markus and Kitayama, there are substantial cognition, emotional, and motivation consequences of these alternative construals of the self. Despite the fact that Markus and Wurf refer to this body of work as providing a "social psychological perspective," it clearly should not be ignored by students of personality theory.

Organismic theory as a reaction against mind–body dualism, faculty psychology, and stimulus–response behaviorism has been immensely successful. Who is there in psychology today who is not a proponent of the main tenets of organismic theory that the whole is something other than the sum of its parts, that what happens to a part happens to the whole, and that there are no
separate compartments within the organism? What psychologist believes that there is a mind that is separate from the body, a mind that obeys laws different from those pertaining to the body? Who believes that there are isolated events, insulated processes, detached functions? Very few if any psychologists subscribe any longer to an atomistic viewpoint. We are all organismic psychologists whatever else we may be.

In this sense, organismic theory is more of an attitude or orientation or frame of reference than it is a systematic behavior theory. It says, in effect, that since everything is related to the whole, true understanding results from the correct placing of a phenomenon within the context of the total system. It directs the investigator to take into account a web of variables rather than pairs of variables, to consider the event that he or she is studying as a component of a system rather than as an isolated happening. To understand the laws by which the total system operates is in fact the ultimate concern of scientists: it is the ideal toward which they constantly strive. The organismic viewpoint as applied within the province of human psychology asserts that the total person is the natural unit of study. Since the normal, healthy human being, or any other organism for that matter, always functions as an organized whole, the person should be studied as an organized whole.

An organismic theory of personality is defined by the attitude of the theorist, not by the contents of the model of personality that is constructed. If the theory focuses upon the whole organism as a unified system rather than upon separate traits or drives or habits, then the theory may be called an organismic one. Goldstein, Maslow, Allport, Murray, Rogers, Freud, Jung, and virtually all other contemporary personality theorists adopt an organismic orientation, but there are radical differences among these theories. What Goldstein finds in the organism is not precisely what Allport or Freud finds there, although all three may be classified properly as organismic in their general orientation.

There is little to find fault with in the organismic approach because it is so universally accepted. One can, however, evaluate a particular organismic theory such as Goldstein's.

A number of more or less specific criticisms have been raised regarding Goldstein's theory. He has been criticized for not distinguishing sufficiently between what is inherent in the organism and what has been put there by the culture. Kattsoff (1942), for example, has raised this question. Goldstein's concept of self-actualization has been regarded as being too general in character to be useful for making specific predictions. Skinner (1940) considered self-actualization a metaphysical concept because it cannot be put to an experimental test. Some psychologists object to Goldstein's apparent disregard of statistical analysis in favor of a qualitative approach in his role as an investigator. These psychologists feel that qualitative analysis is highly subjective and that it is difficult to repeat an investigation when it is couched in purely qualitative terms. Other psychologists do not see eye to eye with Goldstein's
strictures regarding the use of psychological tests. They feel that tests should be administered and scored in a standardized manner and that they should not be changed to meet the needs of the individual case. Goldstein has been criticized for placing too much emphasis upon maturation and not enough upon learning and for exaggerating the importance of the abstract attitude in psychological functioning. Finally, there have been objections to trying to understand the normal personality by studying brain-injured patients.

Maslow's version of organismic theory may turn out to be more influential than any of the others. Maslow was an indefatigable and articulate writer and lecturer. Moreover, he became one of the leaders of humanistic psychology, which appeals to many psychologists. In reading Maslow it is sometimes difficult to draw the line between the inspirational and the scientific. Some critics believe that humanistic psychology is more of a secular replacement for religion than it is a scientific psychology. Others feel that the contributions of the humanists to the empirical foundations of psychology have not been commensurate with their speculative writings. Some psychologists accuse the humanists of accepting as true that which is still hypothetical, of confusing theory with ideology, and of substituting rhetoric for research. In spite of these criticisms of the sort of psychology that Maslow stands for, there are a large number of psychologists who are attracted to this viewpoint because it tries to deal with vital and contemporary human concerns.

There was no major change in Rogers's theoretical viewpoint after 1959, although he became more forceful in presenting his views, more assured of their essential validity, more aware of their applicability to helping to solve the problems of the modern world, and more convinced that mankind has a hopeful future (Rogers, 1977, 1980). Client-centered therapy is an established and widely used method of treatment. Person-centered theory as formulated by Rogers served as a formidable stimulus for investigative activities. Not all of the empirical findings are favorable to Rogers's theory nor can all research on the self be attributed directly to Rogers. Nevertheless, no one has been more influential in providing an intellectual tradition in which research on the self might flourish. His dictum that "the best vantage point for understanding behavior is from the internal frame of reference of the individual himself" has been a rallying point for many psychologists. His passionate regard for humanistic values in psychological research as presented in so many of his writings and in his famous debate with B. F. Skinner (Rogers, 1956) has helped to polarize the thinking of psychologists. His optimism, his implicit faith in the inherent goodness of humans, and his steadfast belief that troubled people can be helped are attitudes that have attracted many people who consider behaviorism too cold and psychoanalysis too pessimistic. That there is a "third force" in psychology as viable as behaviorism and psychoanalysis are is due in very large part to Carl Rogers.
It has already been noted that Rogers's theoretical views, like those of Freud, Jung, Adler, Horney, and Sullivan, grew out of his experiences in working with emotionally disturbed persons. There is, however, one very significant difference between Rogers and these other clinic-based theorists. From 1940, when Rogers accepted an appointment as professor of psychology at Ohio State University, his primary identification was with academic psychology. It is no secret that advancement in the university setting and professional prestige are largely determined by one's research productivity and the research activities of one's students. Moreover, the academic psychologist has to face up to the exacting critical scrutiny of his or her colleagues. That Rogers met these tests with great success is attested to by the quantity and quality of his publications, by the number of students he has had, and by the honors his fellow psychologists have accorded him. He was one of the first three psychologists chosen to receive a Distinguished Scientific Contribution Award from the American Psychological Association in 1956. On the other hand, despite his association with the academic process for many years, Rogers was sharply critical of traditional university structures. He viewed himself as having gone his own way uninfluenced, as far as possible, by the pressures and politics of academic departments. To some extent, this isolation reflects Rogers's cynicism about our educational institution and its enforced segregation of feelings and intellect. Using a phrase that could serve as a summary for his theory, Rogers deplored "the silent screams of denied feelings echoing off every classroom wall and university corridor" (Rogers, 1980, p. 251; italics added).

The chief criticism that many psychologists make of Rogers's theory is that it is based upon a naive type of phenomenology. There is abundant evidence to show that factors unavailable to consciousness motivate behavior and that what a person says of him- or herself is distorted by defenses and deceptions of various kinds. Self-reports are notoriously lacking in reliability, not only because people may intend to deceive their listeners, but also because they do not know the whole truth about themselves. Rogers has been criticized for ignoring the unconscious, whose potency for controlling human conduct has been attested to by psychoanalytic investigations over a period of eight decades. Rogers believes there is no need to probe, to interpret, to carry on extensive and intricate analyses of dreams, or to excavate layer after layer of psychic strata—because the person is revealed in what the person says about himself.

The criticism of naiveté cannot be urged too strongly against Rogers, however. Explicitly recognized in Rogers's theory is the concept of an organism that has many experiences of which the person is not aware. Some of these unsymbolized experiences are denied entrance to consciousness because they are inconsistent with the self-image. If this is not repression, in the psychoanalytic sense, then the distinction between it and repression is so slight as to be negligible. The principal difference between Rogers and psychoanalysis lies in Rogers's conviction that repression can be prevented in the first place by
the parents giving unconditional positive regard to the child. Or if the damage has been done, it can be corrected later by therapeutic intervention in which the therapist prizes the client. When given unconditional positive regard, the client eventually discovers his or her real self. This real self is the one that is completely congruent with the experiencing organism. Psychoanalysts would object that unconditional positive regard, even if it could be consistently maintained by the therapist, would not be sufficient to overcome repression in the patient. Analysis and interpretation of what the patient is thinking and feeling, of dreams, and of the transference are necessary to penetrate the defenses and make conscious that which is unconscious. Even under the most favorable therapeutic conditions, a portion of one’s experiences still remains unconscious.

Rogers (1977) modified his view of the unconscious by suggesting that unconscious organismic processes do in fact, and should, guide much of our behavior. These processes are not antisocial and impulsive in the Freudian sense: they are dependable guides for achieving personal fulfillment and for developing warm interpersonal relations. Rogers seems to be saying “Trust your unconscious.”

Another criticism focuses on Rogers’s failure to describe the nature of the organism. If the organism is the basic psychological reality, what are the characteristics of this reality? What precisely are the potentialities residing within the organism that are to be actualized? Other theorists have postulated such elements as life and death instincts (Freud), archetypes (Jung), needs (Murray, Fromm, and Maslow), drives (Miller and Dollard), and traits (Allport and Cattell), but Rogers did not postulate anything other than the very general actualizing tendency.

Rogers might have answered this type of criticism by saying that as a phenomenologist he is interested only in the experiences flowing from the organism and the person’s openness to these experiences, and not in the organism itself. It is, of course, a theorist’s prerogative to place a theory within a frame and to ignore what lies outside the frame because it is considered to be either unimportant or irrelevant. All theorists exercise this right.

Whatever the future of Rogers’s theory may be, it has served well the purpose of making the self an object of empirical investigation. Many psychologists have given theoretical status to the self, but it is to Rogers’s credit that his formulations regarding the phenomenal self have led directly to the making of predictions and to investigative activities. Heuristically, his theory has been an extremely potent and pervasive force.
The three theorists discussed in this final section of the text are distinguished
by an emphasis on the central role played by learning in the acquisition of
those characteristic behavior tendencies that comprise the structural and
dynamic components in other theories of personality. As a consequence, they
differ most clearly among themselves in their articulation of the principles
that govern learning. Skinner provides a compelling description of instrumental
conditioning, according to which behavior is "selected and maintained by its
consequences." The heart of Skinner's model is his specification of the parameters
that govern the operation of reinforcement. Dollard and Miller employ a
stimulus–response account of learning. In the process, they reconceptualize
a number of important features from Freud's psychodynamic model. Finally,
Bandura articulates a cognitive social learning model in which observational
learning is the primary means through which people develop their behavioral
repertoires. Much of Bandura's account rests on the assumption that human
behavior is guided by the consequences that an individual anticipates.

Other differences accompany the distinctive positions these theorists hold
with respect to the principles of learning. For example, Skinner in no way
would have described himself as a personality theorist; rather, he attempted to
provide an alternative framework for explaining processes that other theorists
described as distinctive parts of an individual's personality. Bandura works at
the boundary between personality and social psychology. Of the three, Dollard
and Miller would be most likely to refer to their work as a theory of personality.
In addition, Bandura emphasizes cognitive processes in his account. Dollard
Table 4
Dimensional comparison of learning theories

<table>
<thead>
<tr>
<th>Parameter compared</th>
<th>Skinner</th>
<th>Dollard and Miller</th>
<th>Bandura</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>Unconscious determinants</td>
<td>L</td>
<td>M</td>
<td>L</td>
</tr>
<tr>
<td>Learning process</td>
<td>H</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Structure</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>Heredity</td>
<td>H</td>
<td>L</td>
<td>L</td>
</tr>
<tr>
<td>Early development</td>
<td>M</td>
<td>H</td>
<td>M</td>
</tr>
<tr>
<td>Continuity</td>
<td>H</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>Organismic emphasis</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>Field emphasis</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>Uniqueness</td>
<td>L</td>
<td>L</td>
<td>L</td>
</tr>
<tr>
<td>Molar emphasis</td>
<td>L</td>
<td>L</td>
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<tr>
<td>Psychological environment</td>
<td>L</td>
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<tr>
<td>Self-concept</td>
<td>L</td>
<td>L</td>
<td>H</td>
</tr>
<tr>
<td>Competence</td>
<td>L</td>
<td>L</td>
<td>H</td>
</tr>
<tr>
<td>Group membership</td>
<td>L</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>Biology anchoring</td>
<td>M</td>
<td>M</td>
<td>L</td>
</tr>
<tr>
<td>Social science anchoring</td>
<td>M</td>
<td>H</td>
<td>M</td>
</tr>
<tr>
<td>Multiple motives</td>
<td>L</td>
<td>M</td>
<td>L</td>
</tr>
<tr>
<td>Ideal personality</td>
<td>L</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>Abnormal behavior</td>
<td>M</td>
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<td>M</td>
</tr>
</tbody>
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Note: H indicates high (emphasized), M indicates moderate, L indicates low (deemphasized).

and Miller also attempted to account for cognitive processes, but Skinner stood firm against any attempt to account for behavior in terms of unobserved cognitive processes. All three theorists have highly practical goals, but that practical orientation led Skinner to a distinctively radical position in which only observable and manipulable environmental events play a causal role.

Table 4 provides a comparative summary of Skinner, Dollard and Miller, and Bandura. All three positions are of course rated as high on the learning process. Each theorist also emphasizes continuity and deemphasizes uniqueness, but several differences are apparent. For instance, Skinner is alone in his emphasis on the role played by heredity. In addition, Bandura is distinctive in this company for his emphasis on the self-concept and the role played by competence in guiding behavior.

Each of these three positions has been criticized for providing incomplete theories of personality, as we shall see. None of the three adopted that as an explicit goal, however, and to a large extent we are forcing Skinner and Bandura into roles they did not seek. Despite this, each of the three theories has much to offer students of personality. We encourage the reader not only to come to terms with the individual positions but also to compare them with theoretical statements presented earlier in this book.
In the early part of this century the strident but powerful voice of John B. Watson had enormous impact on both academic psychology and the general public. During more recent years, B. F. Skinner exerted a comparable influence and advocated some of the same reforms. Skinner was an ardent behaviorist convinced of the importance of objective method, experimental rigor, and the capacity of elegant experimentation and inductive science to solve the most
complex behavioral problems. He applied his concepts and methods to the major concerns of our time, both practical and theoretical.

Skinner’s position often has been described as a stimulus–response theory, but he repudiated this label on two grounds. First, his approach depends on the connection between a response and a subsequent reinforcing event, not a stimulus and a subsequent response. Indeed, Skinner concluded that there are no controlling or eliciting stimuli for most behaviors; rather, the hallmark of Skinner’s operant conditioning is that control resides in the consequences of behavior. His approach is more accurately described as “selectionist” than as “associationist.” Skinner frequently emphasized the parallels between the operant selection of particular behaviors because of their consequences during the life of an individual and the selection of members of a population because of Darwinian natural selection during evolutionary time: “Reflexes and other innate patterns of behavior evolve because they increase the chances of survival of the species. Operants grow strong because they are followed by important consequences in the life of the individual” (Skinner, 1953, p. 90; quoted in Catania, 1993; see also Catania, 1992). Second, Skinner has been distinguished by a distaste for formal theory, as illustrated in his rejection of Clark Hull’s postulate–theorem approach to theorizing. Rather than defining science in terms of the quest for explanatory principles, “the goal of Skinner’s science is the control, prediction, and interpretation of behavior—a goal believed to be attainable because of the assumed lawfulness of behavior. . . . When the description of the controlling functional relationship is complete, control is obtained and the goal of the science is met” (Holland, 1992, p. 665).

The son of a small-town lawyer, Skinner was born in 1904 and raised in Susquehanna, Pennsylvania, in a warm and stable family setting. It is interesting to note what the subsequent inventor of the “Skinner box,” the “baby box,” and various teaching machines observes in regard to his childhood:

_I was always building things. I built roller-skate scooters, steerable wagons, sleds, and rafts to be poled about on shallow ponds. I made seesaws, merry-go-rounds, and slides. I made slingshots, bows and arrows, blow guns and water pistols from lengths of bamboo, and from a discarded water boiler a steam cannon with which I could shoot plugs of potato and carrot over the houses of our neighbors. I made tops, diabolos, model airplanes driven by twisted rubber bands, box kites, and tin propellers which could be sent high into the air with a spool-and-string spinner. I tried again and again to make a glider in which I myself might fly._
I invented things, some of them in the spirit of the outrageous contraptions in the cartoons which Rube Goldberg was publishing in Philadelphia Inquirer (to which, as a good Republican, my father subscribed). For example, a friend and I used to gather elderberries and sell them from door to door, and I built a flotation system which separated ripe from green berries. I worked for years on the design of a perpetual motion machine. (It did not work.) (Skinner, 1967, p. 388)

As an undergraduate he attended a small liberal arts school, Hamilton College, where he majored in English and determined to become a writer. Encouraged in various ways, including a letter from Robert Frost appraising three of Skinner’s short stories, he decided to spend a year or two in full-time literary endeavor, while living at home. This period turned out to be relatively unproductive, and following a brief interval in Greenwich Village and Europe he gave up writing and turned to Harvard and psychology. Although Skinner abandoned a career in creative writing, he did not give up his interest in literature, as a number of his subsequent articles testify (Skinner, 1961).

At this time Harvard was an informal but stimulating setting for a young psychologist. Skinner does not appear to have followed in the path of any particular faculty member, but he had significant encounters with many, including E. G. Boring, Carroll Pratt, and Henry A. Murray. At least as significant as these interactions were the influences of his fellow graduate student Fred Keller and the distinguished experimental biologist W. J. Crozier. Skinner received his Ph.D. in 1931 and spent five postdoctoral years working in Crozier’s laboratory, the last three of which were as a Junior Fellow. Harvard’s most prestigious position for a young scholar. Crozier was one of a number of rigorous biologists who influenced Skinner’s thought. Others include Jacques Loeb, C. S. Sherrington, and Ivan Pavlov. Among major psychologists in his intellectual lineage are John B. Watson and E. L. Thorndike. Skinner identified a number of philosophers of science whose writings contributed to his behavioristic position including Bertrand Russell, Ernst Mach, Henri Poincaré, and Percy Bridgman.

His first academic position was at the University of Minnesota where he moved in 1936. The nine subsequent years at Minnesota were remarkably productive and established Skinner as one of the major experimental psychologists of his time. During this period of intense scientific activity he found time to begin a novel, Walden two (1948), which described the evolution of an experimental society based on psychological principles. Following a brief stay at Indiana University he returned to Harvard for the duration of his career. During these years Skinner was accorded many honors including the Distinguished Scientific Award of the American Psychological Association, membership in the National Academy of Sciences, the Gold Medal Award of the American Psychological Foundation, serving as the William James Lecturer at
Harvard, and receipt of the President's Medal of Science. B. F. Skinner died of leukemia on August 18, 1990, only eight days after receipt of the only award the American Psychological Association had given for Outstanding Lifetime Contribution to Psychology. Surely no award ever was more appropriate. Holland (1992, p. 665) summarized Skinner's contribution as the demonstration that "behavior could be studied as a self-sufficient subject matter, rather than as a reflection of inner mental events."

Skinner's most important single publication was his first volume, *The behavior of organisms* (1938), which continues to be a major source of intellectual influence many years after publication. His volume entitled *Science and human behavior* (1953) provided an introduction to his position and illustrated its application to a wide variety of practical problems. A detailed analysis of language in terms of his concepts appeared in *Verbal behavior* (1957), the book that Skinner himself regarded as his most important, and an early example of programmed learning was offered by Holland and Skinner (1961). His most important articles prior to 1961 are contained in a collection of papers entitled *Cumulative record* (1961). *The technology of teaching* (1968) detailed his approach to learning in the school setting. *Contingencies of reinforcement* (1969) restated Skinner's scientific position including its relevance for broad social problems. In *Beyond freedom and dignity* (1971), probably his most controversial book, Skinner argued that the concepts of freedom and dignity are hindrances to the improvement of modern society. *About behaviorism* (1974) summarized Skinner's views on the brand of psychology that is practically synonymous with his name. Skinner published a three-volume autobiography (1976, 1979, and 1983b) in addition to an earlier statement (1967). Many of his later papers appear in two collections (Skinner, 1978, 1987), and a final book (Skinner & Vaughan, 1983) described strategies Skinner used himself to deal with some of the problems associated with growing old. Several biographies of Skinner have appeared recently, including Nye (1992), Richelle (1993), and an intellectual and cultural biography by Bjork (1993) that Fancher calls "the first serious biography of America's most famous psychologist since his death" (1995, p. 730; see also Morris, 1995).

What can we say in general terms regarding Skinner's position and its distinctive features? First of all, it would be difficult to find a theorist who was less enthusiastic about being cast in the role of theorist than Skinner. In spite of his enormous theoretical influence, he questioned the contribution of theory to scientific development. Until late in his career, Skinner looked on his own work as illustrating an informed and systematic empiricism that operates without theoretical derivation. He consistently opposed any attempt to fill in the gap between observed events with inferred or hypothesized variables. His intent was to gather behavioral laws with no "explanatory fictions" at all. This point of view was particularly well illustrated in two papers entitled "Are
theories of learning necessary?" (1950) and "A case history in scientific method" (1956).

One may also note that this theory owes as much to the laboratory as any other theory discussed in this volume. Skinner's principles were derived from precise experimentation, and he showed more careful respect for well-controlled data than any comparable theorist. It is an easy matter to state that rewards have something to do with learning, and it is not particularly difficult to demonstrate repeatedly under carefully controlled conditions that this is true in a number of different settings. It is another matter, however, to identify precisely highly regular relations between particular patterns of reinforcement and carefully specified response measures. In his studies of reinforcement schedules Skinner did just this, and he provided findings that have a regularity and specificity that rival those of any physical scientist. He demonstrated that particular patterns (schedules) of reinforcement generate characteristic and highly replicable changes in rate of responding, both in sustained responding and extinction.

Skinner differed markedly from the average experimental psychologist in his concern for the individual subject. His results were typically reported in terms of individual records. It is not enough that his studies produced average results that concur with expectation and future observation. The behavioral law or equation must apply to each subject observed under appropriate conditions. Attention to the individual applicability of every finding or law is particularly valuable in a discipline where the investigator often does not look beyond group data to see whether there are many, if any, individual subjects whose behavior conforms to group generalizations.

Skinner's focus on the study of individual subjects instead of generalized group trends reflected his belief that lawful control can be seen in individual behavior. It is one of the great ironies in psychology that personality psychologists typically attempt to understand individuals by studying groups, while Skinner attempted to develop general laws by studying individuals! In this respect, Skinner echoes Gordon Allport's search for general principles that explain the development and behavior of individuals (see Chapter 7).

Although many psychologists have focused on responses that appear largely under stimulus control (reflexes, for example), Skinner chose to direct his attention toward emitted instead of elicited responses. This emphasis upon operants rather than respondents, to use Skinner's terminology, constitutes another distinctive feature of his approach to the study of behavior. He also believed that psychology should properly focus on simple behavioral events before attempting to understand and predict the complex events.

Although he emphasized the study of individual organisms and simple responses, Skinner assumed that the findings of this research have broad generality. In his words: "I suggest that the dynamic properties of operant behavior may be studied with a single reflex (or at least with only as many as
are needed to attest to the general applicability of the results)” (Skinner, 1938, pp. 45–46). Skinner believed that the same general principles of behavior will be uncovered regardless of what organism, stimulus, response, and reinforcer the experimenter chooses to study. Thus, the pigeon and the laboratory provide a paradigm that can be extrapolated and extended to the widest variety of other organisms and situations.

Consistent with the last observation is the fact that Skinner’s approach to the study of behavior, his laws, and technology have been used in a broad range of applied settings. Skinner and his students have dealt significantly with practical problems such as missile control (Skinner, 1960), space technology (Rohles, 1966), behavioral assay of psychoactive drugs (Boren, 1966), educational technology (Skinner, 1968, 1984), the development of experimental cultures or societies (Skinner, 1961), the treatment of psychotics, autistic children, and the mentally retarded (Krasner & Ullmann, 1965), the use of token economies (Ayllon & Azrin, 1965, 1968; Krasner, 1970; Kazdin, 1989), aging (Skinner, 1983a; Skinner & Vaughan, 1983), the quality of life in Western culture (Skinner, 1986b), and child development (Bijou & Baer, 1966). Consequently, although in one respect Skinner is the “purest” of all the theorists under consideration, he is also a theorist whose work has had very wide application in diverse behavioral domains, not to mention within psychology itself (see, e.g., Morris, 1992).

We have seen something of the origins and general qualities of Skinner’s austere formulations, and we shall now examine his conceptions and their application in somewhat more detail.

**SOME GENERAL CONSIDERATIONS**

**Lawfulness of Behavior**

Let us begin with an examination of some of the basic assumptions and attitudes that underlie Skinner’s work.

Although the assumption that behavior is lawful is implicit in all psychological research it is often not made explicit, and many of its implications remain unrecognized. Skinner, like Freud, deserves recognition for his constant emphasis on the orderliness of behavior, and, perhaps more significantly, for communicating his belief in this lawfulness to a large segment of society. By means of his writings and refined experiments, Skinner persuaded many that the principle of determinism applies to human beings and raises serious questions concerning our conception of a human being as a free agent with certain goals in life. For example, Skinner continually pointed out that once we accept this principle the apportioning of blame or responsibility for actions has little meaning. One individual commits serious crimes; another performs deeds in the service of humanity. Both classes of behavior result from the interplay of identifiable variables that completely determine behavior. An individual’s behavior is entirely a product of, and can be understood purely in terms of
the objective world. In principle, and Skinner believed in practice also, an individual's actions can be considered just as lawful as the movement of one billiard ball when it is struck by another ball. When carried to its logical conclusion, this assumption has proven deeply troubling to many of Skinner's readers. For example, just as we neither blame nor praise a billiard ball for the consequences of its motion, so also does it make no sense from Skinner's perspective to praise one individual for winning a Nobel Prize or to blame another for becoming a serial murderer. Behavior is a product of forces acting on the individual, not of personal choice. Perhaps no other theorist save Freud has introduced an assumption so foreign to our customary way of viewing ourselves. Accepting or rejecting Skinner's assumption of lawfulness has profound consequences for legal decision rules and governmental policies toward disadvantaged citizens, among other domains, not to mention personal judgments about our own behavior and the behavior of others. In this respect, as in so many others, Skinner is profoundly provocative.

Of course, all personality theorists covertly assume that behavior is lawful. But Skinner drew out the implications of this assumption so that the ordinary person could understand them. The following quotation clearly illustrates Skinner's views:

Science is more than the mere description of events as they occur. It is an attempt to discover order, to show that certain events stand in lawful relations to other events. No practical technology can be based upon science until such relations have been discovered. But order is not only a possible end product; it is a working assumption which must be adopted at the very start. We cannot apply the methods of science to a subject matter which is assumed to move about capriciously. Science not only describes, it predicts. It deals not only with the past but with the future. Nor is prediction the last word: to the extent that relevant conditions can be altered, or otherwise controlled, the future can be controlled. If we are to use the methods of science in the field of human affairs, we must assume that behavior is lawful and determined. We must expect to discover that what a man does is the result of specifiable conditions and that once these conditions have been discovered, we can anticipate and to some extent determine his actions.

This possibility is offensive to many people. It is opposed to a tradition of long standing which regards man as a free agent, whose behavior is the product, not of a specifiable antecedent condition, but of spontaneous inner changes of course. Prevailing philosophies of human nature recognize an internal "will" which has the power to interfere with causal relationships and which makes the prediction and control of behavior impossible. To suggest that we abandon this view is to threaten many
cherished beliefs—to undermine what appears to be a stimulating and productive conception of human nature. The alternative point of view insists upon recognizing coercive forces in human conduct which we may prefer to disregard. It challenges our aspirations, either worldly or otherworldly. Regardless of how much we stand to gain from supposing that human behavior is the proper subject matter of science, no one who is a product of Western civilization can do so without a struggle. We simply do not want such a science. (Skinner, 1953, pp. 6–7)

In *Beyond freedom and dignity* (1971), Skinner suggested that, in analyzing behavior, the layperson typically attributes a causal role to the environment for some behaviors but not for others. If a supervisor is in the factory, it is easy to attribute a worker’s good performance to the supervisor’s presence. We give more credit to a worker who is equally industrious in the absence of the supervisor, because in this case the causes of behavior are less obvious. Thus the amount of credit we give a person tends to be inversely related to the conspicuousness of the causes of his or her behavior. Skinner argued that the worker’s behavior is lawful whether or not its causes are obvious to the casual observer, and giving credit to the individual for actions only impedes the search for the factors controlling their behavior.

The assumption that all behavior is lawful clearly implies the possibility of behavior control. All that is required is to manipulate those conditions that influence or result in a change in behavior. There can be some disagreement about whether control necessarily implies understanding or explanation, but on a purely practical level Skinner preferred to use the term control because its meaning is clear. Skinner was not much interested in those aspects of behavior that are strongly resistant to change, those governed primarily by hereditary endowment for example. The types of behavior that he studied are those that seem most plastic, and for which one can assume that change can be brought about by manipulation of those kinds of environmental variables that normally interact with the person. Skinner’s interest in behavior stems not only from a curiosity about how behavior works, but also from an intense desire to go about the job of manipulating it. The word control is used in part because it correctly reflects this conviction. Skinner frequently argued that the ability to manipulate behavior, if handled properly, can be used for the betterment of all.

**Functional Analysis**

The question now arises as to how control is most likely to be achieved. Skinner believed that a *functional analysis* is most appropriate. By a functional analysis Skinner meant an analysis of behavior in terms of cause and effect relationships, where the causes themselves are controllable, that is, stimuli, deprivations and so on. Psychologists often use the terms independent variable and
dependent variable in this context. An independent variable is one that is manipulated by the experimenter, and a dependent variable is a variable that may change as a result of this manipulation. Skinner contrasted the functional analysis of behavior with an analysis that seeks only to establish correlations between dependent variables instead of causal relationships. In the establishment of correlations, as in the classification of traits, we might find, for example, that people who are very aggressive tend also to be very intelligent. But we do not claim to show how the aggressive disposition or intelligence can be encouraged or discouraged. We are only connecting effect with effect and are not discovering antecedent variables that give rise to either characteristic. Thus, although we may be able to predict behavior to some degree because we can measure intelligence and predict aggressiveness, we are given no indication of which variables to manipulate in order to heighten or reduce aggressiveness.

Skinner consistently argued that behavior can best be studied by considering how it is related to antecedent events. This is an argument accepted by many psychologists. Skinner also argued that in a functional analysis of behavior there is no necessity to talk about mechanisms operating within the organism. Behavior can be explained and controlled purely by the manipulation of the environment that contains the behaving organism, and there is no need to take the organism apart or make any inferences about the events that are going on inside the organism. As Skinner (1974, p. 182) put it, "In its search for internal explanation, supported by the false sense of cause associated with feelings and introspective observations, mentalism has obscured the environmental antecedents which would have led to a much more effective analysis. . . . The objection to the inner workings of the mind is not that they are not open to inspection but that they have stood in the way of the inspection of more important things." This argument has been widely misunderstood, and it is central to Skinner's position. Skinner is proposing not that inner states do not exist but that they cannot serve as causes in a scientific analysis of behavior. Intelligence, expectation, and other mental states are themselves the product of previous contingencies of reinforcement, and they have no causal status: "When we say that a man eats because he is hungry, smokes a great deal because he has the tobacco habit, fights because of the instinct of pugnacity, behaves brilliantly because of his intelligence, or plays the piano well because of his musical ability, we seem to be referring to causes. But on analysis these phrases prove to be merely redundant descriptions" (Skinner, 1953, p. 31). This is not meant to deny that "feelings" exist; however, they and other bodily states are "collateral products of our genetic and environmental histories. They have no explanatory force" (Skinner, 1975, p. 43; see also Skinner, 1985). Similarly, Skinner rejected attempts to explain the variability in behavior by reference to motivational states. That is, "nothing [is] gained by talking about a state of hunger, no matter what the introspective or physio-
logical evidence, because we must still explain the state" (Skinner, 1977b, p. 1010).

Despite their inadmissibility as causes, inner states do have utility as predictors. Skinner wrote the following in *About behaviorism*: "What a person feels is a product of the contingencies of which his future behavior will also be a function, and there is therefore a useful connection between feelings and behavior. It would be foolish to rule out the knowledge a person has of his current condition . . . but we can nevertheless predict behavior more accurately if we have direct knowledge about the history to which feelings are to be traced" (1974, p. 230). Once again, it is critical to recognize that Skinner’s goal was to develop a technology that will permit us to alter behavior, not just to predict it. The problem is not only that inner states are themselves the product of previous environmental actions, it is that inner states are not subject to manipulation. As a consequence, they are useless in an attempt to control behavior.

To begin to understand his position, it is helpful to see what Skinner says about some of the commonly used causal explanations of behavior that rely on internal events as the antecedent in a cause-and-effect relationship. Suppose a man walks into a restaurant, briskly calls the waiter, and orders a hamburger. When the hamburger is delivered, he wolfs it down, without pausing to reply to conversation addressed to him. We ask why is the man eating? One common explanation of his behavior is that he is hungry. But how do we know that the man is hungry? We only know that the man engages in a number of activities that tend to be associated and that tend to occur following the same kinds of environmental conditions. But in using this description we are not recognizing an event of being hungry that is antecedent to eating; instead, the act of hurried eating is part of what we mean by being hungry. The term “being hungry” may simply describe the collection of activities that are associated with an identified independent variable (food consumption), much as the term “playing baseball” is a term used to encompass the activities of pitching, batting, fielding, and so on. Each of these activities could be explained by pointing to the sequence of events prior to the baseball game. But the activities are not explained simply by describing them as part of the playing of baseball. We do not say that an individual is pitching simply because he is playing baseball. Playing baseball is not an event antecedent to pitching: rather pitching is a part of “playing baseball.”

Objecting to this line of reasoning we might claim that the term “being hungry” is used to label an event antecedent to eating (number of hours since last meal) and that being hungry is a cause of eating. In this sense, being hungry can be used as a causal link between food deprivation and the behavior that occurs in the restaurant. We then have the problem of how this causal link is to be identified and what properties are to be ascribed to it.
Two solutions to this problem are common. One solution is to give the event of being hungry a place in a mental universe, to assign it nonphysical status. This is frequently done and gives rise to the conception of the outer person and the inner person. The outer person, or behavioral person as he might be called, is driven and controlled by the inner metaphysical person. The conception is illustrated in day-to-day statements such as “He failed to perform adequately because of mental fatigue.” or “She failed because she was not attending to the task.” Or even more clearly, “He managed to do it only through a tremendous exercise of will power.” These statements give the impression of providing an explanation of behavior because they seem to refer to events that are antecedent to the behavior under consideration. Of course, it is true that these events are supposed to occur in a nonphysical world; the way in which they are able to influence physical events is not made at all clear. The more serious objection to this type of explanation is that when the events are looked at more closely it is found that they have no identifying properties other than their capacity to produce the behavior to be explained. The same kind of explanation is put forward by primitive people when they account for the movement of the sun by some human controlling force, when the only evidence they have for the existence of the controlling force is the movement of the sun itself. A controlling force can be manufactured to explain the occurrence of any conceivable event. The emptiness of this type of explanation is most easily seen when we ask ourselves how much more confidently an effect can be predicted now that the cause of it is isolated. Then we find that there is no isolation, the cause is not separable from the effect, for there is no property of the cause other than its production of the effect.

An explanation of behavior in terms of a mental event usually is put forward when there is ignorance of the physical events important in the production of the behavior. Skinner believed this is a most harmful type of explanation simply because it provides a misleading appearance of being satisfactory and therefore tends to retard the investigation of those objective variables that might yield genuine behavioral control.

Another status we might ascribe to being hungry is physiological. We might look for stomach contractions, the concentration of sugar in the blood, the activation of brain centers, and so forth. In a physiological explanation the causal antecedents of behavior could be isolated; and there would be no claim that mental events influence physical events. Skinner did not take such a firm stand against physiological explanations; he believed that behavior might ultimately be predicted by tracing the effects of an environmental variable through the entire sequence of physiological events by which it is followed. However, Skinner emphasized that a science of behavior does not necessarily require a knowledge of physiological processes in order to be viable; even when we do understand these processes, practical control of behavior will be exercised by the manipulation of “traditional” independent variables that lie
outside the organism. Thus Skinner saw no reason why we should not treat the human organism as an unopened—but not empty—box with various inputs and outputs, and he believed that such a treatment will yield the most efficient control of those outputs. As we shall see, when we look at Skinner's experimental work, his views are given strong support by the success of his approach.

As we have noted, Skinner provided a program for a descriptive science, for to link dependent variables to independent variables with no intervening steps leads only to laws or universal hypotheses, and not to theories. The distinction between these is not always very clear, but in a discussion that deals with whether theories are necessary in science, Skinner attempted to explain what constitutes a theory. The following quotation shows that he used the term to describe a system that relates one set of observations to another set of observations by an inferred set of events or constructs that are described in terms other than those describing the observations and that are themselves not presently observed:

Certainly basic assumptions, essential to any scientific activity, are sometimes called theories. That nature is orderly rather than capricious is an example. Certain statements are also theories simply to the extent that they are not yet facts. A scientist may guess at the result of an experiment before the experiment is carried out. The prediction and the later statement of result may be composed of the same terms in the same syntactic arrangement, the difference being the degree of confidence. No empirical statement is wholly nontheoretical in this sense because evidence is never complete, nor is any prediction probably ever made wholly without evidence. The term theory will not refer here to statements of these sorts but rather to any explanation of an observed fact which appeals to events taking place somewhere else, at some other level of observation, described in different terms and measured, if at all, in different dimensions. (1953, p. 26)

Skinner's approach was based on the assumption that behavior is orderly and that our primary purpose is to control it. Moreover, this control can be achieved best by lawfully relating independent variables or inputs into the organism to dependent variables or outputs of the organism and then controlling subsequent behavior by the manipulation of those same inputs (environmental events) in such a way as to obtain a particular output (response).

THE STRUCTURE OF PERSONALITY

Of all the personality theorists to be considered in this volume Skinner showed the greatest indifference to structural variables. This is not surprising in view
of what has already been said concerning his general approach to the study of behavior.

Skinner focused primarily on modifiable behavior. Consequently, he took little interest in behavioral characteristics that seem to be relatively enduring. This attitude is mainly a consequence of his emphasis on control of behavior. Prediction and explanation may be achieved by knowledge of the enduring and modifiable aspects of personality. But control is achieved only through modification; control implies that the environment can be varied in order to bring about different behavior patterns. However, Skinner never asserted that all the factors that determine behavior lie in the environment. In the first place, he argued that an organism's sensitivity to reinforcement itself has a genetic basis, having evolved because of the survival advantages of being able to learn about important events in the environment. Second, Skinner stated that, in any given species or individual, some behaviors may be more easily conditioned than others. He also recognized that some behaviors may have a completely genetic basis, so that experience will have no effect on them. Skinner saw a parallel between the hereditary and environmental bases of behavior. He suggested that the process of evolution shapes the innate behaviors of a species just as an individual's learned behaviors are shaped by the environment. Nevertheless, genetic explanations of behavior should be viewed with caution, both because the evolutionary factors that determined the form of an innate behavior are not observable and because many behaviors thought to be innate might actually have been shaped by experience (Skinner, 1969). It should be clear that Skinner did not claim that an individual's behavior is only a product of the environment. He simply deemphasized the practical importance of biological variability, because, in a purely behavioral science, this variability cannot easily be placed under behavioral control. In contrast to what Skinner termed "mentalism," however, physiology holds promise: "The physiologist of the future will tell us all that can be known about what is happening inside the behaving organism. His account will be an important advance over a behavioral analysis, because the latter is necessarily 'historical'—that is to say, it is confined to functional relations showing temporal gaps. Something is done today which affects the behavior of an organism tomorrow. No matter how clearly that fact can be established, a step is missing, and we must wait for the physiologist to supply it. He will be able to show how an organism is changed when exposed to contingencies of reinforcement and why the changed organism then behaves in a different way, possibly at a much later date. What he discovers cannot invalidate the laws of a science of behavior, but it will make the picture of human action more nearly complete" (Skinner, 1974, pp. 236–237).

As noted above, Skinner is similarly inclusive with respect to the role of evolution and genetics. He wrote that "the organism ... does what it is induced to do by its genetic endowment or the prevailing conditions" (1977b,
He concluded this same paper by stating, "The behavior of organisms is a single field in which both phylogeny and ontogeny must be taken into account. Like all sciences, it must have its specialists. . . ." (p. 1012). As suggested above, Skinner chose to specialize in the "experimental analysis" of behavior.

In selecting response variables, Skinner was primarily concerned with their simplicity and their lawful or regular association with environmental variation. The major classification of behavior that Skinner suggested is the distinction between operant and respondent. This distinction primarily involves the difference between responses that are elicited and those that are emitted. As we have seen, the focus of Skinner's concern was on the operant that is emitted in the absence of any eliciting stimulus. A respondent, on the other hand, is elicited by a known stimulus and is best illustrated by a response such as the pupillary reflex or the knee-jerk reflex where there is a known and relatively invariable response associated with a specified stimulus. We shall have more to say about this distinction subsequently.

Although Skinner avoided structural concepts, he showed only a mild distaste for dynamic or motivational concepts. He recognized that a person does not always exhibit the same behavior to the same degree when in a constant situation, and he believed that general recognition of this is the principal reason for the development of our concept of motivation. Inasmuch as behavior tends to be highly variable in some situations, an internal force is assumed to account for this variability. We see, for instance, that a child does not always eat the food presented to it, and therefore we say that its eating depends not only on the presence of the food but also on variation in the degree of hunger. On the other hand, we find that the knee-jerk reflex is elicited with about the same vigor on each occasion that the knee is struck. Thus we feel no need to postulate a variable knee-jerk drive because there is no unexplained variability in the vigor or frequency of the reflex.

As we have already suggested, Skinner believed that even when behavior shows this type of variability it is still unnecessary and often misleading to postulate an internal energizing force, for when this is done the question still remains as to how the intensity of this force is governed. For example, one asks for the cause of the child's hunger. An answer to this question is necessary, because only then can we estimate the intensity of the force so that a prediction can be made about the vigor of the associated behavior. Skinner pointed out that a satisfactory answer must at some stage involve discovery of an environmental variable to which the internal force is linked, just as hunger is linked to the deprivation of food. Why bother to account for behavioral variability in terms of an internal state, whose intensity must be calculated on the
basis of knowledge about variation in the environment? Why not simply concern oneself with the environmental variable and account for the behavior directly? Following this argument, Skinner treated the variability in the vigor of behavior just as he treated any other aspect of behavior: as a direct causal consequence of the variation in an independent variable.

The argument just presented might lead one to believe that those variables that govern the drive or motivational states of other theorists assume no special position in Skinner's system. But this is incorrect, for they do have a special property, but it is not the property of being internal causes of behavior. We find that certain variables affect the probability of occurrence of whole groups of behavior patterns. For example, consider the case of thirst. Thirst can be increased by several different operations and in turn may influence a number of different responses. The temperature of the room in which an animal is enclosed can be increased, thereby causing the animal to discharge water by sweating more profusely; or the time elapsed since the animal was previously allowed to drink can be increased; or the animal can be induced to eat foods that have high salt contents. Each of these operations will increase the animal's thirst. By this we mean that each of these operations increases the likelihood that the animal will engage in one or more of a group of activities all of which are affected by any of this same group of operations. Thus, the animal will perform a learned response more vigorously if it produces water, a response such as pressing a lever or running through a maze, for example, and it will drink more vigorously, choose water instead of food, or choose any other responses that have been followed by water in the past. These examples show that in saying that certain operations increase thirst we are only saying that these operations tend to increase the occurrence of specific responses. In summary, Skinner used a term such as thirst simply as a convenient verbal device that acquires meaning through its ability to encompass the relation between a group of independent and dependent variables—and the term acquires no meaning other than that. Skinner would not ascribe a causal status to thirst; the causal status is ascribed to the operations that result in drinking behavior. It is important to note that unlike many other reinforcement theorists Skinner did not consider drives to represent a class of stimuli.

There are other terms that can be treated like drives because they are utilized for linking a group of independent variables to a group of dependent variables. These terms belong to the area of emotion. Skinner made no real distinction between drives and emotions, and he used these terms and justified their use in the same way. Consider the example of an angry person. We do not know that a person is angry because we have had access into her mind or because we have observed that certain glands are secreting certain substances. Instead, we have noted that such a person exhibits particular behavioral characteristics. She adopts a stern expression, speaks curtly, is disposed to aggressive behavior, and so on. Similarly, we know that a person is afraid because
he stammers, starts easily, is tense, and shows various aversive responses. Such behavior might be observed when we see a student waiting outside a professor's office following a poor performance in an examination. We note aspects of the student's behavior, and then, because of our observation of some other associated behavior or because we know the student's examination score, we judge the student to be afraid. The student need not be afraid when we see him stammering. He could be stammering because of an inherent defect in his vocal apparatus. But we judge him to be afraid because of the particular independent (environmental conditions) and dependent (response) variables with which the stammering is associated. To exhibit this particular association is to be afraid.

Thus, Skinner employed a set of concepts that might be called dynamic or motivational. These concepts, similar to the motivational concepts in other theories, were employed to account for the variability of behavior in otherwise constant situations. However, in Skinner's system they occupy a distinct category because they relate groups of responses to groups of operations, not because they are equated with energy states, purpose, or any other condition that implies they are causal antecedents of behavior.

THE DEVELOPMENT OF PERSONALITY

Most of Skinner's position was concerned with behavioral change, learning, and modification of behavior; consequently, one can say that his theory is most relevant to the development of personality. Similar to many other theorists, Skinner believed that an understanding of personality will develop from a consideration of the behavioral development of the human organism in continuing interaction with the environment. Consistently, this interaction has been the focus of a large number of carefully managed experimental studies. A key concept within Skinner's system is the principle of reinforcement; indeed, Skinner's position is often labeled operant reinforcement theory.

Classical Conditioning

To reinforce behavior is simply to carry out a manipulation that changes the probability of occurrence of that behavior in the future. The finding that certain operations change the probability of occurrence of responses in a lawful manner is credited primarily to two early leaders in the study of behavioral modification, I. P. Pavlov and E. L. Thorndike. Pavlov discovered the principle of reinforcement as it applies to classical conditioning. It can be illustrated with a famous example. Suppose that on a number of occasions a bell is sounded in the presence of a hungry dog, and suppose also that on each of these occasions the sound of a bell is immediately followed by the presentation of meat to the dog. What do we observe? On each presentation of the bell-and-meat combination the dog salivates. But at first the dog salivates only when
the meat is presented and not before. Later, however, salivation begins to
occur as soon as the bell is sounded, before the presentation of the meat. At
this stage the salivary response is conditioned to the sound of the bell, and
we find that the presentation of the meat immediately following the sound of
the bell is the critical operation responsible for this conditioning. Thus the
presentation of the meat is a reinforcing operation. It strengthens the likelihood
that the salivary response will occur when the bell is sounded on a later
occasion. Furthermore, because its presentation increases the chances of
salivation, it is classified as a positive reinforcer.

Following the development of a strong conditioned response, an experi-
menter might wish to see what happens when the conditioned stimulus is
consistently presented without its being followed by the reinforcing stimulus.
In the example outlined above the bell would be sounded but no meat would
follow. What happens then is that the conditioned response extinguishes. That
is, its frequency of occurrence and its magnitude decline with successive
soundings of the bell, until finally no salivation is elicited by the bell at all.
The conditioned response is then completely extinguished. Extinction is the
decrease in responding that occurs when the reinforcement following the
response no longer occurs.

A characteristic of classical conditioning is the fact that a readily identifi-
able stimulus can be located that elicits the response even before conditioning
begins. For instance, in the example considered above, the stimulus provided
by the meat elicits salivation. As we have noted, Skinner called such a response
a respondent to emphasize the strong eliciting role played by the preceding
stimulus. Another characteristic of this situation is that the reinforcer is manip-
ulated in temporal association with the stimulus to which the response is being
conditioned, while the response, if any, comes later. Conditioning is most
effectively carried out when the reinforcer follows the conditioned stimulus,
regardless of whether the response has occurred or not.

Skinner accepted the existence of classical conditioning and its depend-
dence on the principle of reinforcement, but he was less concerned with it
than with another type of learning that also relies on the principle of reinforce-
ment. The other type of learning, which was first systematically investigated
by Thorndike, is called instrumental or operant conditioning.

Many early investigators believed that all learning involved the process of
classical conditioning. But Skinner noted that there was much that could not
be fitted into this paradigm. There are some responses that, unlike respondents,
do not appear to be tied to a readily identifiable eliciting stimulus, such as
painting a picture or crossing a street, for example. These responses seem to
be spontaneous and voluntary. Another property of this kind of behavior that
again differentiates it from respondent behavior is that its frequency of occur-
rence is changed according to the event that follows. More specifically, the strength of one of these responses increases when the response occurs and is followed by reinforcement. This peculiarity of this class of responses gives rise to Skinner’s use of the term “operant.” An operant is a response that operates on the environment and changes it. The change in the environment affects the subsequent occurrence of the response. In operant conditioning, therefore, the reinforcer is not associated with an eliciting stimulus as it is when respondents are conditioned. Instead, it is associated with the response. When a salivary response is conditioned to the sound of a bell, the presentation of the meat does not depend on the prior occurrence of the response. On the other hand, when an operant response is conditioned, it is essential that the reinforcer be presented after the occurrence of the response. Only in this way does the frequency of the response increase.

Skinner modified Thorndike’s position in two key respects. First, Thorndike (1898) had summarized his position in terms of the law of effect. This law states that responses that produce a satisfying effect become more likely to occur again in that particular situation and responses that produce an unsatisfying effect become less likely to occur in that situation. Skinner’s goal was to build a psychology based on observable phenomena, avoiding reference to internal events within the organism. As a consequence, he rejected any reference to the satisfying and unsatisfying effects to which Thorndike had referred, choosing instead simply to refer to the observable effect of a stimulus on behavior. Skinner proposed the empirical law of effect. That is, a reinforcing stimulus is an event that increases the frequency of behavior with which it is paired, with no reference to “satisfaction” or any other internal event. Second, Skinner noted that the model described by Thorndike required that the organism produce the full behavior before the environment could act on it. In the real world, however, many behaviors are so complex that it is extremely unlikely the organism ever would produce them in the first place. The law of effect cannot account for the strengthening of a behavior that is too complicated to occur by itself. An adult might be prepared to reinforce a child for riding a bicycle or reading a book or a dog for rolling over, but such behaviors are highly unlikely to occur by themselves. Skinner proposed that organisms can learn such complicated behaviors through shaping, using the principle of successive approximations. We start by reinforcing a behavior that is a first step toward the final behavior and then gradually reinforce successively closer approximations to the final behavior. Through this process, organisms can acquire extremely complicated behaviors, as illustrated later in this chapter.

Let us take a very simple example of operant conditioning. We can teach a child to ask for candy frequently by giving candy whenever it asks for candy. We positively reinforce the response of asking for candy. We can also extinguish the response of asking for candy by simply not presenting the candy when the child asks for it. We then find that the frequency of occurrence of asking for
candy declines. There is another way that we can reduce the occurrence of the response. When the child asks for candy, we can punish it by slapping it. When we perform an operation like this, of adding something to the situation that reduces the probability of responding, we say that we have punished the response. A **punishing stimulus** is an aversive stimulus, which, when occurring after an operant response, decreases the future likelihood of that response. It is important to note that a punishment is not the same as a negative reinforcer. A reinforcement increases the likelihood of occurrence of a behavior with which it is paired, and a punishment decreases the likelihood of a behavior. A behavior can be reinforced by the removal of an aversive stimulus, however, in which case we refer to a negative reinforcer. For example, a parent might reinforce a child for receiving good grades by excusing the child from doing the dishes. Similarly, a person with a phobic fear of snakes reinforces the avoidance response by turning away whenever a snake is encountered, thereby eliminating the aversive fear triggered by the snake. These are both examples of negative reinforcement.

The general principles that Skinner employed to account for the modification of behavior have now been explained. These principles derive from a massive amount of carefully controlled research, and they have been found to have wide applicability. It may seem that they are overly simple and that they have nothing to do with the development of personality. However, Skinner argued persuasively that a personality is nothing but a collection of behavior patterns and that when we ask about the development of personality we ask only about the development of these behavior patterns. Skinner believed that we can predict, control, and explain these developments by seeing how the principle of reinforcement has worked to account for the present-day behavior of an individual as a result of the reinforcement of previous responses.

Because the principle of reinforcement is so important, it is necessary to consider the development of a particular response in detail and show how it can be manipulated with the use of the operant techniques. Suppose that we put a hungry pigeon into a small well-illuminated chamber that is isolated from the external environment by sound-proofed and opaque walls. Such a chamber is frequently called a Skinner box (although not by Skinner), and it represents an important engineering accomplishment. It shields the subject from much uncontrolled environmental variation, and it also permits mechanical or automated control of both stimulus events and the recording of responses.

On one wall of this chamber, about 10 inches from the floor, is a translucent disc that can be illuminated from behind by a red light. The disc is connected by an electrical switch to the external apparatus that records and controls the events occurring in the box. The apparatus is wired so that whenever pressure is applied to the disc a response is recorded and food is delivered to the pigeon in a hopper fixed to the wall of the chamber just below the disc.
The pigeon can apply suitable pressure to the disc by pecking it, and this is the response we want to develop and control. In order for the pigeon to peck the disc for the first time, we shape its behavior. The probability of the pigeon pecking the disc on a "random" basis is very small indeed, and clearly we cannot increase the probability by the action of the food reinforcer until that response has first occurred. The pecking response is shaped by reinforcing successive approximations to the pecking response. First we train the bird to eat from a food hopper when it is opened. This behavior is readily conditioned and the sight of the open hopper becomes a stimulus for eating. Then, we present food only when the bird is near the disc. This increases the probability that the bird will again stand near the disc. Then we present food only when the bird raises its head when standing near the disc, then when its beak is in a striking position with respect to the disc, and so forth. Eventually, by means of these successive approximations, the bird will peck the key for the first time. Food is, of course, delivered immediately. Shortly after this the bird will probably peck the disc again, and food can again be delivered. If reinforcement is then presented on each occasion that the bird pecks, pecking will soon be occurring quite rapidly. This is referred to as a continuous reinforcement schedule. However, if the food hopper is no longer operated when the bird pecks, then the rate of pecking declines, and in a very short time it is reduced to a rate similar to that observed when the bird was first put into the chamber. Pecking scarcely occurs at all; the previously reinforced response has been extinguished.

Schedules of Reinforcement

Suppose that instead of never operating the hopper we operate it on fewer occasions. For example, the apparatus may be programmed so that food is available if the pigeon pecks following a certain period of time, such as five minutes. If the reinforcement is contingent on an interval of time, it is referred to as interval reinforcement; if this interval is unchanging (e.g., every five or ten minutes), we have a fixed-interval reinforcement schedule. Instead of providing reinforcement following a constant interval of time, the investigator may wish to reinforce according to an intermittent or variable-interval schedule. Here, although the reinforcement may be available on the average at five-minute intervals, the actual interval will vary randomly around this average. Thus, at each moment there is a low and constant probability that food will be available. Under these conditions the pigeon responds with a steady rate of pecking. Most of these pecks are not reinforced, but those that are reinforced serve to maintain the overall response rate. If the food hopper is disconnected so that pecking is no longer reinforced, the pecking response again extinguishes. This time it does so at a much slower rate than when reinforcement was continuous, and many more pecks are emitted before extinction is complete.
A schedule of reinforcement can also be established in which temporal factors are unimportant and where the number of rewards obtained by the bird depends only on its own behavior (responses). This is called a ratio reinforcement schedule. Here the reinforcement is determined only by the number of pecks that have been emitted since the last reinforcement. In the very first example, each peck was reinforced. It is a simple matter to change this so that only every tenth peck is reinforced or every twentieth or any other number. This would be referred to as fixed-ratio reinforcement. Or perhaps the number might vary on a random basis, just as the time intervals varied in the previous example, so that reinforcement might on the average be given after every fifth peck but in actuality be randomly distributed around this average. On some trials the reward might follow the second or third peck while on others it would follow the seventh or eighth. This would be called a variable-ratio schedule. These ratio schedules are analogous to the situation of a piece worker or person working on a commission where the payoff depends only on the efficiency and effort of the worker. A variable-ratio schedule is at the heart of all gambling systems and devices. It is worth noting that the extinction process is much slower with ratio schedules than it is with interval schedules. In addition, variable or intermittent reinforcement tends to make a learned response more resistant to extinction.

The importance of these various schedules is that on the one hand they show correspondence to many learning situations of interest to the personality investigator or theorist. On the other hand they relate to particular patterns of acquisition and extinction of the responses being learned. Skinner and his associates did a great deal of systematic work in describing the effects of a wide variety of schedules. We have already commented on some of the differences between the various schedules, and there are many more generalizations available for the interested reader (Ferster & Skinner, 1957; Skinner, 1969).

It is not necessary for a response to physically produce the reinforcement for it to be reinforced. Ordinarily, for experimental purposes, an experimental apparatus is set up so that a reinforcer is produced by a response through its effects on the apparatus. This ensures that it is the one particular response in which we are interested that is reinforced. We could, however, simply deliver “free” reinforcements quite independently of the subject’s behavior. Suppose we operate the food hopper every ten or fifteen seconds. When the hopper first operates, the bird will be involved in some particular movement sequence, perhaps pacing in a circle in the center of the chamber. The fact that the hopper comes up immediately following a set of movements such as this ensures that the set of movements will be repeated shortly. Although that behavior did not produce the reinforcer, it was immediately followed by the reinforcer. It can easily be seen that this difference would not be relevant to

Superstitious Behavior
the laws relating responses to reinforcement, because from the pigeon's point of view there is no way to ever determine whether a response is simply followed by the operation of the hopper, accidentally as it were, or whether a response caused the operation of the hopper. Suppose the probability of pacing round the cage is increased. This means that this behavior sequence is likely to be occurring when the hopper is operated next time, and so the sequence will again be reinforced. In this manner, pacing behavior may acquire considerable strength. It is unlikely that pacing will be followed by the operation of the hopper on every occasion that it occurs, but as we have previously seen, the intermittent reinforcement of responses actually contributes to the production and maintenance of extremely stable behavior.

This type of conditioning, in which there is no causal relation between the response and the reinforcer, is sometimes referred to as "superstitious behavior." Skinner suggested that it accounts for many of the superstitions held by humans. The members of a primitive tribe may practice rain making by the performance of some ritualized dance. On some occasions rain does happen to follow the performance. Thus the rain-making dance is reinforced and tends to be repeated. The natives believe that a causal connection exists between the dance and the production of rain. Actually the dance is accidentally conditioned; the rain occasionally happens to follow the dance. The same type of behavior can be seen with superstitious people who carry lucky charms, rabbits' feet, and other talismans. It may even be the case that the generally superstitious person is distinguished from the less superstitious person by the fact that many instances of accidental conditioning have, by chance, figured to a relatively large extent in that person's life history. Another example that may be viewed in the same light is the supposed power of prayer. Occasionally prayers are "answered." Accidental conditioning can account for an increased frequency of praying without supposing that prayers actually produce any effect.

The fact that a chance reinforcement following a response is sufficient to ensure the strengthening of that response is not generally recognized, and as a result, serious consequences sometimes arise. For example, a nurse might work in a hospital ward with mentally disturbed children. One child might appear to be relatively normal and quiet for most of the time, so that the nurse turns her attention to other patients or duties. But perhaps when this occurs, the child begins to scream and violently bang its head against the wall. At this the nurse is quite likely to rush over to the child, kiss and embrace it, utter soothing words, and in general respond in an affectionate manner as she tells the child not to engage in such behavior. Under these conditions, we should not be surprised if the frequency with which the child engages in the abnormal behavior increases instead of decreases during its stay in the ward. It is fairly clear that the response of screaming and banging the head against the wall is reinforced by affection, kind words, and physical contact, actions that have
for some time been established as positive reinforcers. The nurse misunderstands the effect of her own behavior. Parents do the same thing when they give attention to a normal child only when it cries for attention or seeks attention in some irritating or antisocial way.

Let us turn again to one of the simplest cases of operant conditioning, in which the pecks made by a pigeon to a red disc are reinforced by the presentation of food in a hopper. Suppose that when the pecking response is firmly established and the food-filled hopper has been presented a number of times, a new response is made available, perhaps the depression of a small foot pedal. The foot pedal is inserted into the chamber, and the apparatus is programmed so that one depression of the pedal causes the empty food hopper to be presented. At the same time the red disc is covered up so that the pigeon is unable to see or peck at it. Following this kind of operation it is consistently found that the pigeon presses the foot pedal a very large number of times. What has happened is that the presentation of the hopper acquired reinforcing properties in the first part of the experiment when it was consistently experienced as part of the stimulus complex associated with food. Because of this association, the hopper becomes a conditioned or secondary reinforcer. The hopper is a reinforcer because its presentation increases the rate of emission of a response, in this case the depression of a pedal, and it is a conditioned reinforcer because its power to do this depends on its association with another reinforcer. The maintenance of the reinforcing properties of the hopper also depends on a continuing association of the hopper with another reinforcer; if food is permanently omitted from the hopper, its conditioned reinforcing properties extinguish and the rate of pedal pressing declines. However, these properties can easily be restored by once again pairing the hopper with food.

Skinner believed that conditioned or secondary reinforcers are of great importance in the control of human behavior. It is obvious, at least in the affluent Western societies, that not every action is maintained by the presentation of the unconditioned or primary reinforcers such as food, water, and sex. On the basis of animal experimentation, which has demonstrated that stimuli can acquire reinforcing properties, it is possible to reason that much of human behavior relies on conditioned reinforcement. The most common example of a conditioned reinforcer is money. Money is a good example not only because it clearly has no intrinsic value of its own but also because it is a generalized conditioned reinforcer. It has been paired with a number of different unconditioned or primary reinforcers and consequently is reinforcing under a wide variety of drives. The extremely generalized reinforcing effect of money is ultimately based on the fact that it is associated with a large number of other reinforcers. The notion of conditioned reinforcement is important in Skinner's
system, and, as we shall see later, he used it effectively to account for the maintenance of many responses that occur as part of our social behavior.

The notion of stimulus generalization is also important in Skinner’s system, as it is in all of the personality theories that derive from learning theory. In the pigeon experiments that we have described, the bird pecked at a red disc. A further experiment that can be carried out after the response to the red disc has become stabilized is the manipulation of the color of the disc across the wavelength spectrum. If this is done, there occurs a very orderly change in the rate of pecking. As the color projected on the disc moves further away from the color at which the bird was trained to peck, the rate of responding declines. With colors that are very near to red in the spectrum the bird’s rate of pecking is almost as high as the rate of pecking to red.

Other aspects of the situation besides the color of the disc could be changed, and in most cases the same effect could be obtained. Perhaps the brightness of the lights that illuminate the chamber or the shape of the stimulus might be changed. Again a decline in response rate would occur systematically as the stimulus shifted more and more away from its original state. This phenomenon is important for several reasons. First, it shows that a response may be emitted in a situation that is slightly different from the one in which it was originally reinforced. Second, it demonstrates that the strength of that response suffers some decrement in such a changed situation, and if the situation is sufficiently different from the training situation, the response fails to occur. No person is ever in exactly the same situation twice. However, a situation in the real world may be slightly different from another situation and still be likely to yield the same reinforcement for the same response. Hence it is adaptive for the original stimulus situation to generalize to the new situation. If animals did not show stimulus generalization, learning could never be exhibited. On the other hand, it is clearly not adaptive for an animal to completely generalize from one situation to all others. Very different situations do call for different behavioral responses. If perfect stimulus generalization occurred and the animal were to transfer a response to all situations regardless of their similarity to the original situation, inappropriate responses would constantly occur. Indeed there would be no learning and no reason to suppose that one response would occur instead of another. Thus it is important that the person shows stimulus discrimination.

Note that Skinner did not define either stimulus generalization or stimulus discrimination in terms of perceptual or other internal processes. He defined each of them in terms of response measures in a well-controlled experimental situation. To the extent that the response is maintained in a new situation there is some degree of stimulus generalization. To the extent that the response is decreased or weakened there is stimulus discrimination. The animal discrimi-
nates (fails to respond in the presence of the new stimulus) to the extent that it fails to generalize (does respond to the new stimulus). Stimulus discrimination can usually be enhanced by alternately presenting the animal with one stimulus, for example, the red disc, in the presence of which responding continues to be reinforced, and then presenting the animal with another stimulus, for example, a green disc, in the presence of which responding is nonreinforced. Responding in the presence of the red disc is then maintained by the action of the reinforcer, while responding in the presence of the green disc, although perhaps starting out at some high generalized rate, is extinguished. The procedure simply shows that the stimulus control of pecking may be considerably enhanced by appropriate training.

Most aspects of personality are demonstrated in a social context, and social behavior is a very important characteristic of human behavior in general. We shall now consider social behavior in humans in order to grasp the flavor of how Skinner used the findings of his refined experimental work with lower animals to reach certain conclusions about personality development in humans. First, we should note that Skinner assigned no special significance to social behavior as distinct from other behavior. Social behavior is characterized only by the fact that it involves an interaction between two or more persons. Apart from this, it is not considered distinct from other behavior because Skinner believed that the principles that determine the development of behavior in an environment surrounded by inanimate or mechanical objects also determine behavior in an environment surrounded by animate objects. In each case the developing organism interacts with the environment and as a part of that interaction receives feedback that positively or negatively reinforces or punishes that behavior. Perhaps social responses and the reinforcers appropriate to them are somewhat more subtle or difficult to identify than is behavior occurring in nonsocial situations, but this in itself indicates no important difference of principle between the two types of response.

One interesting point about social behavior, however, is that the reinforcers that a person receives usually depend entirely on the person's behavioral output. In discussing conditioning in the pigeon, we noted that ratio schedules were constructed so that the pigeon's rate of reinforcement could increase indefinitely with a greater and greater output of responses. Social behavior is most frequently reinforced according to the ratio principle. A child is rewarded for remaining quiet with candy or with a conditioned reinforcer such as affection or a smile, and the more the child remains quiet, the more he or she is reinforced. In adult society one is normally reinforced for being polite. A shake of the hand or a friendly greeting are both likely to produce the social reinforcement of a friendly gesture on the part of another and in some cases may lead to a better job or perhaps an increase in social status.
When we talk about certain aspects of a person's personality in the context of social behavior, we ordinarily refer to general types of behavior instead of to specific responses. But so far, in looking at Skinner's system, we have only considered the development of particular responses such as a lever press or uttering a particular word or phrase. How is this involved in the understanding of a submissive, an anxious, or an aggressive personality? Skinner would argue that the terms normally used to describe personality traits have meaning only because they are ultimately reducible to the description of a range of specific responses that tend to be associated together in a certain type of situation. Thus, in determining whether a person is socially dominant, we note his or her conversation in a group setting, observe the person in interaction with a series of individuals, secure his or her responses to a number of specific items describing relevant situations, and so forth, and arrive at an overall rating or judgment. Each of the particular responses tells us something about a person's dominance. The fact that specific responses tend to be associated in certain situations probably depends on their selective reinforcement as a group. A person acquires the general trait of dominance because some group, perhaps his or her family, has placed a high premium on a class of responses in its delivery of reinforcement.

Responses tend also to be associated with one another by virtue of the fact that they are functionally interchangeable. A person one meets for the first time may shake one's hand or give a verbal greeting. In either case that person is behaving in a friendly manner and is likely to be reinforced in the same way no matter which response is emitted. At previous times, each response in that type of situation may easily have been reinforced equally often. Because of this, each response will be likely to occur on the present occasion, and the difference in their controlling stimuli that makes for the emission of one instead of the other may be so subtle that in practice the occurrence of the one particular response cannot be predicted. In these cases we would only go so far as to predict the general characteristics of the behavior that we expect to occur.

It is of interest to note that the same situation does not necessarily produce the same behavior in different individuals. An example of this occurs with individuals seeking a raise from their employer. One person may present him or herself in an aggressive manner, another may do it in a very friendly or even obsequious manner. If we looked into the background of the person who reacts aggressively in the superior's office, we should find that aggressive behavior had been reinforced most frequently in the history of that individual and probably reinforced in a larger variety of situations. In the case of the other individual aggressive behavior might have been punished by aversive consequences and obsequious behavior might have been positively reinforced. To the extent that the previous situations, which generated these behaviors, are similar to the situation in which the employees ask for a raise, we expect
these two different and opposite categories of behavior to be in evidence. Of course, in this situation only one of the approaches may work; perhaps only the person with an obsequious manner gets the raise. That person's behavior will then be reinforced, while that of the aggressive individual will be nonreinforced. However, the aggressive manner of the nonreinforced individual may undergo little change. Most behavior outside the laboratory is reinforced only intermittently, and, as we saw in the case of the pigeon, intermittent reinforcement generates very stable and persistent behavior. Almost definitely, the history of reinforcement in the aggressive individual will have been intermittent and the amount of extinction of the aggressive behavior, which occurs as a result of this one nonreinforcement, will probably be very slight. Also, when the two individuals ask for a raise under other circumstances, perhaps from another employer, the aggressive approach might be the successful one, thus reversing the contingencies of reinforcement. This raises another complicating factor. One individual may show a much greater capacity for discrimination between the two types of employer, and the person's behavior might eventually become adjusted so that it is more often appropriate to differing situations. This person might be said to have the ability to assess people and adjust his or her own behavior in accordance with the assessment. In Skinner's system the processes involved in this would be those of differential reinforcement and discrimination.

Not surprisingly a number of clinical psychologists have adopted the basic attitudes and approach characteristics of Skinner. They have found that this framework can be used to understand normal development, and it can also be applied to the study and control of pathological behavior. Abnormal behavior is assumed to be the same in its principles of development as normal behavior. In putting forward a program for the treatment of abnormal behavior, Skinner repeatedly asserted that the goal is simply to replace abnormal behavior with normal behavior, and this can be achieved by the direct manipulation of behavior. In dealing with abnormal behavior, Skinner did not appeal to the actions of repressed wishes, an identity crisis, conflicts between ego and superego, or other constructs, all of which he would label as explanatory fiction. Rather, he attempted to modify the undesirable behavior by manipulation of the environment in a manner determined by the techniques of operant and respondent conditioning.

Suppose that a soldier, initially of average courage, is shot and wounded in battle. Then he is hospitalized, and when he recovers, he is again sent to the front line. When this happens, the soldier develops a paralyzed arm or perhaps becomes blind. A physical examination reveals no deficiency in either the nerves and muscles of the arm or of the relevant sensory equipment. However, this apparently uncaused physical disability has the effect of releasing

Abnormal Behavior
the soldier from his obligation to go to the front line, for blindness or paralysis ensures that the man is sent to a hospital or committed to relatively inactive duty.

Skinner would analyze this situation very simply. The injury received by the soldier is aversive and so has negatively reinforcing properties. That is, it is a stimulus whose withdrawal increases the strength of the response that it immediately follows. That the injury is a stimulus of this type seems to be fairly obvious because it is reasonable to expect, for instance, that when the soldier is in the hospital he will behave in a manner appropriate to ridding himself of the injury as quickly as possible. In carrying out the doctor’s orders, the soldier effectively escapes from the injury. It can also be expected, given the principle of classical or respondent conditioning, that the stimuli associated with the onset of the injury will have come to possess some of its negative properties. A stimulus that is associated with the onset of a negative reinforcer becomes a conditioned negative reinforcer.

We can return to a simple animal experiment for an analogy. Suppose a rat is enclosed in a cage with a grid floor that can be electrified. The rat is shocked through the grid floor every so often, and the shock is turned off only when the rat jumps over a little hurdle dividing the cage. Very soon we find that the response of jumping over the hurdle quickly follows the onset of the electric shock. This happens because each jump over the hurdle, which at first occurs only after much random action, is reinforced by the termination of a negative reinforcer and having thus been reinforced occurs more readily on subsequent occasions. A conditioned negative reinforcer can be set up very easily. A buzzer is introduced into the situation so that its onset precedes each shock by several seconds. This will be sufficient to ensure that the buzzer acquires conditioned reinforcing properties. But to make the analogy with the case of the soldier more complete, the experimental program is changed so that a jump over the hurdle, following the onset of the buzzer, terminates the buzzer and switches off the shock that would have occurred subsequently. In this situation the rat is likely to end up by jumping over the hurdle on almost every occasion that the buzzer is presented. This leads to avoidance of shock. However, we can analyze the behavior of the rat without referring to avoidance at all by supposing that the buzzer has become a conditioned negative reinforcer through the process of classical conditioning and that jumping over the hurdle is the response reinforced by termination of the negative reinforcer. Just as we can describe the rat as escaping from the shock in the original situation, so we can describe it as escaping from the buzzer in the modified situation.

Insofar as the case of the soldier is analogous to this, it can be seen that the stimuli associated with the injurious event that occurred in battle would acquire negative reinforcing properties. Thus, the soldier would be likely to engage in behavior that is followed by the termination of these stimuli. One
type of behavior that would be reinforced in such a way would be the response of simply refusing to enter into the battle area. This could be interpreted as showing escape from the battle-associated stimuli, but in ordinary language it would probably be described as avoidance of possible future injury.

It is very likely that such escape behavior would lead to social rejection and/or a court martial, with aversive consequences that in themselves would constitute punishment, such as a long prison term or perhaps even the death penalty. Thus, when the soldier begins to take the obvious escape route of disobeying orders, his behavior, although leading to an escape from the aversive stimuli associated with his injury, would in itself produce other aversive stimuli based on the consequences of the court martial or social rejection. Behavior followed by an increase in aversive stimulation tends to be reduced in frequency; we say that such behavior declines in frequency because it is punished. The path that involves the disobeying of orders is not, therefore, likely to be taken. What will happen is that some behavior will emerge that terminates both sets of conditioned negative reinforcers, and this behavior will be reinforced and maintained. A paralysis of the arm or blindness satisfies these conditions because in most armies a soldier is not held responsible for these behavior patterns and their emergence is not punished. Choosing this route follows directly from a consideration of the principles formulated by Skinner.

Notice that in the above analysis there is no reference to what the soldier is thinking, feeling, or trying to do. Neither is there any mention of conscious or unconscious processes or physiological processes. The analysis makes use of the laws of respondent (classical) and operant conditioning and depends only on observed operations and behavior. It does not have recourse to variables operating at other than a behavioral level or to any kind of hypothetical theoretical construct.

The question now arises as to how the soldier is to be cured. There are several general ways of doing this that can be used to eliminate many different varieties of abnormal behavior. Let us return to the rat experiment. Suppose that the apparatus is now programmed so that the buzzer continues to be regularly presented, but it is no longer ever followed by the electric shock, regardless of the animal’s behavior. When this change is first introduced and the buzzer is presented, the rat jumps the hurdle and terminates the buzzer sound. But after a few trials no jump occurs, and no shock occurs. The situation can be analyzed in this way. When the buzzer is regularly presented and is not followed by shock, as occurs when the rat terminates the sound of the buzzer and avoids the shock, or when the shock has been discontinued, then the conditioned aversive properties of the buzzer become reduced. Remember that in discussing classical conditioning it was pointed out that the conditioned salivary response extinguished if the sound of the bell was not followed by the presentation of meat. Similarly, in the present situation, the classically conditioned negative reinforcing properties of the sound of the buzzer will
extinguish when it is not followed by shock. Then, since the conditioned reinforcing properties of the sound of the buzzer are being reduced, the operant response of terminating it is less likely to occur, because this response is being reinforced only by termination of a negative reinforcer whose strength is gradually weakening. The problem with this method is that extinction of such an avoidance response is often extremely slow. The animal may jump the hurdle for hundreds or thousands of trials after the shock is discontinued (Solomon, Kamin, & Wynne, 1953). Similarly, if the soldier were exposed to the stimuli associated with the battle without subsequent unconditioned negative reinforcement, these stimuli would lose their negatively reinforcing properties, and the paralysis or blindness should extinguish. However, the soldier is very unlikely to volunteer to return to the battlefield.

An alternative approach to this problem is to prevent the avoidance response from occurring, a procedure sometimes called flooding (Baum, 1970). If a barrier is constructed so that the rat cannot jump the hurdle, the buzzer will be presented without the shock, and the conditioned aversive properties of the buzzer will quickly extinguish. In the same way, requiring the soldier to return to the battle despite his paralysis or blindness should cause the aversive properties of the stimuli of the battlefield to extinguish if no further unconditioned aversive events occur.

Another way to cure the soldier is to shape some other response that is not considered to be abnormal and that terminates the conditioned negative reinforcer. The soldier could, for instance, be allowed to discharge himself from the army without fear of a penalty. Following this, the paralysis of his arm would presumably disappear. Or, the soldier could be told that he would be placed on inactive duty regardless of the condition of his arm. This would be functionally equivalent to a discharge. In either case the soldier escapes from the conditioned negative reinforcer without having to make the responses that result in paralysis.

One cure that would probably not succeed would be to punish the soldier. Suppose the soldier were to be punished whenever the paralysis showed signs of becoming worse. In that case the paralysis might disappear, but only to be replaced by some other response that was equally abnormal. The reason for the occurrence of a new response would be the same as that which accounted for the occurrence of the paralysis. It would be a response such as blindness or loss of speech whose strength would be increased because its occurrence was followed by the termination of negative reinforcement (being returned to battle). Punishment would be unlikely to work because it would not result in the substitution of a normal response for an abnormal response, nor would it extinguish the conditioned reinforcing properties of the stimuli associated with battle.

It has often been said, in criticism of Skinner, that this type of analysis of abnormality, and its cure by psychotherapy, is the analysis and cure of
symptoms instead of causes. The internal causes, mental or physiological, are neglected and only the symptom is treated. Such therapy seems to disregard underlying forces that then exert their influence through some other behavioral outlet. However, note that these cures may prove inadequate because the psychotherapist has failed to understand properly the principles of behavior modification or has failed to look adequately into the patient’s history to determine the antecedents of the undesirable behavior. Indeed, evidence in regard to symptom substitution under these conditions indicates that such an outcome is not very likely (Krasner & Ullmann, 1965).

We have already examined a number of respects in which the work of Skinner and his followers deviates from the contemporary norm. Among these characteristics are the intensive study of individual subjects, the automated control of experimental conditions and recording of subjects’ responses, and a focus on simple behavioral events that can be modified with appropriate environmental manipulation. Here we shall expand on certain aspects of this approach and provide a few illustrations of research programs carried out by Skinner and his students. There are several excellent source books for the person wishing to examine the research of Skinner and his followers in more detail, including volumes edited by Honig (1966) and Honig and Staddon (1977) as well as Skinner’s own *Cumulative record* (1961) and *Notebooks* (1980).

Skinner’s emphasis on individual subjects in experimentation has already been noted. Associated with this is the elimination of undetermined influences that might affect the subject’s behavior. Other experimenters who work with animals, and whose primary interest is in the learning process, typically use large groups of animals in their experiments. This enables them to be little concerned with uncontrolled variables, provided they are randomly distributed. Skinner argued that if there are uncontrolled variables that affect behavior they should not be neglected, for they merit study as much as any other variables. Furthermore, Skinner believed that our aim should be directed to the control of behavior in the individual subject. If large groups of animals have to be used in an experiment, then for Skinner this is an admission of failure. If the effects of an intentional manipulation of an independent variable obviously are being masked by a great deal of “noise” or “random” variability, this clearly shows that control is not being adequately exercised. Under such conditions, Skinner would put aside the idea of manipulating the original independent variable, at least for the moment, and proceed instead to try to uncover the hidden variables that are causing the variability. Such an investigation can provide some understanding of controlling variables in their own right and, if successful, can give one an idea of how to reduce the variability that
has intruded. Attention can then be turned back to the effects of the original variable, and experimentation can proceed under more orderly conditions.

Once the stability of a response has been obtained, a typical operant reinforcement theorist would determine a baseline against which to assess the changes in responding that might occur as a result of the manipulation of an independent variable. Usually, the baseline measure consists of a record of the rate of emission of a simple response such as pecking a disc or, in the case of the rat, pressing a lever. For example, an experimenter might train a pigeon to peck at a disc and then maintain responding with an intermittent reinforcement schedule. This has been found to produce baseline rates of responding that are stable, durable, and also fairly sensitive to the effects of introduced variables. One variable that might be introduced, for example, is a brief period of intense noise superimposed during the pecking. The effects of this would be measured as a change in the ongoing pecking rate. Probably, the pecking rate would decline during the first presentation of the noise, but with successive presentations it would decline less and less and then finally would not be affected at all. The experiment would be reported as showing the effects of the independent variable of noise on the dependent variable of the pecking response. This simple example illustrates the general method of experimentation typically employed.

In practice it might have proved impossible to generate stable rates of responding in individual subjects. But Skinner has been extremely successful in achieving this end. Because of his emphasis on individual subject experimentation, he managed to reduce substantially uncontrolled sources of influence on experimental subjects. This has been partly due to the use of the sound-prooed and light-controlled Skinner box for housing subjects during experimentation. This simple device very effectively isolates the organism from influences that are not directly controlled by the experimenter.

One area in which Skinner's influence has become pronounced is that of psychopharmacology, or the study of drugs and behavior. The Skinner box has proved to be an admirable tool for all types of precise work involving the observation of behavior following the administration of pharmacological agents. Suppose the behavioral effects of a particular drug are being investigated. A rat is first trained to press a bar in the Skinner box by reinforcing bar pressing according to some intermittent reinforcement schedule. After a number of sessions of such training, the rate of bar pressing becomes stable. It does not vary much between sessions or within sessions. The drug is then administered to the rat before the beginning of a new session, and during the course of that one session, the time of onset of drug effects, its effect on behavior, and the duration of that effect can all be determined. Moreover, all this can be done with one experimental subject, although ordinarily there would be replications. In psychopharmacological studies the effects of drugs on timing behavior, perception, fear, avoidance, and appetitive responding.
among others, have all been studied. The Skinner box allows an experimenter to investigate these independently under very similar basic conditions. Up to the present time no method of animal experimentation has even approached that used by the Skinnerians for isolating particular aspects of behavior and studying the effects of drugs on them.

A significant example of the application of operant conditioning techniques in a mental hospital setting is provided by a series of studies by Ayllon and Azrin (1965, 1968). These investigators, working with a group of chronic psychotics who were judged to be unresponsive to conventional methods of therapy and unlikely to be discharged, were able to establish a "token economy" that was effective in manipulating the behavior of the patients in a socially desirable manner. The general procedure involved identifying some form of response such as feeding oneself satisfactorily or carrying out a work assignment and then associating the desired response with a reinforcer. The term "token economy" refers to the fact that tokens were introduced to serve as conditioned reinforcers bridging the gap between the time when the desired response was emitted and when the unconditioned reinforcement (cigarettes, cosmetics, clothing, attending a movie, social interaction, privacy, etc.) was presented. Ayllon and Azrin were able to show that when a particular type of response, such as completing a work assignment, was associated with the conditioned reinforcement (token payment), this response could be maintained at a high rate, but that when the reinforcement was removed, the rate of response immediately fell off, although it could be reinstated by restoring the reinforcement contingency. In their words:

The results of the six experiments demonstrate that the reinforcement procedure was effective in maintaining desired performance. In each experiment, the performance fell to a near-zero level when the established response-reinforcement relation was discontinued. On the other hand, reintroduction of the reinforcement procedure effectively maintained performance both on and off the experimental ward. (1968, p. 268)

Token economies have also been used extensively in classroom settings with such populations as normal children, delinquents, and severely retarded children. Tokens may be awarded for proper classroom behaviors like remaining seated, paying attention, and completing assignments. The tokens can later be exchanged for candy, movies, periods of free play, or whatever reinforcers a particular child happens to value (Kazdin & Bootzin, 1972). The results of these and many other studies make it clear that the systematic and skillful use of reinforcement can produce dramatic and beneficial behavioral changes even in the very seriously disturbed. Moreover, these changes are highly lawful and conform precisely to what the principles of operant conditioning lead us to expect.
Many of these principles have been employed by Lovaas and his colleagues in their attempts to teach language to autistic children (Lovaas, Berberich, Perloff, & Schaefer, 1966). Autistic children usually do not engage in any form of communication, and they display bizarre and often self-destructive behaviors. Lovaas et al. use punishment to eliminate self-mutilative behaviors and extinction procedures to eliminate other undesirable but less dangerous behaviors. The language training program is based on the concepts of shaping, reinforcement, generalization, and discrimination. For example, a child may initially be rewarded with a piece of candy for any vocalizations. Such vocalizations are then shaped into a word—doll, for example. Once several words are learned in this way, discrimination training is used to teach the child to produce each word (doll, truck, etc.) in the presence of the appropriate stimulus object. The child is taught by several different instructors in an effort to promote the generalization of language habits to other individuals. These procedures are slow and tedious, but more and more complex language skills can be taught in this way. Such training programs are not free from problems, and follow-up reports have been mixed. In general, children who lived with their families continued to improve, whereas those placed in institutions sometimes returned to their autistic behaviors. Despite these difficulties, all children showed some improvement in behavior as a result of their training (Lovaas, Koegel, Simmons, & Long, 1973).

One of the most unusual applications of the operant approach was carried out by Skinner (1960) himself in an attempt to devise a means of controlling the flight of a missile. During World War II and for ten years thereafter, a variety of studies were carried out under governmental support that were intended to demonstrate the feasibility of employing pigeons as the means of guiding a missile to a predetermined target. This fantasy from science fiction involved nothing more than using operant techniques to train one or more pigeons. The subjects were taught to respond by pecking at a patterned stimulus that represented the missile target—a ship, a section of a city, or a profile of land. When the missile was on target, the pigeon would peck in the center of the display area, where the image was presented, and this would continue the missile on its current course. When the missile deviated, the pecks of the pigeon, following the image of the target, would move to another area of the display, and this would activate a control system that would adjust the course of the missile. Thus, let us say, when the target moved to the left and the pigeon would peck an area left of the center, the missile would turn to the left. The investigators found that following appropriate schedules of reinforcement the pigeons would peck accurately, rapidly, and for amazingly long periods of time. In order to minimize the possibility of error, they even devised multiple guidance systems that involved three or seven pigeons. Although the pigeons never guided any real missiles onto real targets, their simulated performance was such that Skinner could accurately state:
The use of living organisms in guiding missiles is, it seems fair to say, no longer a crackpot idea. A pigeon is an extraordinarily subtle and complex mechanism capable of performances which at the moment can be equalled by electronic equipment only of vastly greater weight and size, and it can be put to reliable use through the principles which have emerged from an experimental analysis of its behavior. (1960, p. 36)

We already have mentioned a number of examples of the wide range of research that Skinner generated and provoked. Rather than attempt to catalogue that research, or the evolution of behaviorism that has occurred in recent years, we refer the reader to other books by Domjan (1996) and Schwartz and Robbins (1995) for current discussions of learning theory; Rachlin (1991, 1994) and Donahoe and Palmer (1994) for discussion of contemporary noncognitive, selectionist approaches to behavior; and Pearce (1987) and Schwartz and Lacey (1982) for accounts of animal cognition derived from Skinner's position. In addition, the interested reader should consult the *Journal of the Experimental Analysis of Behavior* and the *Journal of Applied Behavior Analysis*.

One component of Skinner's work does merit discussion here, because it reveals so much about his position, and that is his attack on the cogency of cognitive science and the cognitive movement within psychology. In an article completed on the evening before he died, Skinner described the distinction between physiology, which tells us how the body works, and the "sciences of variation and selection [which] tell us why it is a body that works that way" (1990, p. 1208). The sciences of variation and selection include ethology, which concerns the natural selection of the behavior of species; behavior analysis, which concerns the operant conditioning of the behavior of an individual; and anthropology, which concerns the evolution of social environments. In a scientific analysis of behavior, "histories of variation and selection play the role of the initiator. There is no place in a scientific analysis of behavior for a mind or self" (Skinner, 1990, p. 1209). It is the contingencies of reinforcement that are responsible for behavior, and those who adopt a cognitive approach have mistakenly assigned responsibility to internal agencies. The analogy Skinner employed is creation science, which he argued has interfered with the proper teaching of biology. According to Skinner, "cognitive science is the creation science of psychology, as it struggles to maintain the position of a mind or self" (1990, p. 1209).

Psychologists have adopted reference to personal control from the vernacular, obscuring in the process the contingencies of reinforcement that in fact control behavior. Behavior does not result from thoughts, feelings, intentions, decisions, or choices, as in cognitive psychology; rather, behaviorists "look at antecedent events in the environment and the environmental histories of both
the species and the individual. . . . The environment selects behaviour" (Skinner, 1985, p. 291). People do not store representations and process information. Skinner preferred the analogy of a storage battery. We change a battery when we charge it, but we do not put electricity into it. Similarly, organisms do not possess and retrieve behaviors; they behave in various ways as a function of experiences that have altered them. The knowledge and expectations to which cognitive scientists refer, as well as such putative states as wants, needs, and feelings, are “current surrogates of the history of reinforcement” (Skinner, 1985, p. 296; see also Skinner, 1977a, 1989). Skinner played the science game very well: In the absence of any demonstration of the utility of states and processes, his parsimonious reference to the environmental control of behavior stands as a powerful rival hypothesis for models predicated on the existence of such internal causes.

CURRENT STATUS AND EVALUATION

It is clear that Skinner would rank with the most idiographic of personality theorists in his emphasis on the importance of studying individuals in detail and stating laws that apply fully to single subjects instead of only to group data. Related to this emphasis on the individual is the fact that the findings reported by Skinner and his students present a degree of lawfulness or precise regularity that is virtually unparalleled among psychologists. This combination of elegant laboratory technique and precise experimental control with the study of individual subjects represents a unique achievement. Generally those who have emphasized study of the individual have been short on rigor and experimental finding.

A notable achievement of this group is their systematic study of schedules of reinforcement. Their voluminous findings in this area have provided the empirical basis for predicting the acquisition and extinction of learned responses with a much greater degree of exactness than had been previously possible. Moreover, their classifications of different types of schedules has made possible generalizations to a wide variety of situations and subjects. Subsequent research in this tradition has pursued still greater precision through mathematical analyses of the rates of behavior under different reinforcement schedules (Herrnstein, 1970). It should be noted that the results of the research on schedules of reinforcement are of crucial importance for all learning theorists and investigators whether or not they adopt Skinner's approach.

The forcefulness, clarity, and explicitness of Skinner’s position has made it relatively easy to identify those aspects of the theory that are laudable as well as those features that appear objectionable. No one could ever accuse Skinner of trying to avoid controversy or to smooth over differences with his contemporaries. If there are significant differences between Skinner and other
major theorists one may be sure that these differences have been highlighted and his position stoutly defended.

Perhaps the criticism most widely leveled at Skinner and his students is that his theory is no theory at all and, moreover, that he has little appreciation for the nature and role of theory in the building of science. As we have seen, Skinner typically was in full agreement with this characterization of his position. He felt it is not a theory and he did not believe that science, particularly at the stage occupied by psychology, is likely to be aided by devoting time to theory building. Thus, for those who believe that there is no such thing as "no theory," that one can choose only between good and bad or between explicit and implicit theory, there has been an irreducible gap between their conception of the scientific process and that which is espoused by Skinner. This gap was substantially reduced with the publication of Contingencies of reinforcement (1969) in which he quite explicitly accepted his role as a systematic theorist.

In a paper published in 1950 I asked the question "Are theories of learning necessary?" and suggested that the answer was "No." I soon found myself representing a position which has been described as a Grand Anti-Theory. Fortunately, I had defined my terms. The word "theory" was to mean "any explanation of an observed fact which appeals to events taking place somewhere else, at some other level of observation, described in different terms, and measured, if at all, in different dimensions"—events, for example, in the real nervous system, the conceptual system, or the mind. I argued that theories of this sort had not stimulated good research on learning and that they misrepresented the facts to be accounted for, gave false assurances about the state of our knowledge, and led to the continued use of methods which should be abandoned.

Near the end of the paper I referred to "the possibility of theory in another sense," as a critique of the methods, data, and concepts of a science of behavior. Parts of The Behavior of Organisms were theoretical in that sense, as were six published papers, in the last of which I insisted that "whether particular experimental psychologists like it or not, experimental psychology is properly and inevitably committed to the construction of a theory of behavior. A theory is essential to the scientific understanding of behavior as a subject matter." Subsequently I was to discuss such a theory in three other papers and in substantial parts of Science and Human Behavior and Verbal Behavior. (Skinner, 1969, pp. vii–viii)

In his system, Skinner consistently rejected as an explanatory device any of the forms of ghostly mental machinery that many of us, deliberately or inadvertently, use to account for human behavior. In doing this, he performed a great service. But as we have seen, Skinner also rejected the idea of introduc-
ing any type of inferred mechanisms into his system, even those that can be adequately tested by deriving noncontradictory explanations and explicit predictions. From this, one may anticipate that Skinner would have difficulty predicting the behavior that occurs in a situation consisting of combinations of novel stimuli or new configurations of familiar stimuli. This is because Skinner can only base his expectations of future behavior on the laws of behavior that already have been formulated. In other words, the laws of behavior can only be extrapolated to instances of the same type of behavior that they cover in the general case, because the system contains no theoretical statements that imply more empirical assertions than those on which they have been built. This difficulty in predicting novel behavior provides one of the bases for Albert Bandura's social learning theory criticisms of Skinner (see Chapter 14).

Skinner's system avoids asking what goes on inside the organism, and therefore Skinner cannot make predictions in situations that are not directly covered by the laws of the system. However, Skinner fully recognized this fact and defended the attitude that gives rise to it. In his classic paper "Are theories of learning necessary?" Skinner (1950) pointed out that although theorizing might lead us to novel expectations this in itself is no virtue unless those expectations are confirmed. And, although it is likely that someone will eventually come up with a workable theory that provides the correct expectations, this may be after many years of unproductive research that has involved the testing of nonfruitful theories in various trivial ways. Any new situation will eventually be investigated anyway, and so there is certainly no need for theorizing. Behavior in such a situation will eventually be brought into the system even in the absence of a theory.

As we have seen, Skinner was a believer in the value of a molecular approach to the study of behavior. He searched for simple elements of behavior to study, and he was certain that the whole is no more than the sum of its parts. Consequently, it is no surprise to discover that holistic psychologists of all varieties are convinced that Skinner's approach to the study of behavior is too simplistic and elemental to represent the full complexity of human behavior. These critics argue that human behavior shows characteristics that necessarily exclude significant areas of it from Skinner's analysis. Essentially, this is because behavior is much more complex than the kind of analysis that Skinner made leads one to suppose. Skinner attempted to explain complex behavior by assuming that many response elements are built into larger units, and he also assumed that complexity develops from the simultaneous operation of many variables. But it is exactly Skinner’s method of integrating behavioral elements that is questioned. At the very least, many observers feel that Skinner's system fails to account for the "richness" and "complexity" of behavior that is so characteristic of the human.
Human language is one example of the type of behavior many feel is not susceptible to analysis by Skinner's concepts. According to Skinner (1957, 1966a), language provides another example of the power of conditioning. That is, speech is verbal behavior acquired through reinforcement for the pairing of "correct" words with a given object or event, and grammar also is acquired as parents' response to a child's verbal constructions. Thought, by extension, is the unobservable behavior that occurs when people talk to themselves. Some powerful arguments and data have been advanced to show that the nervous system, if it develops normally, is particularly receptive to the acquisition of a set of rules that generate theorems that we call sentences. This implies that a language is not acquired through long chains of stimulus–response terms, each one being learned by repetition and reinforcement but instead is generated from a set of axioms and rules that can produce an appropriate sentence even when that sentence has not been emitted previously. Similar to geometry, the rules of language may generate theorems or sentences that have no historical relationship to other sentences occurring in the past. Linguists, such as Chomsky (1959), have particularly emphasized this point. These arguments, which are intimately bound up with the idea that certain response patterns cannot be analyzed into elemental sequences, have been advanced most prominently in connection with language, but some psychologists believe they are equally relevant to the analysis of many other types of behavior.

It is clear, from what has been said, that Skinner generally experimented with relatively simple organisms, with relatively simple histories, and under relatively simple environmental conditions. Rarely is the subject exposed to variations in more than one variable at a time. Critics sometimes say that this is an artificial type of experimentation, that such simple situations never occur outside the laboratory, and that because of this, behavior must necessarily really be much more complex than the Skinner box would lead us to believe. In reply, Skinner argued very effectively that science characteristically proceeds in a piecemeal manner. It almost always looks to simple phenomena first and builds up complex phenomena in a step-by-step manner through an appropriate manipulation and integration of the laws that have been derived from the most simple or clear cases in which they operate. The following quotation from Skinner is instructive:

> Have we been guilty of an undue simplification of conditions in order to obtain this level of rigor? Have we really "proved" that there is comparable order outside the laboratory? It is difficult to be sure of the answers to such questions. Suppose we are observing the rate at which a man sips his breakfast coffee. We have a switch concealed in our hand, which operates a cumulative recorder in another room. Each time our subject sips, we close the switch. It is unlikely that we shall record a smooth curve. At first the coffee is too hot, and sipping is followed by aversive
consequences. As it cools, positive reinforcers emerge, but satiation sets in. Other events at the breakfast table intervene. Sipping eventually ceases not because the cup is empty but because the last few drops are cold.

But although our behavioral curve will not be pretty, neither will the cooling curve for the coffee in the cup. In extrapolating our results to the world at large, we can do no more than the physical and biological sciences in general. Because of experiments performed under laboratory conditions, no one doubts that the cooling of the coffee in the cup is an orderly process, even though the actual curve would be very difficult to explain. Similarly, when we have investigated behavior under the advantageous conditions of the laboratory, we can accept its basic orderliness in the world at large even though we cannot there wholly demonstrate law. (Skinner, 1957, p. 371)

In this statement Skinner is agreeing that very simple processes are studied in the behavioral laboratory and that these never occur in such simple form outside the laboratory. But he is also suggesting that this is the way in which all other sciences are practiced, and they seem to have suffered no disadvantage.

Another frequently encountered criticism concerns the heavy proportion of Skinner’s early work that was carried out on a pigeon or a rat and the readiness with which derived principles and laws have been generalized to humans with little or no concern for species differences and communalities. It is a fact that Skinner and his disciples frequently behaved as though every animal of each species, including the human species, can, by appropriate control, be induced to produce any behavior pattern. They have not sufficiently recognized the fact that the typical organism is not a tabula rasa whose final state is determined only by the reinforcement pattern that is the essence of Skinner’s system. The critics assert that there are at least some behavioral processes that do not fit into this paradigm. Harlow and Harlow’s (1962) work with the social development of rhesus monkeys and some of the European ethologists’ work with instinctive behavior are typical of the illustrations used in these arguments, as is the linguistic work we have already discussed. Some psychologists have emphasized the role of biological factors in learning, questioning whether “general laws of learning” are possible at all. This does not mean, of course, that the application of Skinner’s work to human behavior is inappropriate. There is an enormous wealth of evidence to back up Skinner’s argument that the concepts he used have extensive application to the behavior of humans. The question is how much and where, not whether.

Starkly simple, elegantly precise, and eminently practical, it is not surprising that Skinner’s formulations have attracted more than their proportionate share of adherents. What is particularly relevant to us, of course, is the manner
in which Skinner challenged the traditional approach to personality in terms of intrapsychic structures and dynamics. For Skinner, as we have seen, the wishes, conflicts, and defenses that are at the core of a Freudian account are mentalistic surrogates for reinforcement history, and they have no causal status. “Conflict,” for example, is an environmental rather than an intrapsychic event. It is a label for the existence of incompatible reinforcement contingencies, not the antagonism between impulse and internalized prohibition. Similarly, the defensive compromises that are the manifestation of festering conflict according to Freud are more clearly understood as instances of negative reinforcement: that is, we avoid some statement or action because we have learned that doing so avoids or minimizes unpleasant consequences. And the A–B–C method of discovering the Antecedents of a problematic behavior, providing a precise definition of the Behavior itself, and altering the Consequences that maintain the behavior, replaces the Freudian therapeutic tools of free association and transference.

Notice that the disagreement between Freud and Skinner is not about the role of learning. Such central Freudian phenomena as the sequence of “object-choices” that occurs during development clearly are understandable in terms of the principles of learning described by Skinner. The difference is much more fundamental: Freud proposed that behavior is determined by a complex internal dynamics of affects, impulses, wishes, conflicts, and transformations. For Skinner, however, the springs of behavior are environmental. The difference is between a focus on the vicissitudes of instincts as opposed to the vicissitudes of reinforcements. In addition, the Freudian model was set up to provide a structure for postdictive unraveling of the origins of behavior, but the goal of the Skinnerian model is the control and modification of future behavior.

Skinner stands in stark contrast to the other theorists discussed in this book as well, and it would be a useful exercise for the reader to attempt to “translate” critical constructs from other theories into Skinnerian terms. The dynamics of inferiority described by Alfred Adler, for example, fairly easily can be understood as another instance of negative reinforcement, and Henry Murray’s beta press can be seen as another name for discriminative cues. The “conditions of worth” on which Carl Rogers focuses are nothing more than contingencies of reinforcement, and the personal control on which Rogers depends is a mentalistic illusion. Similarly, Gordon Allport’s description of a personal disposition as the linkage between a set of “functionally equivalent” stimuli and a set of equivalent responses can be reduced in Skinnerian terms to the existence of stimulus generalization and response generalization. The perceived “meaning” that Allport employs to explain the connection would be superfluous for Skinner.

Indeed, Skinner proposed that the construct of trait is fundamentally circular, in that we infer the trait from a certain behavior and then use the trait to explain that behavior. Thus, if we observe a student who is fighting, infer that
he or she is aggressive, and then explain his or her fighting in terms of the aggression, we have engaged in a causally meaningless circle. In this example, trait constructs are employed in a causally redundant manner, but they need not be. Many theorists (e.g., Raymond Cattell and Hans Eysenck) provide a priori means for measuring traits and then use the traits to predict subsequent behavior. And while they may rely heavily on the mechanisms of learning to account for the origins of individual differences on those traits, they freely use the "residue" of that learning to account for subsequent behavior. These, of course, are the points on which Skinner vociferously objected: the ultimate goal is to control behavior, not merely to predict it, and tendencies or structures are useless in the engineering of behavior.

Ironically, it is precisely on these practical grounds that Skinner is most vulnerable. He proposed that we can alter behavior by changing the contingencies that maintain the behavior, taking into account the reinforcement history of the individual (plus the contingencies of survival that have shaped all members of the species). In the laboratory, where we know the histories of our animals and control the contingencies to which we expose them, this model is feasible and powerful. In the real world, however, the situation is not so straightforward. We may alter contingencies, but we often do not know the histories of the individuals with whom we are in contact. If a student comes to a professor complaining of test anxiety, for example, the professor may well have no information about the student's reinforcement history. How, then, can the professor help the student? It would seem reasonable to attempt to learn something about the student's current dynamics and tendencies, recognizing that those tendencies are the product of past experiences but attempting to access the "residue" of the history because there is no access to the history itself. Skinner maintained that we are better off in such a circumstance if we learn what we can of the history, but measuring the current state of the individual seems to be a reasonable alternative. While "personality" may be a "surrogate" for past experiences, it may also be useful if we can demonstrate that individuals who differ on a priori dimensions subsequently exhibit different reactions to particular circumstances. Skinner's technology is extremely powerful, and reasonable people may disagree about the causal status of proximal and distal causes, but it is by no means clear that personality characteristics are irrelevant in the quest to predict and to control behavior.
We present here the personality theory that is most elegant, most economical, and shows the closest link to its natural science forebears. Stimulus–response (S-R) theory, at least in its origins, can accurately be labeled a laboratory theory, in contrast to other theories with which we have dealt where the
role of clinical or naturalistic observation has been much more important. Consistent with these origins is the position's explicitness, economy of formulation, and the serious efforts made to provide suitable empirical anchoring for the main terms of the theory.

Actually there is no single S-R theory, but rather a cluster of theories all resembling each other more or less, but at the same time each possessing certain distinctive qualities. These systems began as attempts to account for the acquisition and retention of new forms of behavior that appeared with experience. It is thus no surprise to find that the learning process is given predominant emphasis. Although innate factors are not ignored, the S-R theorist is primarily concerned with the process whereby the individual mediates between an array of responses and the tremendous variety of stimulation (internal and external) to which he or she is exposed.

Although there is no need to engage in a detailed discussion of the complex origins of S-R theory, it would scarcely be appropriate to introduce this theory without mentioning the contributions of Ivan Pavlov, John B. Watson, and Edward L. Thorndike. The distinguished Russian physiologist Ivan Pavlov (1906, 1927) discovered a type of learning that has become known as classical conditioning. Pavlov was able to demonstrate that through the simultaneous presentation of an unconditioned stimulus (meat paste) and a conditioned stimulus (sound from a tuning fork), the conditioned stimulus would eventually elicit a response (salivation) that originally could be elicited only by the unconditioned stimulus. The act of salivating to the sound of the tuning fork was referred to as a conditioned response.

In the hands of a number of American psychologists, this process of classical conditioning became a means of building an objective psychology that dealt only with observables. John B. Watson (1916, 1925) was the leader of this movement. He rejected the then dominant conception of psychology as a unique type of science, aimed at discovering the structure of consciousness by introspection. Psychology, he proposed, should study behavior, using the same types of objective techniques as other natural sciences. He seized upon Pavlov's principle of conditioning and, combining this with ideas he had already developed, presented to the world a position he called "behaviorism." This objective and environmentalistic point of view quickly came to typify American psychology, and even today it is closely linked with the most distinctive features of psychology in this country. At the same time that these developments were proceeding, Edward Thorndike (1911, 1932) was demonstrating the importance of reward and punishment in the learning process, and his "law of effect" has become one of the cornerstones of modern learning theory. Despite the crucial nature of Pavlov's contributions, learning theory with its heavy stress upon objectivity, its emphasis upon careful experimentation, and its strong functional flavor exists as one of the most singularly American theories of all the positions we shall consider.
As a result of the ideas and investigations of Edward L. Thorndike, John B. Watson, Edward G. Tolman, Edwin R. Guthrie, Clark L. Hull, Kenneth W. Spence, and others, the dominant theoretical interest of American psychologists shifted during the third decade of this century toward the learning process. During the next two decades, most major theoretical issues in psychology were debated within the framework of learning theory. Theorists such as Thorndike, Hull, Spence, and Guthrie described the learning process as involving the associative linkage between sensory and motor processes. Much of the controversy centered about this theoretical conception of the learning process. Edward Tolman, one of the major theorists of this period, shared the view that the empirical task of the learning theorist is to identify the environmental forces that determine behavior but conceived of learning as the development of organized cognitions about sets of sensory, or stimulus, events. Kurt Lewin also made steps toward developing a cognitive type of theory, although he was not deeply and continuously concerned with the learning process. Much of the experimental work stimulated by these theoretical debates involved the investigation of relatively simple forms of learning, particularly as they occurred in animals. In the last thirty years, experimental psychologists have shown an increasing interest in studying language, memory, and complex thought processes in humans as well as cognitive processes in other species. Reflecting this shift in emphasis, sophisticated cognitive and information processing theories that bear little resemblance to simple association theories have been developed.

As the title of this chapter implies, we are concerned here with formulations that are based on S-R association theory or whose intellectual lineage, although showing the influence of recent thought on cognitive processes, owes much to the S-R behaviorist tradition. More specifically, we shall pay particular attention to attempts to generalize or apply the theoretical position of Clark Hull (1943, 1951, 1952) to phenomena of interest to the personality psychologist. What are the reasons for concentrating our interest on the formulations influenced by Hull and his writings? First of all, this theoretical position is one of the most elegant and highly developed of any comprehensive theory. The viewpoint has been stated more explicitly, has been more adequately formalized, and has fostered a greater wealth of related empirical investigation than any comparable theory. Second, and most important, it is largely the intellectual descendants of Hull and Spence who have made the most serious and systematic attempts to apply their laboratory-developed theories to the understanding of personality. A feature that has made Hullian theory particularly attractive is its attention to the role of motivation in determining behavior and the processes by which learned motives are acquired.

B. F. Skinner, a major figure in the field of learning, has also had a marked impact on many areas of psychology, including personality functioning. His contributions were considered in the previous chapter.
Contrary to the theories we have already discussed, the rudiments of the S-R position were developed in connection with data that possess little seeming similarity to the data of major interest to the personality psychologist. It may be an overstatement to say that the white rat has had more to do with shaping this theory than have human subjects, but it is certainly true that members of lower species have had infinitely more to do with the theory's development than in the case of the other theories we have considered. One must not, however, overemphasize the importance of the place of origin of this theory. A theory should be evaluated in terms of what it does rather than where it comes from. Hull, the intellectual father of this position, made explicit his intent of developing a general theory of human behavior at the very beginning of his theoretical strivings. It was only for reasons of strategy that he chose to develop his initial ideas against the relatively stable background provided by animal behavior in carefully controlled experimental situations. Thus, the essence of this theory did not develop from the study of lower organisms because of any conviction that all behavioral problems could be solved in this manner. Rather, it was hoped that the simplicity of the lower organism would permit the establishment of certain fundamentals that, when elaborated through the study of complex human behavior, might prove to be the core of a satisfactory theory of behavior. This readiness to change and extend the peripheral part of the theory, at the same time maintaining certain core assumptions and concepts, is clearly demonstrated in the work of many of Hull's students. Consistent with this point of view we shall make no effort here to outline the details of Hull's theory but rather will focus upon attempts that have been made to modify or elaborate the theory so as to deal with behavior of crucial interest to the personality psychologist. The outstanding example of such a derived theory is contained in the work of Dollard and Miller, and our chapter will give predominant attention to this position. The writings of many others deserve mention, but space limitations will allow us to summarize briefly the views of only two other individuals: Wolpe and Seligman.

Before turning to the details of these theories, a word should be said concerning the Institute of Human Relations at Yale University. This institution was established in 1933 under the direction of Mark May in an effort to bring about closer collaboration and integration among psychology, psychiatry, sociology, and anthropology. The Institute embraced all of these traditionally separate departments. The first decade of its existence represents one of the most fruitful periods of collaboration in the behavioral sciences that has occurred in any American university. Although Clark Hull provided the theoretical underpinning for this group, its activities were by no means focused primarily on experimental psychology. Indeed, social anthropology, the study of the social aspects of humans in nonliterate societies, contributed an important element to the intellectual framework of this group, and there was an intense interest in psychoanalytic theory that contributed to many of the theoretical
and research ideas of members of the group. During this ten-year period a remarkable group of young men received training either as graduate students or young staff members, and upon all of them this experience seems to have exerted a powerful and enduring influence. Among the outstanding members of this group were Judson Brown, John Dollard, Ernest Hilgard, Carl Hovland, Donald Marquis, Neal Miller, O. H. Mowrer, Robert Sears, Kenneth Spence, and John Whiting. It was the Institute of Human Relations, directed by Mark May, infused with the ideas of Clark Hull, and vitalized by the productive scholarship of the individuals just mentioned, that resulted in the developments with which we are concerned in this chapter.

This theory represents the efforts of two individuals, sophisticated in both laboratory and clinical investigation, to modify and simplify Hull’s reinforcement theory so that it can be used easily and effectively to deal with events of major interest to the social and clinical psychologist. The details of the theory have been shaped not only by the formulations of Hull but also by psychoanalytic theory and by the findings and generalizations of social anthropology. As we shall see, the concept of habit, which represents a stable S-R connection, is crucial to this position. In fact, most of the theory is concerned with specifying the conditions under which habits form and are dissolved. The relatively small number of concepts that are employed for this purpose have been used with great ingenuity by the authors to account for phenomena of central interest to the clinician, for example, repression, displacement, and conflict. In many instances the authors have attempted to derive from psychoanalytic writing and clinical observation substantive wisdom concerning behavior that in turn they have incorporated within their S-R concepts. Thus, a good deal of theory application consists of the translation of general observation, or vague theoretical formulation, into the more aseptic terms of S-R theory. Although translation is not in itself a particularly important goal, this effort has frequently made possible new insights and predictions concerning unobserved empirical events, and these functions represent the highest order of theoretical contribution.

In some respects John Dollard and Neal Miller provide striking contrasts; in other regards their backgrounds show great similarity. They are different in that Miller has advanced important ideas and findings primarily within the domain of experimental psychology, and Dollard has made significant anthropological and sociological contributions. However, both have been influenced heavily by their experiences at the Institute of Human Relations, and consistent with this is their indebtedness to Hull and Freud. Perhaps the fruitfulness of their collaboration has derived from this common core of conviction upon which each has erected unique empirical and theoretical strengths.
John Dollard was born in Menasha, Wisconsin, on August 29, 1900. He received an A.B. from the University of Wisconsin in 1922 and subsequently secured his M.A. (1930) and Ph.D. (1931) in sociology from the University of Chicago. From 1926 until 1929 he served as assistant to the president of the University of Chicago. In 1932 he accepted a position as assistant professor of anthropology at Yale University and in the following year became an assistant professor of sociology in the recently formed Institute of Human Relations. In 1935 he became a research associate in the institute and in 1948 a research associate and professor of psychology. He became professor emeritus in 1969. John Dollard died on October 8, 1980 (Miller, 1982). He was trained in psychoanalysis at the Berlin Institute and became a member of the Western New England Psychoanalytic Society. Dollard’s conviction concerning, and personal dedication to, the unification of the social sciences is reflected not only in his publications but also in the remarkable fact that he had academic appointments in anthropology, sociology, and psychology all at the same university. It should be noted that this interdisciplinary activity occurred at a time when the individual disciplines were much less cordial to integration than they are at present. Dollard wrote numerous technical articles in the social sciences that have ranged from ethnology to psychotherapy. He authored a number of books that reflect this same wide-ranging interest. *Caste and class in a Southern town* (1937) is a highly regarded field study concerned with the role of black Americans in a southern community. It represents one of the early examples of culture and personality analysis. This was followed by a related volume, *Children of bondage* (1940), which was coauthored with Allison Davis. He published two volumes concerned with the psychological analysis of fear, *Victory over fear* (1942) and *Fear in battle* (1943), and a significant monograph concerned with the use of life history material, *Criteria for the life history* (1936). He also published, jointly with Frank Auld and Alice White, *Steps in psychotherapy* (1953), a book presenting a method of psychotherapy that includes the detailed description of an individual in treatment, and, with Frank Auld, *Scoring human motives* (1959).

Neal E. Miller was born in Milwaukee, Wisconsin, on August 3, 1909, and received his B.S. from the University of Wisconsin in 1931. He received his M.A. from Stanford University in 1932 and his Ph.D. in psychology from Yale University in 1935. From 1932 until 1935 he served as an assistant in psychology at the Institute of Human Relations, and in 1935–1936 he was a Social Science Research Council traveling fellow during which time he secured a training analysis at the Vienna Institute of Psychoanalysis. From 1936 until 1940 he was an instructor and subsequently assistant professor at the Institute of Human Relations. He became a research associate and associate professor in 1941. From 1942 to 1946 he directed a psychological research project for the Army Air Force. In 1946 he returned to Yale University, becoming the James Rowland Angell professor of psychology in 1952. He remained at Yale
until 1966, when he became professor of psychology and head of the Laboratory of Physiological Psychology at Rockefeller University. Aside from his collaboration with John Dollard, Miller is best known in psychology for his careful experimental and theoretical work on the acquisition of drives, the nature of reinforcement, and the study of conflict. His early research was purely behavioral in nature, but since the mid-1950s, Miller has become concerned with the physiological mechanisms underlying drive and reinforcement and other related phenomena. This work is presented in detail in journal publications, and much of the early work is summarized in three excellent handbook chapters (Miller, 1944, 1951a, 1959). Miller's recent work has focused on behavioral medicine (Miller, 1983) and neuroscience (Miller, 1995). The respect that his contributions have commanded is reflected in the honors he has received. These include membership in the prestigious National Academy of Science, election to the presidency of the American Psychological Association (1959), receipt of the Warren medal from the Society of Experimental Psychologists (1957), and receipt of the President's Medal of Science (1965).
In 1939 several staff members of the Institute of Human Relations, including Dollard and Miller, published a monograph titled *Frustration and aggression*. (Dollard, Doob, Miller, Mowrer & Sears, 1939). This was an early and interesting example of the kind of application with which we are concerned in this chapter. The authors attempted to analyze frustration and its consequences in terms of S-R concepts. In their monograph they present a systematic formulation of this position, together with a considerable amount of new investigation and predictions concerning yet-to-be-observed events. This work not only illustrates the integration of S-R concepts, psychoanalytic formulation, and anthropological evidence but also provides evidence for the fruitfulness of this union, as it has led to a host of related empirical studies. Miller and Dollard have jointly written two volumes representing the attempt to apply a simplified version of Hull’s theory to the problems of the social psychologist (*Social learning and imitation*, 1941) and to the problems of the clinical or personality psychologist (*Personality and psychotherapy*, 1950). It is primarily the contents of these volumes, particularly the latter one, that will form the basis for the exposition to follow.

The core of their position is a description of the learning process. Miller and Dollard clearly express their general view of this process and its constituent elements in the following passage:

> What, then, is learning theory? In its simplest form, it is the study of the circumstances under which a response and a cue stimulus become connected. After learning has been completed, response and cue are bound together in such a way that the appearance of the cue evokes the response. . . . Learning takes place according to definite psychological principles. Practice does not always make perfect. The connection between a cue and a response can be strengthened only under certain conditions. The learner must be driven to make the response and rewarded for having responded in the presence of the cue. This may be expressed in a homely way by saying that in order to learn one must want something, notice something, do something, and get something. Stated more exactly, these factors are drive, cue, response and reward. These elements in the learning process have been carefully explored, and further complexities have been discovered. Learning theory has become a firmly knit body of principles which are useful in describing human behavior. (1941, pp. 1–2)

The learning principles that Dollard and Miller have applied to everyday life have been discovered in controlled laboratory investigations that typically have involved animals as subjects. Knowledge of these laboratory principles, as well as of certain theoretical notions concerning them, is therefore critical to an understanding of their personality theory. A description of a hypothetical
experiment, patterned after pioneering studies of Miller and his colleagues (Miller, 1948; Brown & Jacobs, 1949), and a theoretical analysis of its result will serve as a means of introducing this necessary background.

**AN ILLUSTRATIVE EXPERIMENT**

In this hypothetical experiment, each subject (the ubiquitous laboratory rat) is placed in a rectangular box with a grid floor. The box is divided into two square compartments by a low “fence” or hurdle over which the rat can easily jump. A buzzer is sounded and simultaneously a pulsing electrical charge is sent through the grid floor. The electric shock is omitted with control subjects. The animal can be expected to show a variety of vigorous responses to the shock and eventually will scramble over the hurdle into the other compartment. The shuttlebox apparatus is arranged so that as soon as the subject goes over the hurdle dividing one compartment from the other, the buzzer and shock are terminated. Over the next sixty minutes, this procedure is repeated at irregular intervals, and it is observed that the time between the onset of the buzzer and shock and the subject’s hurdle-jumping response becomes progressively shorter and shorter. On the next day, each subject is again placed in the shuttlebox for an hour. During this session, the buzzer is periodically sounded and remains on until the animal enters the other compartment, but it is never again accompanied by shock. Despite the absence of the shock, the subject continues to jump over the hurdle whenever the buzzer sounds and may even continue to improve its performance.

After several such sessions, a new feature is introduced into the apparatus. Jumping the hurdle no longer is followed by cessation of the buzzer. If, however, the rat depresses a lever attached to the base of the hurdle, the buzzer is turned off. Again, the animals are observed to exhibit vigorous activity, largely confined to jumping back and forth across the hurdle. In the course of moving about the rat might depress the lever. Gradually hurdle jumping begins to disappear and the time between the buzzer onset and the lever press gets shorter and shorter. Eventually the press occurs promptly as the buzzer sounds. The behavior of these subjects is in marked contrast to the unshocked control animals who show no similar systematic changes in their behavior in any of the experimental sessions. Obviously, as a result of the buzzer–shock pairings the experimental subjects have learned or acquired new responses while the control subjects have not.

Actually several types of learning have taken place. The first is classical conditioning, the form of learning originally discovered by Pavlov. Classical conditioning involves a procedure in which an initially neutral stimulus (conditioned stimulus, or CS) is paired with an unconditioned stimulus (US), which regularly elicits a characteristic behavior pattern, the unconditioned response (UR). After repeated CS–US pairings, the CS, presented by itself or in anticipa-
tion of the US, elicits a characteristic reaction known as the conditioned response (CR). Typically, the CR is similar to the UR, though rarely identical. An outline of the classical conditioning that has occurred in our illustrative experiment, according to Miller's theory, is shown in Figure 13.1. However, first consider the consequences of the shock per se. Between the observable US (shock) and the overt behavior (Re mot) it produces, a chain of internal events occurs. The shock elicits a number of internal responses associated with pain (symbolized here as Re mot). These Re mot give rise, in turn, to an internal pattern of stimuli. In addition to having the same capacity as external sources of stimulation to set off, or "cue," still further responses, these internal stimuli consequent on Re mot are said to have drive (D) properties and hence are identified as drive stimuli or S_D.

Drive is a motivational concept in the Hullian system and is said to impel or activate behavior but not to determine its direction. In this instance, the drive is an innate or primary one, based on pain. There are, of course, a number of primary drives, in addition to pain, such as hunger, thirst, and sex. The latter examples, in contrast to pain, are deprivation states, brought about by withholding some kind of stimulus, such as food, and reduced by providing the organism with the appropriate stimulus, instead of by removing noxious stimulation. Actually, Miller postulates that any internal or external stimulus, if intense enough, evokes a drive and impels action. As this statement implies, drives differ in strength, and the stronger the drive, the more vigorous or persistent the behavior it energizes. In our experiment, for example, the vigor of the overtly observable emotional behavior that occurs in subjects in response to the US and later of the learned hurdle-jumping response is influenced by the level of shock that is given.

Initially the buzzer elicits none of the emotional behaviors associated with the shock. But after repeated presentations of the buzzer with the shock, the buzzer gains the capacity to elicit internal Re mot, similar to those originally evoked by the painful US; a conditioned response (CR) has been acquired. In

Figure 13.1
Theoretical analysis of the processes involved in the classical conditioning of an emotional response based on pain.

- US_shock
- Re mot
- S_D(drive)
- Re mot

Habit

CS_buzzer
the Hullian system that Dollard and Miller utilize, the learning that has taken place is described as an associative connection between the conditioned stimulus (buzzer) and the response \( r_{cond} \), and it is represented by the theoretical concept habit. As will be discussed in more detail shortly, Hull postulated that for a habit to be established, not only must the stimulus and response occur close to each other temporally and spatially but also the response must be accompanied by a reinforcement or reward. Assuming that the latter condition is met, the strength of the S-R habit increases with the number of occasions on which the stimulus and the response have occurred together.

The repeated presentations of the buzzer and shock in the first session of our experiment with the subject’s escape from shock acting as the reinforcer are sufficient to set up a relatively strong habit. Once the classically conditioned \( r_{cond} \) has been established, presentation of the buzzer alone not only elicits \( r_{cond} \) but also sets into operation the rest of the chain of events originally associated with the administration of shock. Thus, the distinctive pattern of internal stimulation \( s_b \) will be aroused, and in combination with the buzzer it will act as a cue to elicit overt behavior similar to that previously evoked by the shock. Further, these observable responses are energized or activated by the drive properties of \( s_b \). Since the drive is elicited by a learned response to a previously neutral stimulus, it is identified as an acquired or secondary drive, in contrast to the primary drive evoked by responses to painful stimulation.

In order to distinguish between the \( r_{cond} \rightarrow s_b \) sequence elicited by shock and the classically conditioned sequence elicited by the buzzer, the latter has been given the distinctive label of anxiety or fear. Thus fear is both a learned response—the conditioned form of the pain response, to use Mowrer’s phrase—and a learned, or secondary, drive.

But as we have said, the experimental subjects have learned more than these fear reactions. During the first session, they quickly learned to jump over the hurdle as soon as the buzzer and shock were presented, even though initially the stimulation elicited a variety of vigorous responses of which hurdle jumping was not the most prominent. The key to why this response dominated the others lies in its consequences: Only hurdle jumping was followed by discontinuation of the shock and the train of internal events it provoked. Although there are exceptions, events that reduce or eliminate drive stimuli typically strengthen or increase the probability of appearance of any responses they regularly accompany and are called reinforcers. Conversely, responses unaccompanied by events that reduce drive stimuli tend not to be repeated. Since only hurdle jumping was followed by reinforcement—cessation of the shock—this response was strengthened instead of others.

The development of the capacity of the buzzer–shock combination to elicit hurdle jumping is an example of a kind of learning in which, in contrast to classical conditioning, the occurrence of the reinforcer is contingent on the response having been made; the response is instrumental in producing the
reinforcing event. The type of learning that occurs under these conditions is termed instrumental or, as Skinner called it, operant conditioning. During the first session of our experiment two types of response were learned: the classically conditioned fear response and the instrumental hurdle-jumping response that brought about cessation of the US (thus reinforcing, via drive reduction, both of these responses).

After the first session, the shock was discontinued and only the buzzer was employed. Since no shock was given, cessation of shock no longer occurred. The procedure in which the reinforcers used to establish a response are withdrawn is known as experimental extinction, and it typically produces a rapid reduction in the strength of the learned response. For example, hungry rats who have learned to perform a distinctive instrumental act to obtain food quickly cease to make the response after the food is discontinued. But cessation of shock in our experiment did not lead to disappearance of the hurdle-jumping response (or, theoretically, of $r_{mod}$); for many subjects, the response even continued to increase in strength, as indexed by a decrease in time to respond with successive presentations of the buzzer. Miller suggests that this "extinction" procedure leads to little or no weakening of the learned responses because, in actuality, these responses continue to be reinforced. The CS elicits not pain but the learned fear sequence, and it is this that activates the instrumental habit underlying the hurdle jumping. Occurrence of the instrumental response turns off the buzzer, and the drive stimuli associated with fear are therefore reduced in intensity. Thus both the classically conditioned fear reaction and the instrumental hurdle jumping continue to be reinforced.

Experimental extinction of the hurdle-jumping response did occur, however, when it became ineffective in terminating the buzzer and the fear it elicited. Goaded by this fear, the animals learned instead the now effective lever-pressing response. Thus the subjects continued to perform the response that had allowed them in the past to escape a painful stimulus only as long as it continued to permit them to reduce fear. When conditions changed, they learned a new instrumental response motivated by the learned fear drive and reinforced by fear reduction.

Actual experiments of similar design have indicated that instrumental responses that allow a subject to escape or avoid an anxiety-evoking CS may slowly weaken with successive presentations of the latter. But if a substantial number of CS-US presentations have been given during the initial training period or the noxious US has been intense, the instrumental response may continue with little or no visible decreases in strength for hundreds of presentations of the CS (Miller, 1948). Dollard and Miller have pointed to a strong analogy between the experimental animal who persists in becoming frightened by harmless events such as the sound of a buzzer and the irrational neurotic fears and anxieties that can be observed in human subjects. If the observer has seen the initial learning process, there is nothing mysterious about the
animal’s fear of the buzzer and its efforts to escape; if the observer has seen the learning process preceding the neurotic symptom, there is nothing surprising or senseless about the way in which the human subject behaves. It is only when the observer steps in after the fear has been learned that the subject’s behavior appears strange or irrational.

Another learning principle of which Dollard and Miller make important use in their theory of personality may be illustrated by a variation in the procedure of our hypothetical experiment. After a first session in which the buzzer-shock pairings occur, a second session is conducted in which only a buzzer is presented. But now the buzzer signals vary in intensity, sometimes being the same as in the first session and at other times louder or softer than during training. At the onset of a buzzer signal, the subjects jump the hurdle when the sound of the same intensity that had originally been paired with shock comes on. But they also tend to respond to the other sounds, with the strength of the response tendency being inversely related to the similarity of these buzzer intensities to the one used in the first session. These behaviors illustrate a gradient of stimulus generalization: When a stimulus has gained the capacity to elicit a response by virtue of being paired with an unconditioned stimulus, other stimuli will have automatically gained some degree of this capacity, depending on their similarity to the original stimulus. A related phenomenon that is more difficult to demonstrate concretely is response generalization: A stimulus acquires the capacity to elicit not only the response that has typically followed it but also a number of similar responses.

It has been argued that without the capacity for stimulus and response generalization, organisms would exhibit little or no learning. Although, for convenience, one often refers to the “same” stimulus reoccurring and eliciting the “same” response, rarely if ever are individuals confronted with exactly the same stimulus situation on two or more occasions and the responses are never completely identical. Even in meticulously controlled experiments, it is more accurate to state that a range of stimuli are presented that elicit the capacity to evoke a range of responses.

Generalization gradients, however, have been demonstrated to extend far beyond the limits of stimulus and response variation that occurred in the training situation, the strength of the generalization tendency being related not only to the degree of similarity to the original learning situation but also to such factors as the amount of original learning and the intensity of the drive that underlies the response. However, the generalization gradient can be narrowed by differential reinforcement. Continuing with our illustrative experiment, shocking the animal whenever the buzzer of the original intensity is presented and omitting the shock whenever the buzzer intensity is different will gradually lead to the extinction of hurdle jumping to all but the training stimulus. The procedure has led to stimulus differentiation.
As this account makes clear, the fate of a stimulus–response connection is heavily influenced by the outcome of the responses—the stimulus events that closely follow it. Certain outcome events result in strengthening the connection, that is, in increasing the probability that the response will occur more vigorously or quickly on the next occasion the stimulus is presented. These events are classified as positive reinforcers or rewards. We have also seen that the cessation of other types of events, often noxious in nature, may also act to reinforce responses. Dollard and Miller have looked for a general principle that would allow them to determine whether any given stimulus should be considered a reinforcer. Following Hull (1943), they suggested the drive reduction hypothesis, which states that an event that results in a sudden reduction in drive stimuli acts to reward or reinforce any response it accompanies. In what Miller (1959) describes as its strong form, the drive reduction hypothesis further states that the reduction of drive stimuli is not merely a sufficient condition for reinforcement to occur but a necessary condition as well.

The strong version of the drive reduction hypothesis adopted by Dollard and Miller implies that the learning of an S-R association or habit will take place only if the response has been reinforced. The hypothesis that reinforcement is necessary for learning to occur has generated considerable controversy. Some theorists, such as Guthrie (1959), have insisted that the mere contiguity of a stimulus and response is sufficient; others have formulated two-factor theories in which it is proposed that some kinds of learning require reinforcement in addition to contiguity and others do not (see, e.g., Mowrer, 1947; Spence, 1956; Tolman, 1949).

Criticism has also been aimed at the assumption that reduction in drive stimuli produces the reinforcement effect. Miller himself has indicated on several occasions (see, e.g., Miller, 1959) that although he has found the drive reduction hypothesis to be more appealing than any of the extant rival hypotheses, he has little confidence in its ultimate correctness. He tentatively presented what he considers to be a plausible alternative to the drive reduction hypothesis (Miller, 1963). There may be, he suggests, one or more "go" or "activating" mechanisms in the brain that are triggered by events resulting in drive stimulus reduction. These go mechanisms serve to intensify or energize ongoing responses elicited by the stimulus cues, and these vigorous responses are learned on the basis of pure contiguity. Activation of a go mechanism is itself a response and, similar to other responses, may also be conditioned by contiguity. Thus, a previously neutral stimulus may acquire the capacity to set off a go mechanism by virtue of having previously occurred in conjunction with activation of the mechanism.

Dollard and Miller have suggested that the major arguments in their S-R analysis of personality are unaffected by their specific hypotheses about reinforcement, so that it is possible to embrace the essential aspects of their
theory without accepting their speculations about it. All that is necessary, they state, is that one assumes that events resulting in sudden reduction of drive stimuli reinforce the responses with which they are contiguous in the sense of making these acts more prepotent. Since the experimental evidence demonstrates that, with a few possible exceptions, drive-reducing stimuli do have reinforcing effects, this assumption should find easy acceptance.

THE STRUCTURE OF PERSONALITY

Dollard and Miller have consistently shown less interest in the structural or relatively unchanging elements of personality than in the process of learning and personality development. Granted that structural aspects are not emphasized, what concepts do they employ to represent the stable and enduring characteristics of the person? Habit is the key concept in the learning theory espoused by Dollard and Miller.

A habit, we have seen, is a link or association between a stimulus (cue) and a response. Learned associations or habits may be formed not only between external stimuli and overt responses but also between internal ones as well. The bulk of their theory is concerned with specifying the conditions under which habits are acquired and extinguished or replaced, with little or no attention given to specifying classes of habits or listing the major varieties of habits that people exhibit.

Although personality consists primarily of habits, their particular structure will depend on the unique events to which the individual has been exposed. Further, this is only a temporary structure: The habits of today may alter as a result of tomorrow's experience. Dollard and Miller are content to specify the principles governing habit formation and leave to the individual clinician or investigator the task of specifying the habits that characterize any particular person. They take great pains to emphasize, however, that an important class of habits for humans are elicited by verbal stimuli, whether they are produced by the persons themselves or by someone else, and that responses are also frequently verbal in their nature.

It must also be pointed out that some habits may involve internal responses that in turn elicit internal stimuli with drive characteristics. (We have already examined fear as one example of a learned, response-produced drive.) These secondary drives must also be considered enduring portions of personality. Primary drives and innate S-R connections also contribute to the structure of personality. Typically, however, they are not only less important in human behavior than secondary drives and other types of habits but also define what individuals have in common, as members of the same species, rather than their uniqueness.
Dollard and Miller are explicit in defining the nature of motivation, and they specify in considerable detail the development and elaboration of motives; but there is again no interest in taxonomy or classification. Instead they have focused on certain salient motives such as anxiety. In their analysis of these they have attempted to illustrate the general process that can be expected to operate for all motives.

The effect of drives on the human subject is complicated by the large number of derived or acquired drives that eventually make their appearance. In the process of growth the typical individual develops a large number of secondary drives that serve to instigate behavior: "These learned drives are acquired on the basis of the primary drives, represent elaborations of them, and serve as a facade behind which the functions of the underlying innate drives are hidden" (Dollard & Miller, 1950, pp. 31-32).

In the typical modern society, secondary drive stimulation largely replaces the original function of primary drive stimulation. Acquired drives such as anxiety, shame, and the desire to please impel most of our actions. As this implies, the importance of the primary drives in most instances is not clear from casual observation of the socialized adult. It is only in the process of development or in periods of crisis (failure of the culturally prescribed modes of adaptation) that one can observe clearly the operation of primary drives.

It should be obvious also that most of the reinforcements in the ordinary life of human subjects are not primary rewards but originally neutral events that have acquired reward value by virtue of having consistently been experienced in conjunction with primary reinforcement. A mother's smile, for example, becomes a powerful acquired or secondary reward for the infant, with its repeated association with feeding, diapering, and other caretaking activities that bring pleasure or remove physical discomfort. Secondary rewards often serve, by themselves, to reinforce behavior. Their capacity to reinforce is not sustained indefinitely, however, unless they continue to occur on occasion in conjunction with primary reinforcement. How these changes take place leads us to the general question of the development of personality.

The transformation of the simple infant into the complex adult is a matter of little interest to some theorists, but this process is elaborated by Dollard and Miller. We shall present their treatment of this problem beginning with a brief consideration of the innate equipment of the infant and following this with a discussion of the acquisition of motives and the development of the higher mental processes. In addition, we shall briefly consider the importance of the social context of behavior and developmental stages.
At birth and shortly thereafter the infant is endowed with only a limited array of behavioral equipment. First, it possesses a small number of *specific reflexes*, which are, for the most part, segmental responses made to a highly specific stimulus or class of stimuli. Second, it possesses a number of *innate hierarchies of response*, which are tendencies for certain responses to appear in particular stimulus situations before certain other responses; for example, it may be innately determined that when exposed to certain noxious stimuli the child will first try to escape from the stimuli before crying. This assumption implies that so-called random behavior is not random at all but is determined by response preferences that early in the organism’s development are largely the result of innate factors but with development are influenced by a complex mixture of experience and these innate hierarchies. Third, the individual possesses a set of *primary drives* that, as we have already seen, are in the typical case internal stimuli of great strength and persistence and usually linked to known physiological processes.

Thus, we have initially an individual who is capable of a few, relatively segmental, or differentiated, responses to specific stimuli. This individual also possesses a group of primary drives that under certain organic conditions impel him or her to act or behave but do not direct this activity. The only initial guidance of responses stems from an innate hierarchy of response tendencies that impose a gross or general control over the order in which particular responses will appear in specified situations. Given this initial state our theory of development must account for (1) the extension of present responses to new stimuli or stimulus situations, (2) the development of new responses, (3) the development of new or derived motives, and (4) the extinction or elimination of existing associations between stimuli and responses. All of these developments, Dollard and Miller believe, can be understood by appealing to learning principles.

We have noted that Dollard and Miller suggested that there are four important conceptual elements in the learning process. These are drive, cue, response, and reinforcement. Let us now amplify some of our earlier remarks about these concepts.

A *cue* is a stimulus that guides the response of the organism by directing or determining the exact nature of the response: “Cues determine when he will respond, where he will respond, and which response he will make” (Dollard & Miller, 1950, p. 32). Cues may vary in kind or in intensity. Thus, there are visual cues and auditory cues, but there are also weak flashes of light and blinding flashes of light. Or, there are auditory cues associated with the ringing of a bell and auditory cues associated with the human vocal cords, but there are also gentle, barely detectable, ringing sounds and there are shattering, clanging, ringing sounds. The cue function of stimuli may be associated with
variation in either intensity or kind, although in most instances it is variation
in kind that serves this function. Any quality that makes the stimulus distinctive
may serve as the basis for the cue, and in the usual case distinctiveness is
more easily based upon variation in kind than in intensity. Stimuli may operate
as cues not only singly but also in combination. That is, the distinctiveness
may depend not upon the difference in individual stimuli but rather upon the
pattern or combination of several different stimuli; for example, the same
individual letters may be used in different combinations to spell two or more
words that will have completely different effects upon the reader. We have
already suggested that any stimulus may also become a drive if it is intense
enough; thus the same stimulus may have both drive and cue value: It may
both arouse and direct behavior.

An exceedingly important part in the learning process must be assigned to response factors. As Dollard and Miller point out, before a given response
can be linked to a given cue, the response must occur. Thus, a crucial stage
in the organism’s learning is the production of the appropriate response. In
given any situation certain responses will be more likely to appear than others.
This order of preference, or probability of response, when the situation is first
presented is referred to as the initial hierarchy of responses. If this initial
hierarchy appears to have occurred in the absence of any learning, it may be
referred to as the innate hierarchy of responses, which we have already men-
tioned as part of the primitive equipment of the individual. After experience
and learning have influenced the individual’s behavior in this situation, the
derived order of response is labeled the resultant hierarchy. These concepts
simply remind us that in any environmental setting the potential responses an
individual may make have a different probability of occurring and can be ranked
in terms of this probability.

With development, the hierarchy of response becomes intimately associ-
ated with language because particular responses become linked to words, and
consequently speech may mediate or determine the particular hierarchy that
will operate. Thus, the same situation referred to as “dangerous” or as a
“frolic” will evoke vastly different response hierarchies. The particular hierar-
chy displayed is also heavily influenced by the culture in which the individual
has been socialized as the prescriptions of all cultures include notions of what
the preferred or most likely response is to situations of social importance.

Once a response has been made, its subsequent fate is determined by the
events that follow its occurrence. Responses that have been successful in
bringing about primary or secondary reinforcement will be most likely to recur
the next time the situation is encountered. Not infrequently a situation arises
in which none of the responses the individual can make readily is reinforcing.
These occurrences not only lead to the dropping out or extinction of ineffective
behavior but play a crucial role in the development of new responses and a
wider range of adaptive behavior. These learning dilemmas, as Dollard and
Secondary Drive and the Learning Process

Miller term them, necessitate new responses or invoke responses that are more distant on the hierarchy of response, and this is the crux of learning new responses. If the individual's old responses are perfectly adequate to reduce all of the person's drive tensions, there is no reason to produce new responses and his or her behavior remains unmodified.

We have already seen that the infant is born with a limited range of primary drives that develop into a complex system of secondary drives with growth and experience. The learning processes underlying the acquisition of secondary drives are, in general, the same and have already been illustrated in our earlier presentation of an experiment in which the learned drive of fear or anxiety was acquired. Let us return briefly to a consideration of the processes by which such acquired drives are developed.

Strong stimuli such as shock may elicit intense internal responses, which in turn produce still further internal stimuli. These internal stimuli act as cues to guide or control subsequent responses and serve as a drive that activates the organism and keeps the person active until reinforcement occurs or some other process, such as fatigue, intervenes. The overt responses that result in reinforcement are the ones that are learned. A previously neutral cue that has regularly occurred in conjunction with a drive-producing stimulus may gain the capacity to elicit some part of the internal responses initially elicited only by the drive. These learned internal responses then automatically set off drive stimuli. A secondary drive has been established and will motivate the organism to new learning that leads to reinforcement, just as will primary drives.

Dollard and Miller assert that the strength of the learned internal responses setting off drive stimuli, and hence the acquired drive itself, is a function of the same factors that determine the strengths of S-R connection or habit. Thus, the intensity of the primary drive involved in the reinforcement leading to the drive-producing internal response and the number and pattern of reinforced trials are important determinants of their intensity. If, in our illustrative experiment, a weak shock and few trials are employed, the rat will develop a much weaker fear of the buzzer than if a strong shock and a long series of trials are employed. The gradient of stimulus generalization also applies. The fear response will generalize to cues resembling the learned cue, with those cues that are most similar being feared the most. In general, situations in which the drive-producing internal response is not followed by reinforcement will gradually lead to extinction of that response. They may also be eliminated by a process known as counterconditioning in which a strong incompatible response is conditioned to the same cue. If, for example, a fear-provoking stimulus is paired with a pleasant event, such as eating, it may lose its capacity to act as a conditioned stimulus for the fear reaction (at least if the fear is relatively mild) and become a cue for the eating response instead.
The stimuli associated with acquired drives can serve as cues in the same manner as any other stimulus. The individual may learn to respond with the word “afraid” in fear-evoking situations, that is, label the secondary drive, and this response-produced cue will then mediate the transfer of responses learned in the original fear-producing situation to the present situation. This transfer, involving a response that serves as a cue, is called secondary generalization. Individuals can learn to discriminate different intensities of drive stimulation just as in the case of other stimuli, so that the cue value of the acquired drive may depend on the intensity of the drive.

To summarize, internal responses that produce drive stimuli may become attached to new and originally neutral cues in accordance with the same learning principles that govern the formation and dissolution of other habits. The drive stimuli that these conditioned internal responses set off function just as any other cue and may elicit, for example, responses that have been learned in other situations in which the same drive stimuli were aroused. Finally, these response-produced stimuli serve as a secondary drive in the sense that they will instigate or impel the organism to respond, and their reduction will reinforce or strengthen those responses associated with the reduction. In other words, secondary drives operate just like primary drives.

The individual’s interactions with the environment are of two varieties: those that are direct and guided by a single cue or cue situation and those that are mediated by internal processes. It is the latter class of responses that is of interest here, those mediated by cue-producing responses. Following Hull, Dollard and Miller distinguish between responses that are instrumental (possess some immediate effect upon the environment) and those that are cue producing, whose main function is to mediate or lead the way to another response. Obviously, language is involved in most cue-producing responses, although it need not be spoken language.

One of the most important cue-producing responses is the labeling or naming of events and experiences. The individual may immediately increase the generalization or transfer between two or more cue situations by identifying them as having the same label. For example, by identifying two completely different situations as “threatening,” the individual may greatly increase the likelihood that he or she will behave in the same manner in both situations. Or the individual may build up a sharp discrimination between two similar situations by giving them different names; for instance, two individuals who are objectively very much alike may be labeled respectively as “friend” and “enemy,” with the result that they will be responded to in a highly individual manner. Within any culture there will be critical generalizations and discriminations that are emphasized and thus made easier by the structure of the language. The often repeated examples of tribes where a given commodity,
such as cattle or coconuts, is of great importance and where the language contains a tremendous number of differentiated labels for such objects illustrate this principle.

Not only may words serve to facilitate or inhibit generalization, they may also serve the important function of arousing drives. Further, words may be used to reward or reinforce. And, most important of all, they serve as time-binding mechanisms, permitting the individual to instigate or reinforce present behavior in terms of consequences that are located in the future but susceptible to verbal representation in the present. It is clearly the verbal intervention in the drive–cue–response–reinforcement sequence that makes human behavior so complex and difficult to understand and at the same time accounts for much of the difference between humans and lower species.

Reasoning is essentially a process of substituting internal, cue-producing responses for overt acts. As such, it is vastly more efficient than overt trial and error. Not only does it serve the function of testing symbolically the various alternatives, it also makes possible the substitution of anticipatory responses that may be more effective than any of the overt response alternatives originally available. It is possible through the use of cue-producing responses (thoughts) to begin at the goal situation and work backward until the correct instrumental response has been identified, a feat that would not ordinarily be possible in motor learning. Planning is a special variety of reasoning, where the emphasis is upon future action.

In order for either reasoning or planning to take place, the individual must first be able to inhibit or delay the direct instrumental response to the drive stimulus and cue. It is this inhibition that offers the cue-producing responses an opportunity to operate, and this response of “not responding” must be learned just as any other new response. It is also necessary that the cue-producing responses be efficient and realistic and finally that they lead to appropriate instrumental or overt acts.

The ability to use language and other response-produced cues is greatly influenced by the social context in which the individual develops. In the words of Dollard and Miller:

*The problem solutions painfully acquired during centuries of trial and error, and by the highest order of creative reasoning by rare geniuses, are preserved and accumulate as a part of the culture. . . . People receive an enormous amount of social training in putting words and sentences together in ways that lead to the adaptive solution of problems.*

(1950, p. 116)

It is a rare and creative act to originate the Pythagorean theorem, but it is not much of a trick to learn it at an appropriate time and place when it is
already known. Thus, language provides the key by means of which wisdom from the past is transmitted to the present.

In view of the immense importance of language it is quite appropriate that the child should be trained to pay attention to and respond to verbal cues and eventually to produce them. The use of verbal symbols for communication with other people presumably precedes their use in thought, and a great deal of the child’s interactions with its environment are concerned with how to produce these cues under appropriate circumstances as well as how to understand those that are produced by others.

Language, as we have implied, is a social product. If we grant significance to the language process, it seems reasonable that the social milieu within which the individual functions must be of importance. Let us turn now to a consideration of this factor.

It is very likely that any theory or theorist influenced by social anthropology will highlight the role of sociocultural determinants of behavior, and the present theory is no exception to this rule. Dollard and Miller consistently emphasize the fact that human behavior can be understood only with a full appreciation of the cultural context within which behavior occurs. The psychology of learning provides us with an understanding of the principles of learning, but the social anthropologist or the equivalent provides us with the conditions of learning. And one of these specifications is as important to a full understanding of human development as the other.

No psychologist would venture to predict the behavior of a rat without knowing on what arm of a T-maze the feed or the shock is placed. It is no easier to predict the behavior of a human being without knowing the conditions of his “maze,” i.e., the structure of his social environment. Culture, as conceived by social scientists, is a statement of the design of the human maze, of the type of reward involved, and of what responses are to be rewarded. It is in this sense a recipe for learning. This contention is easily accepted when widely variant societies are compared. But even within the same society, the mazes which are run by two individuals may seem the same but actually be quite different. . . . No personality analysis of two. . . . people can be accurate which does not take into account these cultural differences, that is, differences in the types of responses which have been rewarded. (Miller & Dollard, 1941, pp. 5–6)

As this passage implies, the learning theorist enriches the data of the social anthropologist through providing principles that help to account systematically for the importance of cultural events, while the anthropologist provides the learning theorist with the information he or she needs in order to fit his
or her principles with the actual experience of human subjects. In one sense, this viewpoint argues that the empirical definition of psychological variables is impossible without the wisdom and data of the anthropologist.

Thus, the position of Dollard and Miller cedes a kind of transcultural generality to the principles of learning (or at least some of them) but at the same time grants, and even emphasizes, that the exact form of behavior displayed by a given individual will be tremendously influenced by the society of which he or she is a member.

Dollard and Miller assume that unconscious conflict, learned for the most part during infancy and childhood, serves as the basis for most severe emotional problems in later life. They agree with psychoanalytic theorists in considering experiences of the first half dozen years of life crucial determinants of adult behavior.

It is important to realize that neurotic conflict is not only learned by the child but also learned primarily as a result of conditions created by the parent. This unfortunate capacity of the parent for impairing the child's development stems in part from the fact that cultural prescriptions concerning the child are contradictory or discontinuous and in part from the fact that the child during infancy is not well equipped to cope with complex learning demands even if they are consistent. Thus, society demands that the child learn to be aggressive in some situations and submissive in other very similar situations, a difficult discrimination at best. Worst of all, this demand may be made at a time when the child does not have at its command all the symbolic functions contributed by language so that such discriminations may simply overreach its learning capacity with resultant frustration and emotional upheaval. A similar set of overwhelming conditions may occur in adulthood under exceptional circumstances such as war. As might be expected, such conditions frequently lead to neurosis.

A crucial aspect of childhood experience is the extreme helplessness of the child. It is chiefly in infancy that it is more or less unable to manipulate its environment and thus is vulnerable to the depredations of impelling drive stimuli and overwhelming frustrations. In the ordinary process of development the person will devise mechanisms to avoid situations that are severely frustrating. In infancy the child has no choice but to experience them:

It is not surprising, then, that acute emotional conflicts occur in childhood. The infant has not learned to wait, not knowing the world's inescapable routines; to hope, and thus to assure itself that the good moment will return and that the evil occasion will pass; to reason and plan, and thus to escape present disorder by constructing the future in a controlled way. Rather, the child is urgently, hopelessly, planlessly impelled, living
by moments in eternal pain and then suddenly finding itself bathed in
endless bliss. The young child is necessarily disoriented, confused, delu-
ed, and hallucinated—in short, has just those symptoms that we recognize
as a psychosis in the adult. Infancy, indeed, may be viewed as a period
of transitory psychosis. Savage drives within the infant impel to action.
These drives are unmodified by hope or concept of time. The higher mental
processes (the Ego) cannot do their benign work of comforting, directing
effort, and binding the world into a planful sequence. What is gone may
never return. The present pain may never fade. These are the tumultuous
circumstances in which severe unconscious mental conflicts can be cre-
ated. Only when the child has been taught to speak and think at a rather
high level can the impact of the raw, drastic character of these circum-
stances be reduced. (Dollard & Miller, 1950, pp. 130–131)

Consistent with this view is the prescription that during the early stages
of life the parent’s primary role is to maintain drive stimuli at a low level. The
parent should be permissive, be gratifying, and make few learning demands
until the child’s language skills have developed.

Granted the fact that every culture makes many demands upon the individ-
ual who is to live effectively within it, still there are certain of these demands
that are particularly likely to produce conflict and emotional disturbance.
Dollard and Miller identify four situations in which cultural prescription, as
interpreted by the parent, is particularly likely to have disastrous consequences
for normal development. These are the feeding situation in infancy, toilet
or cleanliness training, early sex training, and training for control of anger
and aggression.

Dollard and Miller suggest that their analysis of these conflict situations
is a restatement of the formulations of Freud in terms of their own conceptual
scheme. For this reason, we shall not attempt to reproduce here all that they
have to say about these critical stages but shall simply consider briefly their
analysis of the feeding situation to illustrate the use they make of learning
concepts in this setting. The important things for the reader to grasp are that
this theory assumes events early in development to be of central importance
in their effects upon behavior and, beyond this, that the operation of these
events is seen as perfectly consistent with the learning process we have al-
ready outlined.

Drive stimuli associated with hunger are among the first strong activity
impellents to which the individual is exposed. Consequently, the techniques
the individual devises to reduce or control these stimuli may be expected to
have an important role as a model for the devices used later in life to reduce
other strong drive stimuli. In this sense, the theory proposes that the feeding
situation serves as a small-scale model that in part determines the large-scale
adjustments of the adult. Thus, Dollard and Miller suggest that the child who
cries when it is hungry and finds that this leads to feeding may be taking the initial steps that will result in an active, manipulative orientation toward drive reduction. On the other hand, the child who is left to “cry himself out” may be laying down the basis for a passive and apathetic reaction to strong drive stimuli. Further, if hunger stimuli are permitted to mount without restriction, the child may come to associate mild hunger stimuli with the intensely painful, overpowering stimuli that he or she has subsequently experienced on so many occasions; and in this manner it may come to “overreact” to relatively mild drive stimuli; that is, the mild drive stimuli acquire a secondary drive strength that is equivalent to the very intense drive stimuli. Another dangerous consequence of permitting the child to be exposed to intense hunger drive stimuli is that it may develop on this basis a fear of being alone. If, when the child is alone, it is exposed to very painful hunger stimuli and if these stimuli are reduced only when the parent finally appears, it may happen that this strong reinforcement (reduction of hunger stimuli) will habituate the response that immediately preceded the appearance of the parent—a fear response. Thus, in the future, when the child or adult is alone, he or she will respond with this previously reinforced fear response and will show a typical pattern of fear of the dark or of being alone.

Perhaps the most important aspect of the feeding situation is that its relative success may be expected to have a great deal to do with future interpersonal relations. This follows from the fact that the feeding experience is associated with the first intimate interpersonal relation—that between mother and child. If the feeding is successful and characterized by drive reduction and gratification, the child comes to associate this pleasant state with the presence of its mother, and this relation by a process of stimulus generalization comes to be linked with other people so that their presence becomes a goal or a secondary reward. If the feeding is unsuccessful and accompanied by pain and anger, the reverse can be expected. Weaning and digestive disturbances are especially likely to have unfortunate consequences for the child as they introduce pain and discomfort into the situation and complicate a learning situation that is already demanding the full capacity of the infant.

An interesting addendum to this analysis of the feeding situation is provided by the results of a set of ingenious experiments conducted with monkeys by Harry Harlow and his colleagues (see, e.g., Harlow, 1958; Harlow & Zimmerman, 1959) after the appearance of the Dollard and Miller volume. Harlow doubted their assumption about the importance of feeding in the development of the mother–child relationship and suggested that bodily contact was far more critical. Evidence supporting Harlow’s views was shown in experiments in which infant monkeys were reared in complete isolation except for the presence of two inanimate “mothers,” one of which was made of wire and held the bottle from which the infant obtained all of its nourishment and the other of which was padded with terry cloth and provided a warm, comfortable surface.
to which the young monkey could cling. The young animals spent much of their time in physical contact with their terry cloth surrogate mother or playing in her vicinity. When frightened, they sought her protection and in other ways behaved toward the terry cloth structure in much the same way that infant monkeys do toward their actual mothers. The wire ‘‘mother,’’ in sharp contrast, was almost completely ignored when the monkeys were not feeding.

What should be noted about these findings is that they do not challenge the essential form of the Dollard and Miller account of the development of affectional attachments. They do suggest that in specifying the conditions of learning Dollard and Miller may have exaggerated the importance of the reduction of hunger and thirst and underestimated the significance of the mother’s rocking, stroking, and holding of her infant while she is feeding it or ministering to it in other ways.

Dollard and Miller’s approach has proven provocative and useful in a variety of domains. Of particular interest, however, has been its application to dynamic processes previously accounted for by psychoanalysis. In this section, we consider the application of S-R learning principles to four such processes: unconscious processes, conflict, acquisition of neuroses, and psychotherapy. A fifth such process, displacement, is discussed subsequently as an illustration of research characteristics of Dollard and Miller.

We have observed that Dollard and Miller represent language as playing a crucial role in human development. In view of this, it is quite natural that those determinants of behavior that elude language, or are unconscious, should play a key role in behavioral disturbances. The theory is quite consistent with psychoanalytic formulations in accepting unconscious factors as important determinants of behavior; however, the account offered by Dollard and Miller of the origin of these unconscious processes shows little similarity to the Freudian version.

Unconscious determinants can be divided into those that have never been conscious and those that, although once so, are conscious no longer. In the first category are included all those drives, responses, and cues learned prior to the advent of speech and that consequently were not labeled. Also in this group belong certain areas of experiences for which our society provides only meager or inadequate names. Kinesthetic and motor cues and responses are generally overlooked by conventional labels and for this reason are not easily discussed and may be considered largely unconscious. In a similar vein, certain areas of sexual and other kinds of tabooed experiences are not usually accompanied by appropriate designations and thus are only poorly represented in
consciousness. In the second category belong all those cues and responses that were formerly conscious but that through repression have become unavailable to consciousness. The process involved in the first category is clear enough, and it is to the phenomenon of repression that we shall devote our attention.

Repression is a process of avoiding certain thoughts, and this avoidance is learned and motivated in exactly the same manner as any other learned response. In this case, the response of not thinking of certain things leads to drive reduction and reinforcement and thus becomes a standard part of the individual's repertoire. There are certain thoughts or memories that have acquired the capacity to arouse fear (secondary drive stimuli) and the response of not thinking or ceasing to think of them leads to a reduction in the fear stimuli and thus the response of not thinking is reinforced. Whereas in the initial learning the individual first thinks of the fearful act or event and then experiences the fear and gives up the thought with the consequent reinforcement, after experience the response of not thinking becomes anticipatory and occurs before the individual has actually reconstructed the event or wish. Not thinking as an anticipatory response not only keeps the fear-evoking thoughts from consciousness but also interferes with the normal extinction process. That is, if the response does not occur, it can hardly be extinguished even if the original source of reinforcement has since vanished.

Dollard and Miller clearly consider repression to exist on a continuum ranging from slight tendencies not to think about certain things to the strongest avoidance of threatening material. They also consider that this tendency can be traced largely to childhood training, which often tends to produce fear of certain thoughts. Once the fear of the thought is developed, the process of repression is readily understandable in terms of the reduction of drive stimuli by not thinking. Children are often punished for the use of certain tabooed words; thus the spoken verbal symbol alone is sufficient to elicit the punishment without the act. Or the child may announce its intention of doing something wrong and be punished before any act has been committed. In other cases, the child may think certain things that it does not even express verbally but that the parent infers correctly from expressive behavior or other cues and for which the child is punished. Frequently the child is punished for acts that have been carried out in the past, so that the punishment accompanies the thought of the act and not the act itself. All of these and other experiences tend to build up a generalization from the act or overt behavior that leads to punishment to the mere thought or symbolic representation of this act. Not only can the individual generalize from the overt act to the thought, but also he or she can discriminate between the two. In the well-adjusted individual this is an exceedingly important and efficient process. Such a person realizes that certain thoughts must never be expressed in certain contexts yet will feel relatively free to think these thoughts privately.
The extent and severity of repression depends upon many factors; among them are possible variations in the innate strength of the fear response, the degree of dependence upon the parents and thus the intensity of the threat of loss of love to which the child can be exposed, and the severity of traumas or fear-producing situations to which the child has been exposed.

The crucial importance of consciousness has to do with the significance of verbal labels in the learning process, particularly in connection with the operation of the higher mental processes. We have already indicated that the processes of generalization and discrimination can be made more efficient by means of verbal symbols, and if labeling is eliminated, the individual clearly operates at a more primitive intellectual level. Thus, the person must become more concrete and stimulus bound, and their behavior comes to resemble that of the child or lower organism where the mediating role of language is not highly developed.

No human being operates so effectively that all of his or her tendencies are congruent and well integrated. Consequently, all personality theories must deal directly or indirectly with the problems posed for the organism by conflicting motives or tendencies. Conflict behavior is represented by Miller and Dollard in terms of five basic assumptions that are extensions of the principles we have already discussed.

They assume first that the tendency to approach a goal becomes stronger the nearer the individual is to the goal. This is referred to as the gradient of approach. Second, they assume that the tendency to avoid a negative stimulus becomes stronger the nearer the individual is to the stimulus. This is referred to as the gradient of avoidance. These assumptions can be derived primarily from the principle of stimulus generalization, which we have already described. The third assumption is that the gradient of avoidance is steeper than the gradient of approach. This implies that the rate at which avoidance tendencies increase with approach to the goal is greater than the rate at which approach tendencies increase under the same conditions. Fourth, it is assumed that an increase in the drive associated with the approach or avoidance will raise the general level of the gradient. Thus, there will still be an increase in the strength of approach or avoidance as the goal is approached, but these tendencies will now have a greater strength at each stage of approach. Fifth, it is assumed that when there are two competing responses, the stronger will occur. Given these assumptions, in addition to the concepts we have already discussed, Miller and Dollard are able to derive predictions concerning the manner in which an individual faced with the various types of conflict will respond.

One of the most important types of conflict is concerned with the opposition between approach and avoidance tendencies aroused simultaneously by the same object or situation; let us say that a young man is strongly attracted to
a woman and yet finds himself embarrassed and uncomfortable (afraid) in her presence. As the first three assumptions above tell us, the avoidance response (getting away from the woman) falls off more sharply than the approach response as the subject moves away from the goal (woman). This is represented graphically in Figure 13.2, where the broken lines, representing the avoidance responses, are angled more sharply than solid lines that represent the approach responses. Therefore the avoidance tendency may be higher or more intense than the approach response near to the goal (woman). When the subject has moved away a certain distance (in the diagram to a point beyond the intersection of the gradients), the approach response will be stronger than the avoidance response (having left the woman, he may call or write to arrange another date). It is at the point where the two gradients intersect (let us say, when the man enters the same room with the woman) that the individual should show a maximum of hesitation and conflict, as it is here that the two competing responses are approximately evenly balanced. When the approach response is stronger than the avoidance response, the individual will approach without conflict and vice versa when the avoidance response is stronger. It is only when the two are evenly matched in strength that the individual will have difficulty in mustering an appropriate response.

If either the approach or the avoidance response is increased in strength, this will have the effect of raising the entire level of that gradient, as shown

**Figure 13.2**

*Graphic representation of conflict situations. (Adapted from Miller, 1951b.)*
in the diagram by the upper gradients of approach and avoidance. This will naturally lead to a different point of intersection between the two gradients. Thus, if the approach tendency is increased in strength, the two gradients will intersect closer to the goal, which implies that the individual will come nearer to the goal before he will hesitate in conflict. The closer he comes to the goal, the stronger will be the avoidance response, and therefore the more intense will be his conflict. That is, the closer he approaches the woman, the more attracted he is and at the same time the more uncomfortable and embarrassed. Conversely, if the tendency to approach is weakened (if he likes the woman less), he will not come so close to the goal before the gradients intersect (he will not keep his date with the woman), and his conflict or disturbance will be weaker because the intensity of the avoidance responses and approach responses will be less at this point. If the tendency to avoid is increased in strength (if his discomfort increases), this will result in the two gradients intersecting at a point farther removed from the goal (he may think about but never actually arrange another date) and thus will reduce the intensity of the conflict. In general, the closer to the goal the point of intersection of the two gradients, the stronger the two competing tendencies and therefore the more intense the conflict. One should note that if the strength of the approach response can be raised to a point where it is stronger than the avoidance response at the goal (in Figure 13.2 this is represented by the strong approach and weak avoidance gradients), the individual will go directly to the goal and the conflict will be overcome. Thus, if the man is so strongly attracted to the woman that he is able to stay in close proximity to her even though uncomfortable, the conflict will eventually be resolved.

Response generalization may also determine what an individual does when confronted with an approach–avoidance conflict. Dollard and Miller tentatively suggest that the same assumptions made about stimulus generalization may also hold for response generalization, namely that the approach gradient for responses of varying degrees of similarity to the one elicited by the instigating stimuli falls off more rapidly than the avoidance gradient. Thus a child may be intensely angry at its parents after they have forbidden some favorite activity but too fearful or guilty about direct expressions of aggression to call them names or lash out at them physically. However, the child's avoidance tendencies may have fallen off sufficiently to permit it to show its displeasure more obliquely by stomping off to its room and slamming the door.

A second type of conflict is encountered when the individual is faced with two competing avoidance responses. For example, a small boy may be afraid to climb and at the same time wish to avoid being called a coward by his playmates. Thus, the nearer he comes to the one goal (the higher he climbs), the stronger the avoidance response and the more likely he will be to retreat. However, as he retreats, he comes closer to the other goal (being called a coward) and the second avoidance response increases while the first de-
creases. Thus, the individual should show vacillation, turning first from one goal and then from the other, that is, climbing to a certain height and then descending. If the strength of one of the avoidance responses is increased, this will change the point of intersection so that the place where the individual will turn back from his goal will be made more distant. It will also increase the intensity of the conflict as now both gradients will be stronger at the point of intersection. Again, if one of the responses is stronger than the other at the goal, the individual will simply continue to withdraw from the most feared situation until he is past the competing situation and the conflict will be overcome: he either climbs to the necessary height or accepts the fact that he is to be called a coward.

Miller and Dollard do not consider the competition between two approach responses to represent a realistic dilemma. They point out that once the individual has started to move toward one of the positive goals, the strength of this response will increase (according to first assumption) and the strength of the competing response will decrease. Therefore, the individual will go directly to this goal. Even if the person begins exactly balanced between the two goals, variations in the stimulus situation or within the organism will upset this balance slightly, and once this is done, the individual will then continue to move toward the nearest goal. Where individuals appear to be in conflict between two positive alternatives, there are always hidden or latent avoidance responses operating.

For a more detailed description of this theory of conflict the reader should consult Miller (1944, 1951b, 1959) where a number of experimental studies that have tested various derivations from this position are summarized. In general, the results of these studies provide strong evidence for the utility of the theory.

Dollard and Miller share with psychoanalytic theorists an abiding concern with the neurotic individual. Consequently, they devote a substantial portion of their theory to the conditions that lead to the development of neuroses and to the psychotherapeutic procedures that can be used to overcome them.

At the core of every neurosis is a strong unconscious conflict, with the origins of the conflict almost always being found in the individual’s childhood. "Neurotic conflicts," Dollard and Miller assert, "are taught by parents and learned by children" (1950, p. 127). We have already described the four critical training situations that lend themselves so easily to parental mishandling and lay the groundwork for future problems: the feeding situation, toilet or cleanliness training, sex training, and training in the control of aggression. All too frequently the child develops intense anxiety or guilt about the expression of its basic needs in these areas, and a conflict has been established that is likely to continue in some form into adult life.
Just as the experimental animal in our laboratory study learns any instrumental response of which it is capable that allows it to escape an anxiety-provoking stimulus, so the human in real-life conflict attempts to escape or avoid feelings of anxiety and guilt by all manner of "instrumental responses." One highly available and thus frequently used mode of reaction is "not thinking." The individual represses memories and thoughts that are capable of making him or her anxious or guilty and refuses to try to understand their conflict and the circumstances that brought it about. The person is aware that something is wrong and is often miserable but does not (because he or she will not) understand why.

Since neurotic conflicts are unconscious, the individual cannot bring problem-solving abilities to bear on problems or recognize that the conditions that brought him or her into conflict may no longer exist. For example, the adult whose parents in his or her early years had constantly threatened him with loss of love and approval at the least sign of anger shown toward them may so completely inhibit any expression of aggression that he or she never discovers that others do not share these parental attitudes. As long as conflicts remain unconscious, they are not only likely to continue to exist but to lead to the development of still further reactions or symptoms. These symptoms may be the fairly direct consequences of the emotional turmoil caused by the conflict, but frequently they are behaviors allowing individuals temporary escape from their fears and anxieties. As Dollard and Miller describe them:

"Although in many ways superficial, the symptoms of the neurotic are the most obvious aspects of his problems. These are what the patient is familiar with and feels he should be rid of. The phobias, inhibitions, avoidances, compulsions, rationalizations, and psychosomatic symptoms of the neurotic are experienced as a nuisance by him and by all who have to deal with him. . . . [He] believes that the symptoms are his disorder. It is these he wishes to be rid of and, not knowing that a serious conflict underlies them, he would like to confine [any] therapeutic discussion to getting rid of the symptoms.

The symptoms do not solve the basic conflict in which the neurotic person is plunged, but they mitigate it. They are responses that tend to reduce the conflict, and in part they succeed. When a successful symptom occurs it is reinforced because it reduces neurotic misery. The symptom is thus learned as a "habit."" (1950, p. 15)

As an illustration of the relationships among conflict, repression, symptoms, and reinforcement, Dollard and Miller presented in some detail "The Case of Mrs. A." A highly condensed version of this case follows.
Mrs. A was a young woman who sought psychiatric help because of a number of fears that had exhausted her husband's patience and led him to threaten to sue for divorce. Her most intense fear was that if she did not count her heartbeats, her heart would stop. In addition, she became anxious and upset in a number of public places and was growing increasingly fearful about leaving her apartment alone. Over the course of the therapeutic sessions, the nature of Mrs. A's problems gradually became clarified. Her most severe conflict was about sex. Although she had strong sexual appetites, her childhood training had led her to feel so guilty and anxious about them that she denied any sexual feelings and expressed only revulsion. Although she consciously tried to be a well-behaved wife, she expressed her sexual needs indirectly in irresponsible behavior, such as going out to bars on drinking parties with other women, in which she seemed almost to court seduction. She was unaware of the motivations for this behavior and was constantly surprised by its consequences.

An analysis of her phobic reactions to being in public places revealed that when she was out alone, she unconsciously became fearful and guilty about the possibility that she would be approached sexually and tempted to succumb. Her fear and guilt about sexual temptation could be lessened by going home or partially avoided by not going out by herself. Her compulsive counting of heartbeats also served to keep her sexual anxieties at a minimum. Any stimuli, including her own thoughts, with sexual connotations would arouse her anxiety. But these thoughts could be banished or prevented from occurring by devoting her attention to her heartbeats. As soon as she started to count, she began to "feel better," so that the habit was reinforced by anxiety reduction.

The types of symptoms exhibited by Mrs. A are examples of learned reactions to affectively unpleasant states. Dollard and Miller suggested that, in addition to this type of learned behavior, there are symptoms of a psychosomatic nature that are innate. Physiological responses, mediated primarily by the so-called autonomic nervous system, are elicited automatically by a number of strong drive states without having to be learned. These innate autonomic responses are frequently aroused by primary drives but may also be produced by secondary or learned drives. The wet palms, queasy stomach, and pounding heart of the anxious student awaiting an important examination provide an all too familiar example.

It has long been believed that, in contrast to skeletal responses, such as movements of the arms and legs, the physiological reactions elicited by the autonomic nervous system are not under the individual's voluntary control. The evidence available to Dollard and Miller also suggested that, although the visceral and glandular responses controlled by the autonomic nervous system could be classically conditioned, they could not be instrumentally conditioned. Instrumental or operant conditioning, as noted in earlier discussion, is a form of learning in which the occurrence of reinforcement is contingent on the
appearance of a specified response, and the failure of a reward to follow the response leads to its extinction. Autonomic responses, according to the traditional view accepted by Dollard and Miller, were not influenced by their consequences, being neither strengthened by the occurrence of reinforcers nor weakened by their nonoccurrence.

Miller subsequently conducted a series of exquisitely controlled animal studies whose results seemed to challenge this view. An experiment by Miller and Banuazizi (1968) involving visceral responses in rats is representative of these investigations. Two types of internal responses were monitored: heart rate and intestinal contractions. For one set of animals, intestinal contractions were selected to be conditioned. For half of the subjects, reward was given each time spontaneous contractions above a certain amplitude happened to occur. For the other half, reward was given for contractions below a certain magnitude. Contractions systematically increased over the course of training in subjects rewarded for large-amplitude responses and decreased in those rewarded for small responses. No systematic change in heart rate was found in either group. In another set of animals, there was a spontaneous occurrence of either a fast or a slow heart rate in the appropriate direction but none in intestinal contractions. The limitation of the conditioning effect to the specific type of response that was followed by reinforcement was seen as providing particularly impressive evidence that autonomic responses can be instrumentally conditioned in the same manner as skeletal responses.

These revolutionary findings suggesting that autonomic response can be instrumentally conditioned raised a number of intriguing possibilities. As Miller (1969) pointed out, psychosomatic symptoms in the human being might be learned in exactly the same way as other symptoms. An even more fascinating possibility is that instrumental-conditioning techniques might be used therapeutically to mitigate the intensity of somatic symptoms (e.g., high blood pressure) whether induced by organic or psychological factors. (An interesting account of Miller’s experiments and some therapeutic applications based on his findings, written for a nonprofessional audience may be found in Jonas’s 1973 book, Visceral Learning.) However, Miller (Miller & Dworkin, 1974) subsequently reported the puzzling finding that other experiments have not been as successful in demonstrating instrumental conditioning, suggesting that the existence of the phenomenon may not have been definitively established.

Dollard and Miller are concerned not only with the development of neuroses but also with their treatment. The essence of their approach to psychotherapy is straightforward:

*If neurotic behavior is learned, it should be unlearned by some combination of the principles by which it was taught. We believe this to be the*
case. Psychotherapy establishes a set of conditions by which neurotic habits may be unlearned and nonneurotic habits learned...; the therapist [acting] as a kind of teacher and the patient as a learner. (Dollard & Miller, 1950, pp. 7–8)

The actual therapeutic procedures that Dollard and Miller advocate are quite traditional. The therapist should be a sympathetic, permissive listener who encourages the patient to express all his or her feelings and to free associate. Whatever the patient’s thoughts, the therapist remains nonpunitive and tries to help the patient understand these feelings and how they developed.

The most novel contribution of Dollard and Miller lies in their learning theory analysis of what occurs in successful psychotherapy. Unrealistic fears and guilt have failed to extinguish because the person has been all too successful in developing techniques to avoid or escape thought and situations that stir up these unpleasant emotions. In the therapeutic situation, an attempt is made to set up the conditions that will result in extinction. The individual is encouraged to express prohibited thoughts and emotions and to experience the fear and guilt evoked by them. Since no unpleasant consequences follow these expressions, extinction of the neurotic fear can be expected to occur. In the initial stages of therapy, patients are likely to discuss only moderately distressing problems of which they have allowed themselves to be consciously aware. But as the unrealistic fear and guilt associated with these problems begin to fade, the extinction effect generalizes to similar but more disturbing problems and thus weakens their motivation to repress or in other ways to avoid confronting them. Gradually, patients become more and more able to face their core conflicts and the significance of their symptomatic behavior. The therapist constantly assists patients in this process by encouraging the use of verbal labels that will help them to discriminate between thought and action (their inner fears and outer realities) and between the conditions of their childhood, in which they learned their fears and conflicts, and the conditions of their adult world.

As repressions are lifted and discriminations developed, patients become able to use their higher mental processes to devise constructive solutions to their problems. As they find more successful ways of behaving, their fears are extinguished still further and their symptoms disappear. Their new ways of responding are strongly reinforced by more positive rewards and take the place of the old, self-defeating symptoms. The whole process of unlearning and relearning that takes place in therapy is likely to be slow and frequently agonizing, but even more so was the learning that initially drove the patient to the therapist.

This theoretical account of the therapeutic process developed by Dollard and Miller has a variety of testable implications, a number of which have received support in studies analyzing the therapy protocols of actual cases.
One of these studies, involving displacement, a complex type of conflict phenomenon, is described in the following section.

Miller and Dollard have reported a considerable quantity of investigation that illustrates or tests derivations from their theoretical position. In their volume *Social learning and imitation* (1941) a number of studies on human and lower animal subjects are summarized that represent attempts to confirm predictions derived from their theory. Miller, as we have mentioned, has conducted a number of experimental studies relevant to various aspects of the theory and has prepared several extensive summaries of them (1944, 1951a, 1959). Here we shall discuss a cluster of studies that deal with the concept of displacement. These investigations not only demonstrate an interest in bridging the gap between psychoanalytic theory and S-R concepts but also provide experimental evidence for the operation of a number of the concepts we have already discussed.

The concept of displacement occupies a central position in psychoanalytic theory, where it is ordinarily used to refer to the capacity of the organism to redirect responses or impulses to a new object when they are denied expression toward their original object. In terms of the theory of Dollard and Miller, this phenomenon can be accounted for quite readily by the concept of stimulus generalization. Miller, in a series of experiments, has attempted to demonstrate the empirical phenomenon, show the continuity of stimulus generalization and displacement, and provide a theoretical account that will permit new predictions concerning these events.

An initial study by Miller and Bugelski (1948) attempted to demonstrate displacement with human subjects. These investigators administered a set of questionnaires that assessed attitudes toward Mexicans and Japanese to a group of boys who were attending a summer camp. While they were filling out these questionnaires, the boys were forced to miss a highly prized social event, and a comparison was made of the attitudes expressed toward the minority groups before and after this frustration. The results showed that following the frustration there was a significant increase in negative attitudes expressed toward the two minority groups. This increase in hostility was interpreted as a displacement of the hostility aroused by the experimenters through their interference with the attendance of the boys at the social event. In psychoanalytic terms, the subjects were displacing the hostility felt toward the experimenters upon the minority group members; in S-R terms, they were generalizing a response from one stimulus object to a similar stimulus object. At any rate, the study showed that the phenomenon in question did occur among human subjects and could be produced experimentally.
Miller reasoned that both psychoanalytic theory and S-R theory assume that a given response may be generalized not only from one stimulus to another but also from one drive to another. Freud very early postulated a considerable amount of interchangeability or substitutability between drives or instincts, and for the S-R theorist drives are only one kind of stimulus. Therefore, it is perfectly natural that there should be drive generalization as well as stimulus generalization. In order to test this prediction, a group of rats was trained under the motivation of thirst and with the reward of drinking to run down an alley. These same animals were then divided into two groups, both of which were satiated on water, but one group was deprived of food and the other satiated on food. The prediction was that the response of running down the maze (which had been learned to thirst) would generalize or displace to the hunger drive. Consequently, the food-deprived rats should run down the maze faster than the nonhungry rats. The results of the study showed a clear confirmation of this prediction. It was also possible to show experimentally that the response of running down the maze, which was originally reinforced by the reduction of thirst drive stimuli, extinguished when the animals continued to run down the maze with no reduction of drive stimuli. Likewise consistent with S-R theory was the observation that when the response had been partially extinguished, an interval with no trials produced spontaneous recovery, or a return to a higher level of response probability. The investigator also demonstrated response generalization from the drive of hunger to the relatively remote drives of pain and fear. The greater dissimilarity between fear and hunger made this appear a more stringent test of the prediction of drive generalization than the previous study.

Miller incorporated these experimental findings as derivations from a series of five assumptions that resemble very closely those we discussed in connection with the analysis of conflict. The principal difference between the two sets of assumptions is that those bearing on conflict concern the distance between the subject and the goal, whereas the present assumptions focus about the similarity between the original stimulus object and certain substitute objects.

This model accepts the fact that whenever displacement takes place there is a response competing with the direct response that is stronger than the direct response. Thus, the aggressive response of the child toward its father is not strong enough to overcome the fear response elicited by the same object. For this reason the child cannot express its aggression directly toward the father. Moreover, the model assumes that the direct response to the original stimulus generalizes to similar stimuli and that the competing response shows the same stimulus generalization. The more similar the new stimulus is to the original stimulus, the greater will be the degree of generalization. However, the gradient of generalization for the competing (inhibiting) response falls off or decreases more rapidly than the gradient of generalization for the direct
response. Thus, while the competing response may be much stronger than the direct response in the face of the original stimulus, by the time the two responses have been generalized to stimuli of a certain degree of remoteness, the order of strength may become reversed. That is, the child may show fear rather than anger to the father but show anger rather than fear to a father-like doll.

These assumptions not only permit the derivation of the empirical phenomena we have already summarized (displacement or stimulus and drive generalization) but also lead to a number of additional predictions, some of them referring to relations that have yet to be tested under controlled empirical conditions. Miller has reported several studies that present further empirical evidence relevant to this theory, most of which is confirmatory (Miller & Kraeberg, 1952; Miller & Murray, 1952; Murray & Miller, 1952).

The empirical studies we have outlined above and the theoretical reasoning that has accompanied them demonstrate quite clearly how much tidier the formulations and investigations of these theorists have been than those of most personality investigators. We see revealed also the preference for paradigmatic studies involving animal subjects but with appropriate bridging studies carried out on human subjects. It is evident that these investigations not only make a contribution to the understanding of displacement or stimulus generalization but also lead to a large number of testable assertions that, when the appropriate empirical steps have been taken, may add weight to or challenge the effectiveness of this theory.

The pioneering theories of Dollard and Miller, along with those of such individuals as O. Hobart Mowrer (1950, 1953) and Robert R. Sears (1944, 1951), have been highly influential in stimulating further efforts to extend learning principles into the realm of personality development and psychotherapy. We cannot hope to do justice to the many investigators and theorists who have contributed to this enterprise. The work of two individuals, Joseph Wolpe and Martin Seligman, will serve, however, to illustrate the directions in which learning theory approaches to personality have developed.

The views of Wolpe are interesting to contrast with those of Dollard and Miller. Dollard and Miller, we have seen, were heavily influenced by psychoanalytic thought, and they accepted as valid many of the insights provided by the Freudians. They attempted to combine two traditions by bringing to the rich literature of psychoanalytic theory the power and precision of the concepts of learning theory. Wolpe has rejected this type of approach and put forward the view that a simple set of learning principles established in the laboratory is
sufficient to account for the acquisition of many personality phenomena. He finds traditional methods of psychotherapy to be equally wanting on both theoretical and practical grounds. In the place of these methods are substituted radically different types of techniques, which have come to be called behavior therapies (Eysenck, 1959a; Skinner & Lindsley, 1954). These behavior therapies, several of which were developed by Wolpe, are based on the direct application of principles developed in the learning laboratory to neurotic problems.

Wolpe, a psychiatrist whose medical training was received at the University of Witwatersrand in South Africa (M.B., 1939; M.D., 1948), has had many years of practical experience in conducting psychotherapy. Except for several interruptions spent in military service or in advanced training, he was in private practice in his native country from 1940 to 1959. During the last decade of this period he also served as a lecturer in psychiatry at the University of Witwatersrand, where he conducted laboratory studies of experimental neuroses in animals and developed a number of behavior therapy techniques. These studies resulted in a number of articles published in psychiatric and psychological journals. He spent the 1956–1957 academic year as a fellow at the Center for Advanced Study in the Behavioral Sciences in Stanford, California. While at the Center he worked on a book, *Psychotherapy by reciprocal inhibition*, published in 1958, in which he summarized and extended his ideas about the development and treatment of the neuroses. In 1960 Wolpe moved to the United States as a professor of psychiatry, first at the University of Virginia Medical School and then, in 1965, at the Temple University Medical School. His continued work on behavior therapy has culminated in a number of publications, including the books *The conditioning therapies* (1966, in collaboration with A. Salter and L. Reyna), *Behavior therapy techniques* (1966, with A. A. Lazarus), *The practice of behavior therapy* (1973), and *Theme and variations: A behavior therapy casebook* (1976). Wolpe served as president of the Association for Advancement of Behavior Therapy in its second year, 1967–1968. He remains active as Distinguished Professor of Psychology at Pepperdine University, and he continues as coeditor of the *Journal of Behavior Therapy and Experimental Psychiatry*.

As might be expected from his background in psychiatry, Wolpe has largely confined his interest in personality to the psychoneuroses, and he was originally committed to a psychoanalytic interpretation of their etiology. He described the events that led him to reject this position in favor of a learning theory approach in the Preface to his major work, *Psychotherapy by reciprocal inhibition:*

*The theory of neurosis and the methods of psychotherapy described in this book stem directly from modern learning theory. The chain of events leading to the writing of it may be dated from the year 1944, when as a*
military medical officer I had plenty of time for reading. Then a staunch follower of Freud, I was one day surprised to find in Malinowski's *Sex and Repression in Savage Society* persuasive evidence against the assumption that the Oedipus theory had universal application. The ripple this roused in me soon subsided since the point did not seem vital; but a month or so later I chanced to read in C. W. Valentine's *Psychology of Early Childhood* an account of observations on young children that threw doubt on the validity of the Oedipus theory even for Western society. This time my faith in the "sure stronghold" of Freudianism was seriously shaken, and a paragraph in a newspaper to the effect that the Russians do not accept psychoanalysis was enough to motivate me to find out what they do accept: the answer was Pavlov. This answer did not directly yield much enlightenment, but Pavlov led to Hull, and Hull to the studies of experimental neurosis that suggested the new methods of psychotherapy. (p. vii)

Wolpe agrees with Hans Eysenck (see Chapter 9) that although individuals may differ in the degree to which they are constitutionally predisposed to develop neurotic anxiety, all neurotic behavior is learned. Their conception of this behavior departs sharply from classical psychoanalytic theory, as they take pains to point out. The differences are succinctly described in the following passage:

When we observe people behaving in a manner which is apparently "abnormal", self-destructive, or maladjusted, we have two very obvious and well-established ways of regarding their behaviour. The first is the medical model; according to this such people are ill. They suffer from some form of disease, and the observed behaviour is simply a symptom (or set of symptoms) of this disease. Treatment would consist of curing the underlying illness; this would make the symptoms disappear automatically. . . . The acceptance of Freud's teaching. . . . owes much to his clever use of the medical analogy—the patient's complaints are but symptoms, the underlying disease is the "complex" which must be eradicated by "interpretive" psychotherapy before the symptoms can disappear for good. "Symptomatic" treatment, on this account, is useless; relapses and symptom substitutions will show the strength of the surviving complex.

In distinct contrast to the medical model we have the behavioural model, which forms the basis of behaviour therapy (Eysenck and Rachman, 1965). This model postulates very simply that all behaviour is learned, and that "abnormal" behaviour is learned according to the same laws as "normal" behaviour. The principles of learning and conditioning apply
equally to both, enabling us to understand the genesis of both normal and abnormal behaviour. Thus the "symptoms" the patient complains of are simply items of behaviour which the patient has learned; there is no underlying "cause" or "complex" which produces and sustains the "symptoms"; and makes them reappear once they have been eliminated by "purely symptomatic" treatment. It also follows from this way of looking at the problem that behaviours, once learned, can also be unlearned, or "extinguished", as the Pavlovian would say. (Eysenck, 1976b, pp. 331–333)

Psychoanalytic theory postulates that an unconscious conflict between instinctual forces and ego defensive processes is at the heart of neurosis. Here, too, Wolpe vigorously disagrees. The core phenomenon is simply a conditioned fear reaction. A review of certain experiments done with animals leads Wolpe to suggest that while exposing an individual to a situation that simultaneously elicits strong competing responses may result in neurotic fear or anxiety, conflict is neither the necessary ingredient in the genesis of neuroses nor the most frequent one. More commonly, Wolpe insists, the core phenomenon is simply a conditioned fear reaction, brought about by the conjunction on one or more occasions of an initially neutral stimulus with a physically or psychologically painful event. If the trauma is sufficiently intense and the person particularly vulnerable, only one such experience may be required to establish an anxiety reaction of great strength and persistence.

Once learned, conditioned anxieties are elicited not merely by the original conditioned stimulus, but also, because of stimulus generalization, by other stimuli. The anxiety reactions evoked by these various stimuli lead the individual to make further responses that not infrequently lead to rapid anxiety reduction. On these occasions, still further stimuli that happen to be present at the time the drive reduction occurred will acquire the capacity to elicit the anxiety. In this manner, fear reactions may spread to stimuli that bear little or no resemblance to those involved in the original conditioning.

Wolpe’s theories about human neuroses were heavily influenced by the results of a series of experiments he conducted with cats during the late 1940s that were stimulated by earlier investigations by the psychiatrist Jules Masserman (1943). In one study, Masserman had shown that animals first trained to receive food at a given location and then given shocks at that location developed intense anxiety reactions or "experimental neuroses." The experiment was designed to demonstrate that conflict, as is claimed in psychoanalytic theory, is a critical component in the production of neuroses, and its results have frequently been cited in support of this contention. Wolpe repeated the conditions of the Masserman experiment but added another group of animals. This second group experienced shock in the experimental apparatus but had not had the prior approach training with food given to the conflict group.
The emotional behavior elicited by the cues of the experimental setting was observed to be similar in both groups, a finding that led Wolpe to believe that anxiety is typically the essential element in the formation of neuroses and that conflict need not necessarily be present.

Wolpe also attempted to “cure” his experimental animals of their neuroses by various methods. A highly successful technique, demonstrated in one study, was to feed the animals in a laboratory room only slightly similar to the one in which the shocks had been experienced, then in a somewhat more similar room, and so forth. Eventually the animals were able to eat and carry on other activities in the training setting without any visible signs of emotional upset.

Wolpe patterned this method after a procedure first reported many years before in a study of children’s fears by Mary Cover Jones (1924). Jones successfully used a technique (which, in its basic elements, subsequently came to be labeled counterconditioning) in which children were given attractive food while a feared object was at some distance from them. The object was progressively brought closer and closer to the child until it eventually became a signal for food instead of a stimulus that elicited fear.

Such findings led Wolpe to formulate the following principle: “If a response antagonistic to anxiety can be made to occur in the presence of anxiety-evoking stimuli so that it is accompanied by a complete or partial suppression of the anxiety responses, the bond between these stimuli and the anxiety responses will be weakened” (Wolpe, 1958, p. 71). Wolpe saw this principle as a specific instance of the still more general principle of reciprocal inhibition. As Wolpe uses the term, reciprocal inhibition refers to the situation in which “the elicitation of one response appears to bring about a decrement in the strength of evocation of a simultaneous response” (Wolpe, 1958, p. 29).

Wolpe believed that human neuroses developed in the course of everyday living obey essentially the same laws as the experimental neuroses of his laboratory animals. It followed that therapies based on the principle of reciprocal inhibition should be successful with human clinical cases. Eating did not seem to be an appropriate response to pit against anxiety reactions with adults, so Wolpe’s problem was to find an alternative. He suggested the use of several responses that are antagonistic to anxiety and devised or adopted therapeutic techniques based on each of them. The most widely used of these techniques are assertiveness training and systematic desensitization. Assertiveness training, originally suggested by Salter (1949), is a method of deconditioning the anxiety of individuals who are too inhibited and timorous in interpersonal situations to respond appropriately. The therapist attempts to persuade the individual that acting assertively (which Wolpe defines as “the proper expression of any emotion other than anxiety towards another person,” 1973, p. 81) is to his or her advantage and to teach the individual appropriate behavior by such devices as role playing in imaginary situations that are bothersome in real life and having the individual practice assertive responses. Systematic desensitization
Harvard, and receipt of the President’s Medal of Science. B. F. Skinner died of leukemia on August 18, 1990, only eight days after receipt of the only award the American Psychological Association had given for Outstanding Lifetime Contribution to Psychology. Surely no award ever was more appropriate. Holland (1992, p. 665) summarized Skinner’s contribution as the demonstration that “behavior could be studied as a self-sufficient subject matter, rather than as a reflection of inner mental events.”

Skinner’s most important single publication was his first volume, *The behavior of organisms* (1938), which continues to be a major source of intellectual influence many years after publication. His volume entitled *Science and human behavior* (1953) provided an introduction to his position and illustrated its application to a wide variety of practical problems. A detailed analysis of language in terms of his concepts appeared in *Verbal behavior* (1957), the book that Skinner himself regarded as his most important, and an early example of programmed learning was offered by Holland and Skinner (1961). His most important articles prior to 1961 are contained in a collection of papers entitled *Cumulative record* (1961). *The technology of teaching* (1968) detailed his approach to learning in the school setting. *Contingencies of reinforcement* (1969) restated Skinner’s scientific position including its relevance for broad social problems. In *Beyond freedom and dignity* (1971), probably his most controversial book, Skinner argued that the concepts of freedom and dignity are hindrances to the improvement of modern society. *About behaviorism* (1974) summarized Skinner’s views on the brand of psychology that is practically synonymous with his name. Skinner published a three-volume autobiography (1976, 1979, and 1983b) in addition to an earlier statement (1967). Many of his later papers appear in two collections (Skinner, 1978, 1987), and a final book (Skinner & Vaughan, 1983) described strategies Skinner used himself to deal with some of the problems associated with growing old. Several biographies of Skinner have appeared recently, including Nye (1992), Richelle (1993), and an intellectual and cultural biography by Bjork (1993) that Fancher calls “the first serious biography of America’s most famous psychologist since his death” (1995, p. 730; see also Morris, 1995).

What can we say in general terms regarding Skinner’s position and its distinctive features? First of all, it would be difficult to find a theorist who was less enthusiastic about being cast in the role of theorist than Skinner. In spite of his enormous theoretical influence, he questioned the contribution of theory to scientific development. Until late in his career, Skinner looked on his own work as illustrating an informed and systematic empiricism that operates without theoretical derivation. He consistently opposed any attempt to fill in the gap between observed events with inferred or hypothesized variables. His intent was to gather behavioral laws with no “explanatory fictions” at all. This point of view was particularly well illustrated in two papers entitled “Are
theories of learning necessary?" (1950) and "A case history in scientific method" (1956).

One may also note that this theory owes as much to the laboratory as any other theory discussed in this volume. Skinner's principles were derived from precise experimentation, and he showed more careful respect for well-controlled data than any comparable theorist. It is an easy matter to state that rewards have something to do with learning, and it is not particularly difficult to demonstrate repeatedly under carefully controlled conditions that this is true in a number of different settings. It is another matter, however, to identify precisely highly regular relations between particular patterns of reinforcement and carefully specified response measures. In his studies of reinforcement schedules Skinner did just this, and he provided findings that have a regularity and specificity that rival those of any physical scientist. He demonstrated that particular patterns (schedules) of reinforcement generate characteristic and highly replicable changes in rate of responding, both in sustained responding and extinction.

Skinner differed markedly from the average experimental psychologist in his concern for the individual subject. His results were typically reported in terms of individual records. It is not enough that his studies produced average results that concur with expectation and future observation. The behavioral law or equation must apply to each subject observed under appropriate conditions. Attention to the individual applicability of every finding or law is particularly valuable in a discipline where the investigator often does not look beyond group data to see whether there are many, if any, individual subjects whose behavior conforms to group generalizations.

Skinner's focus on the study of individual subjects instead of generalized group trends reflected his belief that lawful control can be seen in individual behavior. It is one of the great ironies in psychology that personality psychologists typically attempt to understand individuals by studying groups, while Skinner attempted to develop general laws by studying individuals! In this respect, Skinner echoes Gordon Allport's search for general principles that explain the development and behavior of individuals (see Chapter 7).

Although many psychologists have focused on responses that appear largely under stimulus control (reflexes, for example), Skinner chose to direct his attention toward emitted instead of elicited responses. This emphasis upon operants rather than respondents, to use Skinner's terminology, constitutes another distinctive feature of his approach to the study of behavior. He also believed that psychology should properly focus on simple behavioral events before attempting to understand and predict the complex events.

Although he emphasized the study of individual organisms and simple responses, Skinner assumed that the findings of this research have broad generality. In his words: "I suggest that the dynamic properties of operant behavior may be studied with a single reflex (or at least with only as many as
employs deep muscle relaxation to oppose anxiety. Since desensitization is the most highly developed of Wolpe’s techniques and is most closely associated with his name, it will be the only behavior therapy discussed in any detail.

Systematic desensitization is closely modeled after the type of counterconditioning procedures Wolpe used to treat shock-induced neuroses in his experimental animals. Patients are initially given training that allows them to relax at will each of their major muscle groups. The second task that must be accomplished before therapy can begin is to identify the individual’s problem areas and the situations that arouse emotional discomfort. This information is gathered in initial interviews and together the patient and the therapist construct one or more anxiety hierarchies in which a series of related situations are ranked according to the amount of anxiety they elicit.

Therapy consists of having the individuals relax and then imagine as vividly as possible each scene on their anxiety hierarchy while maintaining their relaxation. The patients begin with imagining the least anxiety-provoking item on their hierarchy and are instructed to stop immediately if they begin to feel at all anxious. They then repeat this scene until they can picture it for a number of seconds and remain completely relaxed. When extinction of the anxiety reaction to the scene has been accomplished, they go on to the next item. Extinction of the weak anxiety reactions to the first scene generalizes to this next item, thus making extinction to this scene easier to accomplish, and so forth through the entire list of anxiety-provoking situations.

In his 1958 volume, Wolpe reported that of about two hundred individuals that he and his colleagues had treated by desensitization and other reciprocal inhibition techniques, approximately 90 percent were “cured” or showed much improvement, a figure much higher than has been reported for more conventional therapies. Further, considerably fewer sessions were required to bring about these results than are typically required by ordinary psychotherapy. Wolpe has also reported that although interviewing the individual seeking help to determine the stimuli eliciting anxiety and setting up appropriate hierarchies require considerable clinical acumen, relatively untrained, inexperienced persons can successfully supervise desensitization sessions.

Wolpe’s data encouraged other clinicians to use desensitization to treat a variety of neurotic anxieties and scores of case studies reporting successful outcome began to appear in the literature. Wolpe recognized that as encouraging as these reports were, scientific rigor demanded that conclusions about the relative efficacy of systematic desensitization in comparison to other therapeutic techniques be based on the results of carefully controlled experimental studies. The results of these studies have not only confirmed that desensitization can be used with beneficial effects in treating many types of problems, often in conjunction with other behavioral techniques, but also that the procedure may be superior to more traditional therapeutic techniques.
The success of desensitization prompted a number of investigators to undertake serious experimental tests of Wolpe’s theoretical propositions and to propose alternate theories to explain desensitization’s effectiveness and extensions or modifications of the technique. One major outcome has been the development of the behaviorally oriented procedures aimed at cognitive restructuring or modification of the destructive thoughts accompanying anxiety reactions (e.g., Meichenbaum, 1976). A consequence of these developments is that the area is currently characterized by healthy theoretical debate and that behavior therapists have at their disposal a number of techniques, including systematic desensitization, each of which, singly or in combination, may be particularly useful with different individuals or kinds of complaints.

In his influential research and writing, Martin Seligman focuses upon a narrower set of phenomena than Wolpe but shows the same willingness to apply principles originally discovered in the laboratory with animals to the emotional problems of human beings. Seligman observes that, in the natural world, unpleasant, traumatic events may occur that the person or animal can do little or nothing to control. When the organism discovers that nothing can be done to escape or ward off aversive events—that reinforcement and behavior are not contingent on each other—a reaction may be acquired that Seligman calls learned helplessness. One of the consequences of helplessness is emotional disruption, far greater in intensity than is shown by those who experience the same unpleasant events but have some degree of control over them. Helplessness also leads to a decrease in motivation, the organism behaving passively and appearing to “give up,” doing little to attempt to escape the noxious stimulus. Even more serious, helplessness may lead to a cognitive deficit that interferes with the organism’s capacity to perceive the relation between response and reinforcement in other situations in which control is possible. Seligman noted the similarity between learned helplessness, which he and others have demonstrated experimentally in the laboratory with a number of animal species, including humans, and the psychopathological phenomenon of depression. The behaviors exhibited by the depressed individual bear a striking resemblance to those associated with learned helplessness and, he proposes, have similar origins. The methods that are effective in reducing experimentally induced helplessness may also be beneficial in treating depressive reactions. Experimental studies of learned helplessness may thus serve as a laboratory model of depression as it occurs in the natural world.

Seligman did his graduate study in experimental psychology at the University of Pennsylvania, receiving his degree in 1967. He started his academic career as an Assistant Professor at Cornell University, moving back to the University of Pennsylvania in 1970, where he is now professor of psychology.
Seligman directed the clinical psychology training program at the University of Pennsylvania for 14 years. His most noteworthy recent activity has been serving as the primary consultant for a survey on people’s experience with psychotherapy conducted by *Consumer Reports* (see Seligman, 1995a, 1996, plus the commentary following the latter article). Seligman formerly served as president of the American Psychological Association’s Division 12 (Clinical Psychology), and he has been elected president of the American Psychological Association for 1998. In addition, Seligman has received two Distinguished Scientific Contribution awards from the American Psychological Association, the American Psychological Society’s William James Fellow Award for basic science and James McKeen Cattell Fellow Award for the application of psychological knowledge, the Laurel Award of the American Association for Applied Psychology and Prevention, plus the MERIT Award from the National Institute of Mental Health (Martin, 1996). Seligman has written thirteen books, most notably *Helplessness* (1975), *Learned optimism* (1991), and *The optimistic child* (1995b).

Seligman’s work on learned helplessness falls into two phases, separated by the transition to an attributional model to account for helplessness in humans (Abramson, Seligman, & Teasdale, 1978). As an introduction to the first phase, consider the following experiment (Overmier & Seligman, 1967). An experimental animal—a dog—is placed in a shuttlebox. Periodically, a tone comes on, and soon after, the dog experiences a painful but physically harmless shock. At the onset of the shock, the dog whines and runs about, at one point happening to jump over the barrier while the shock is still being administered. When the dog crosses the barrier, both the shock and the tone cease. With successive trials, the dog jumps over the barrier to escape the shock more and more quickly. Eventually, the animal waits quite calmly in front of the barrier, nimbly jumping over it as soon as the tone comes on, thereby completely avoiding the shock.

Another dog is first placed in a restraining hammock and given a number of brief shocks it can do nothing to escape or avoid. When put into the shuttlebox a day later, the animal initially acts much like the dog that had not had the initial experience with uncontrollable shock, but quickly differences become apparent. Even if the animal accidentally jumps the barrier, it does not learn on subsequent trials to cross the barrier to escape or avoid the shock. Instead the dog ceases to be active, sitting or lying down, whimpering, until the tone and the shock end.

Almost all dogs without prior shock experience learn the barrier-jumping response to escape or avoid aversive stimulation. In contrast, most animals initially given uncontrollable shock respond apathetically to the shock in the shuttlebox situation and show little or no learning of the barrier-jumping response. This learned helplessness effect is not unique to dogs but has been demonstrated in cats (Thomas & Dewald, 1977), fish (Padilla, Padilla, Ket-
terer, & Giacolone, 1970), rats (e.g., Seligman & Beagley, 1975), and man
(e.g., Hiroto, 1974; Hiroto & Seligman, 1975; Klein, Fencil-Morse, & Sell-
gman, 1976).

In one particularly illuminating experiment, Hiroto and Seligman (1975)
not only demonstrated learned helplessness in the human subject but also
showed that uncontrollable, unpleasant events inducing helplessness need not
be physically noxious. Three groups of college students were presented with
a shuttlebox arrangement in which they could escape or avoid loud noise by
moving their hand from one side of the box to the other. Prior to this task,
one group of students had been given discrimination learning problems that
were solvable, and another group was given problems that, unknown to the
students, were unsolvable. The third group received no problems. The individ-
uals who had been given solvable or no problems quickly learned to escape or
avoid the noise in the shuttlebox situation while those given the unsolvable
problems (and thus subjected to unavoidable failure) did not learn. Seligman
(1976) views these results as primarily revealing a motivational deficit in those
who had been exposed to uncontrollable events, that is, as demonstrating a
failure to initiate responses that would ward off undesirable outcomes. In
complementary experiments, the cognitive deficit that is one of the symptoms
of learned helplessness was highlighted. Miller and Seligman (1975) first
instructed two groups of students to learn to escape unpleasant noise that
came on periodically. The students in one group were able to discover a
response that terminated the noise. The other group received exactly the same
noise but were led to believe that termination was automatic and unrelated
to their responses (that reinforcement and their behavior were unrelated or
noncontingent). A third group received no pretreatment. All students were then
given a series of anagrams to solve. The group that had previously experienced
inescapable noise reached fewer solutions than the other two.

In addition to exhibiting motivational and cognitive deficits, organisms
subjected to uncontrollable aversive events often exhibit marked emotional
disturbance. In humans, for example, subjects allowed to terminate noxious
stimulation by performing some instrumental act report less emotional stress
and physical upset than yoked subjects given the same stimulation but forced
to endure it passively (e.g., Glass & Singer, 1972). In lengthy experiments with
animals, yoked subjects have been found to be more likely to develop ulcers
and to show weight loss, loss of appetite, and other symptoms of severe
emotional stress than the subjects whose responses controlled the duration
of the noxious events (e.g., Weiss, 1971).

If subjects have been exposed only briefly to inescapable stress, learned
helplessness is only a transitory phenomenon that wears off quickly and, in
human experiments, is exhibited only in the laboratory setting. Investigations
with animals demonstrate, however, that repeated exposure may lead not
only to the severe emotional reactions just described, but also to prolonged
motivational and cognitive deficits. Animals with no prior experience coping with trauma seem particularly susceptible to learned helplessness. Animals brought up in benign laboratory environments, for example, are far more prone to exhibit learned helplessness after exposure to inescapable stress than animals that have experienced the rough and tumble of the natural world (Seligman & Groves, 1970; Seligman & Maier, 1967).

Humans tested in the laboratory also differ in their susceptibility to the helplessness syndrome. The life experiences that make some people particularly likely to become helpless are not known, but differences have been shown to be related to people's answers on a personality test (Rotter, 1966) measuring belief in internal versus external locus of control of reinforcement (Dweck & Reppucci, 1973; Hiroto, 1974). "External" individuals, those who believe that what happens to them in life is a matter of luck and beyond their control, are more likely to become helpless after being exposed to unescapable noxious events than "internal" individuals, those who regard their destiny as largely being in their own hands.

A rather simple "cure" has been found for the transient kind of helplessness induced in human subjects in the laboratory: giving the subjects experience in successfully mastering some task soon after they have been exposed to the unescapable aversive stimuli (e.g., Klein & Seligman, 1976). For individuals exhibiting helplessness in real-life situations, more complicated therapeutic methods may be required. Dweck (1975), for example, devised treatment procedures for "helpless" children—those who had been observed by their school teachers and principals as expecting to fail and as doing badly in their school work when failure threatened. These children were also found to be more likely than their nonhelpless peers to attribute their intellectual successes and failures to forces outside themselves or to attribute their failures to lack of ability (both uncontrollable causes) rather than to their lack of effort (a controllable cause). The children were put through an extended program, lasting over a large number of sessions, in each of which they were given problems to solve. In one group, the children were taught to take responsibility for their failures and to attribute them to lack of sufficient effort. In a second group, the children were provided with only success experiences. In a posttreatment test, the children were given difficult problems and inevitably were unable to solve a number of them. After failure, the performance of those who had been allowed only to succeed deteriorated, as in the school setting, but the performance of children trained to take personal responsibility held up or actually improved.

Seligman has noted striking parallels between learned helplessness, induced in the laboratory, and the phenomenon of reactive depression, so-called because the state is presumably brought on by some emotionally upsetting event such as loss of a job, death of a loved one, or failure in some valued activity. Most people suffer from mild bouts of depression from time to time,
but for many, the state may be severe and long lasting and carry with it the possibility of suicide. Depressed individuals are typically slowed down in their speech and body movements; they feel unable to act or to make decisions; they appear to have "given up" and to suffer from what one writer (Beck, 1967) describes as a paralysis of will. When asked to perform some task, those who are depressed are likely to insist that it is hopeless to try because they are incapable of being successful and to describe their performance as much worse than it actually was. All of these symptoms resemble learned helplessness. Underlying depression, Seligman (1975) proposes, "is not a generalized pessimism, but pessimism specific to the effects on one's own skilled actions" (p. 122). This belief that reinforcement is not contingent on one's actions is, of course, the core of learned helplessness. Thus, according to Seligman's theory, depression represents a type of learned helplessness and is precipitated by the same causes: experiencing traumatic events that one's best efforts have done nothing to ward off and that one feels powerless to control.

In one experimental test of the learned helplessness model of depression, Miller and Seligman (1976) had groups of mildly depressed and nondepressed students perform two series of tasks, one involving skill and the other involving chance, and before each task had the student state their expectancy of succeeding. On the skill task, the nondepressed students adjusted their expectancies up and down depending on whether they had succeeded or failed on the previous problem, but on the chance task they showed little change in their expectancies. The depressed students showed little change after success and failure on the chance task or on the task involving skill. Nondepressed students who had been pretreated with inescapable noxious stimuli showed the same pattern. Helplessness induced in the laboratory and naturally occurring depression were thus shown to have the same effect of reducing the expectation that one's own effort can influence outcome.

The helplessness exhibited by mildly depressed college students in the laboratory can be alleviated by giving them a series of success experiences (Klein & Seligman, 1976). Treatment procedures for the more severely depressed, based on the learned helplessness model, are just beginning to be developed. Several techniques related to those devised by Wolpe have been found to be promising, such as training depressed individuals to become more assertive (Taulbee & Wright, 1971) or to perform a graduated series of task assignments requiring more and more effort (Burgess, 1968). The crux of successful therapy with depressives, Seligman advises, is to restore their sense of efficacy, to get them to perceive that they can control outcomes by their own behavior.

According to Seligman's original model, the deficits characteristic of learned helplessness occur when organisms acquire (i.e., learn) an expectation of future response-outcome independence. The problem with this model, when
applied to human helplessness in the laboratory and to human depression, was its failure to account for "boundary conditions" (Peterson & Seligman, 1984). That is, what factors control the chronicity and the generality of helplessness and depression, and why is depression associated with a loss of self-esteem? Abramson et al.'s (1978) revision of helplessness theory incorporated the person's causal explanation for the uncontrollable event. Specifically, it posited that when people encounter uncontrollable bad events, they ask why. Three explanatory dimensions capture the nature of their possible answers. First, the cause may have to do with the person or with the situation (i.e., an internal versus an external attribution or explanation). Second, the cause may persist across time or be temporary (i.e., a stable versus an unstable explanation). Finally, the cause may affect a variety of situations or it may be limited to a single outcome (i.e., a global versus a specific explanation). Table 13.1 gives examples of possible types of causal explanations. According to the reformulation, an internal attribution for a bad event is likely to produce a loss of self-esteem. A stable explanation for a bad event means that a depressive reaction will tend to persist. And if a global explanation is invoked for a bad event, the helplessness deficits or depression will tend to be generalized to many situations.

Individuals may be distinguished by characteristic explanatory styles. Such individual differences in explanatory tendency are necessary to explain why different people have different reactions to the same events. Individuals' characteristic styles for explaining events may be inferred from the Attributional

<table>
<thead>
<tr>
<th>Style</th>
<th>Internal</th>
<th>External</th>
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<tr>
<td>Stable</td>
<td></td>
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<tr>
<td>Global</td>
<td>&quot;I'm incapable of doing anything right.&quot;</td>
<td>&quot;All institutions chronically make mistakes.&quot;</td>
</tr>
<tr>
<td>Specific</td>
<td>&quot;I always have trouble figuring my balance.&quot;</td>
<td>&quot;This bank has always used antiquated techniques.&quot;</td>
</tr>
<tr>
<td>Unstable</td>
<td></td>
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</tr>
<tr>
<td>Global</td>
<td>&quot;I've had the flu for a few weeks and I've let everything slide.&quot;</td>
<td>&quot;Holiday shopping demands that one throw oneself into it.&quot;</td>
</tr>
<tr>
<td>Specific</td>
<td>&quot;The one time I didn't enter a check is the only time my account gets overdrawn.&quot;</td>
<td>&quot;I'm surprised—my bank has never made an error before.&quot;</td>
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Reprinted from Peterson and Seligman, 1984, p. 349, with permission.
Style Questionnaire, on which respondents rate the internality, stability, and globality of the causal explanation they provide for each of a series of events, such as “You have a job interview, and it goes badly.” Alternatively, explanatory style may be inferred through content analysis and rating of the explanations people provide in letters, diaries, interviews, or other personal documents. According to the revision, a depressive explanatory style is one in which an individual tends to make internal, stable, and global explanations for bad events. Such a style serves as a risk factor for helplessness deficits and depression. Interestingly, Peterson and Seligman (1984) regard explanatory style as a personality trait. They provide three reasons for this conclusion: Style is inferred from cross-situational consistency of explanation, people differ in how consistently they make certain explanations across situations, and measures of explanatory style exhibit reasonably high stability across time.

Seligman’s reformulation provides an example of what is often termed a diathesis–stress model. That is, depression results from the combination of a diathesis or predisposition (the depressive explanatory style in this case) and a situational stressor (an uncontrollable bad event for this model). Both factors must be present in order for the outcome to occur.

The results of numerous studies have proven consistent with the model. For example, Peterson and Seligman (1984) described supportive results from studies employing a variety of research strategies. Nolen-Hoeksema, Girdus, and Seligman (1986, 1992) reported connections between explanatory style and depression in a longitudinal study of children. Peterson, Seligman, and Vaillant (1988) found that pessimistic explanatory style at age 25 was a risk factor for physical illness in middle age (see Peterson & Seligman, 1987, for a discussion of possible mediating mechanisms). Seligman and Schulman (1986) found that the explanatory style of beginning insurance agents predicted both persistence in this career and dollar value of policies sold by those who remained as agents. Similarly, Peterson and Barrett (1987) reported that a pessimistic explanatory style predicted a low grade point average at the end of the first-year in college, even after controlling for SAT scores.

Two other revisions of the reformulation recently have been proposed. First, Abramson, Metalsky, and Alloy (1989) offer a hopelessness theory of depression in which causal attributions are deemphasized and hopelessness serves as a “proximal sufficient cause of the symptoms of hopelessness depression.” Hopelessness in turn refers to the “expectation that highly desired outcomes will not occur or that highly aversive outcomes will occur coupled with an expectation that no response in one’s repertoire will change the likelihood of occurrence of these outcomes” (p. 359). Metalsky and Joiner (1992) and Metalsky, Joiner, Hardin, and Abramson (1993) provide partial support for this new model. Second, Seligman recently has turned his attention from learned helplessness to learned optimism. He continues to regard depression as a consequence of a pessimistic way of thinking about failure. Learned
optimism is seen as an antidote: "Learning how to think more optimistically when we fail gives us a permanent skill for warding off depression. It also can help us achieve more and have better health" (Seligman, 1991, p. 290; see also 1995b). Seligman describes strategies for learning optimistic behavior, and he advocates flexible optimism as an approach to life. It is an intriguing, albeit currently untested, position.

CURRENT STATUS AND EVALUATION

Our discussion of the theory and research of Dollard and Miller has made manifest a number of virtues. The major concepts within this theory are clearly expounded and customarily linked to certain classes of empirical events. There is a scarcity of vague allusion or appeal to intuition in the works of these theorists. The hard-headed, positivistic reader will find much to admire in their writings. Moreover, this evident objectivity does not prevent many S-R learning theorists from being ready and eager to embrace a wide range of empirical phenomena with their conceptual tools. Although their formulations began in the laboratory, they have shown no timidity about advancing with them upon the most complex of behavioral phenomena.

A highly significant contribution of S-R theory to the personality scene is contained in the careful detail with which this position represents the learning process. Obviously the transformation of behavior as a result of experience is a crucial consideration for any adequate theory of personality, and yet many theories have largely overlooked this question or have brushed by it with a few stereotyped phrases. In this sense at least, S-R theory provides a model to be emulated by other theoretical positions.

The readiness of Dollard and Miller to extract wisdom from social anthropology and clinical psychoanalysis represents, for many, another attractive feature of their particular position. They make more explicit use of sociocultural variables than almost any of the other theories we have discussed, and we have seen that their theory owes much to the impact of psychoanalysis. The readiness and sophistication with which sociocultural variables are introduced in the theory may be related to the fact that this theory has been applied by cultural anthropologists more widely than any other theory of personality except psychoanalysis.

This willingness to incorporate the hypotheses and speculations of other types of theories, such as psychoanalysis, while appealing to many inside as well as outside the learning group, has not found universal favor among those who advocate the application of learning principles to personality phenomena. Psychologists such as Bandura (see Chapter 14), Wolpe, and Eysenck (see Chapter 9), to say nothing of those who take the Skinnerian approach (see Chapter 12), not only find little necessity for going beyond the principles established in the learning laboratory but may actively disagree with the views
of more traditional personality theorists, particularly those of a psychoanalytic persuasion.

Although divided on this issue, S-R theorists have characteristically emphasized the function of a theory as a guide to investigation and the necessity of submitting theoretical differences to experimental test. In these respects, members of this group have a definite superiority over most other personality theorists. In general, these theorists have a better sense of the nature and function of theory in an empirical discipline than any other group of personality theorists. In their writing, as compared with the writing of other theorists, there is less reification, less sterile argument over words, and more readiness to look at theories as sets of rules that are used only when they are demonstrably more useful than other sets of rules. This methodological sophistication is undoubtedly responsible for the relative explicitness and formal adequacy of these theories.

In many ways S-R theory typifies an experimental, objective approach to human behavior. As such, it has been a prime critical target for the many psychologists who are convinced that an adequate understanding of human behavior must involve more than a slavish application of the experimental methods of physical science. These critics feel that although their personal theoretical positions may be vulnerable because they rest on empirical observation that is not adequately controlled, the observations, at least, are relevant to the events with which they purport to deal. In the case of S-R theory, the bulk of the careful investigation not only is concerned with simple instead of complex behavior, but also, more important, has often been carried out with an animal species that is phylogenetically far removed and manifestly different in many crucial respects from the human organism. What good are rigor and careful specification in the experimental situation if the investigator is subsequently forced to make a tenuous assumption of phylogenetic continuity in order to apply findings to important events? We have already seen that S-R theorists consider that learning principles established in laboratory studies of animals must be justified with experimental studies employing human subjects. Thus, there is an essential agreement here concerning the importance of coordinating research; the question becomes one of how much confidence can be placed in the theory until such studies are carried out in considerable quantity.

A related criticism frequently leveled at learning theory approaches asserts that most of the positive features of this position, including its careful definitions, explicitness, and wealth of research, exist only when the theory is applied to animal behavior or very restricted domains of human behavior. As soon as the theory is applied to complex human behavior it is in the same situation as other theories of personality, with ad hoc definitions, and reasoning by analogy, representing the rule instead of the exception. This criticism suggests that the rigor and relative formal adequacy of S-R theories are illusory because
they exist only when their principles are applied within a very limited scope. Once a learning theory is generalized, concepts that were clear become ambiguous and definitions that were tight become flaccid.

Perhaps the most important critical objection to S-R approaches is the assertion that they do not provide adequate prior specification of stimulus and response. Traditionally, learning theorists have been concerned almost exclusively with the process of learning and have not attempted to identify the stimuli occurring in the natural environment of the organisms they study or to develop a suitable taxonomy for these stimulus events. Further, these learning processes have been investigated in restricted, controlled settings in which it is relatively simple to specify the stimuli eliciting observable behavior. The challenge to the personality theorist is to understand the human organism operating in the real-world environment, and it can be cogently argued that if psychologists cannot fully define the stimulus for behavior their task has barely begun. Roughly the same arguments can be made about the response. In fairness it must be admitted that theorists such as Miller and Dollard are well aware of this problem. Miller, in a jocular vein, has suggested that S-R theory might better be labeled “hyphen theory,” as it has had more to say about the connection between the stimulus and the response than about either the stimulus or the response itself. Miller and Dollard have made attempts to overcome this deficiency by specifying at least some of the social conditions under which human learning takes place in addition to the abstract principles governing that learning (see also Bandura’s theory in Chapter 14).

Related to this criticism is the fact that S-R theory has remarkably little to say about the structures or acquisitions of personality, which is undoubtedly why many theorists have found psychoanalytic theory useful in their thinking and investigation. This objection also maintains that, with its preoccupation with the process of learning, S-R theory is only a partial theory and that the relatively stable components of personality are an essential element in any attempt to understand human behavior.

Certainly the most frequently voiced criticisms of S-R theory point to the simplicity and molecularity of the position. Holists feel that this theory is the very essence of a segmental, fragmented, and atomistic approach to behavior. They claim that so little of the context of behavior is seen that one cannot hope to understand or predict human behavior adequately. There is no appreciation of the importance of the whole, and the patterning of the parts is overlooked in favor of their microscopic examination. For example, Monte (1995, p. 753) argues that "real people do not think ideas in discrete, unconnected chunks. . . . Therefore, it is almost impossible, as Freud pointed out, that repression could work by eliminating discrete anxious bits of thought. . . . The feelings of helplessness that Freud so carefully described as the key trigger for the ego's escape through repression are given no weight at all in Dollard
and Miller's S-R formulation. . . . The kind of distress that Freud wrote about so eloquently is not yet captured."

In these objections it is difficult to sort out the polemical and affective components from their legitimate intellectual accompaniment. In defense of learning theory, it is certainly clear that there is nothing in the S-R position to imply that variables must operate singly or in isolation. Interaction of variables is perfectly acceptable, so at least this degree of holism is congruent with S-R theory.

Still other psychologists accuse S-R theorists of having neglected language and thought processes and claim that their concepts are inadequate to explain the acquisition and development of these complex cognitive functions. Any acceptable theory of human learning, they contend, must incorporate these cognitive phenomena. It is only in recent years, however, that adequate theories of language and cognition have been developed (most of them, admittedly, outside of the S-R animal learning tradition). There is no barrier, in principle, to the discoveries of cognitive theories being incorporated into learning theory accounts of personality development. As we will see in Chapter 14, Bandura's social learning theory is a major step in this direction.

In summary, S-R theory is a theoretical position that in many respects is singularly American. It is objective, functional, places much emphasis on empirical research, and is only minimally concerned with the subjective and intuitive side of human behavior. As such it provides a striking contrast to many of the theories we have discussed that are deeply indebted to European psychology.
INTRODUCTION AND CONTEXT

ALBERT BANDURA
PERSONAL HISTORY
RECONCEPTUALIZATION OF REINFORCEMENT
PRINCIPLES OF OBSERVATIONAL LEARNING
  Attentional Processes
  Retention Processes
  Production Processes
  Motivational Processes
RECIPECOAL DETERMINISM
THE SELF-SYSTEM
  Self-Observation

Judgmental Process
Self-Reaction
APPLICATIONS TO THERAPY
SELF-EFFICACY
CHARACTERISTIC RESEARCH AND RESEARCH METHODS
WALTER MISCHEL
COGNITIVE PERSON VARIABLES
THE CONSISTENCY PARADOX AND COGNITIVE PROTOTYPES
A COGNITIVE–AFFECTIVE SYSTEM THEORY OF PERSONALITY
CURRENT STATUS AND EVALUATION

During the middle of the current century, the dominant perspective within psychology in the United States clearly has been that of behaviorism: Behavior is accountable in terms of and is controlled by manipulation of environmental forces. In the hands of theorists such as Skinner, internal representations and
tendencies were discounted as epiphenomena with no causal status. Beginning shortly after the midpoint of the century, however, a group of theorists who came to be known as social learning theorists proposed that environmental stimuli provide an inadequate basis from which to account for human behavior. These theorists argue that human behavior can only be understood in terms of a reciprocal interaction between external stimuli and internal cognitions. Furthermore, symbolic representations of past events and the current situation guide behavior, and self-regulatory processes permit people to exert control over their own behavior. In the process, the central construct of “reinforcement” is substantially altered: Rather than mechanistically “stamping in” an associated behavior, reinforcement functions by providing information. A reinforcer is effective to the extent that a person is aware of it and anticipates that it will apply to his or her subsequent behavior. Social learning theorists retain the behaviorists’ conviction that, within the limits imposed by biology, learning accounts for the acquisition and maintenance of human behavior. Such learning, however, can only be understood in a social context, and it is predicated on a belief in the causal significance of cognition. In this chapter, we focus on Albert Bandura as the most prominent of these social learning theorists and we also consider the increasingly influential contributions of Walter Mischel.

**ALBERT BANDURA**

Albert Bandura shares the view that learning principles are sufficient to explain and predict behavior and behavior change. However, he takes issue with learning approaches to personality that draw their principles exclusively from studies of single organisms in an impersonal environment or that picture human behavior as being passively controlled by environmental influences. He reminds us that humans are capable of thought and self-regulation that permit them to control their environment as well as to be shaped by it. Furthermore, many aspects of personality functioning involve the interaction of the individual with others so that an adequate theory of personality must take into account the social context in which behavior is originally acquired and continues to be maintained. Bandura’s intent has therefore been to extend and modify traditional learning theory by developing principles of social learning. As Bandura describes it:

*Social learning theory approaches the explanation of human behavior in terms of a continuous reciprocal interaction between cognitive, behavioral, and environmental determinants. Within the process of reciprocal determinism lies the opportunity for people to influence their destiny as well as the limits of self-direction. This conception of human functioning then neither casts people into the role of powerless objects controlled by environmental forces nor free agents who can become whatever they...*
choose: Both people and their environments are reciprocal determinants of each other. (Bandura, 1977b, p. vii)

Bandura received his graduate training in clinical psychology at the University of Iowa, which awarded him the Ph.D. in 1952. At Iowa the Hullian tradition was strong; its faculty consisted of such individuals as Kenneth Spence, Judson Brown, and Robert Sears, all of whom had received their doctoral training at Yale and made notable contributions of their own in extending Hull’s theory. After a year of postdoctoral clinical training, Bandura accepted, in 1953, a position at Stanford University, where he is now David Starr Jordan Professor of Social Science. He has served as chairman of the Stanford Department of Psychology and in 1974 was elected to the presidency of the American Psychological Association. Bandura has been the recipient of the Distinguished Scientist Award of the American Psychological Association’s Division of Clinical Psychology, the Distinguished Scientific Contribution Award from the American Psychological Association, and the Distinguished Contribution Award of the International Society for Research on Aggression.

Bandura has presented his theory in a series of books. With the late Richard Walters as junior author, Bandura (1959) wrote Adolescent aggression, a detailed report of a field study in which social learning principles were used to analyze the personality development of a group of middle-class delinquent boys, followed by Social learning and personality development (1963), a volume in which he and Walters presented the social learning principles they had developed and the evidence on which the theory was based. In 1969 Bandura published Principles of behavior modification, in which he outlined the application of behavioral techniques based on learning principles to the modification of behavior, and in 1973, he published Aggression: A social learning analysis. Social learning theory (1977b), in which Bandura has “attempted to provide a unified theoretical framework for analyzing human thought and behavior” (p. vi), remains his clearest theoretical statement to date, although his Social foundations of thought and action (1986) provides a more detailed treatment of the theory. In addition to these theoretical statements, Bandura and his students have contributed an extensive series of empirical articles.

In common with most learning theory approaches to personality, social learning theory is based on the premise that human behavior is largely acquired and that the principles of learning are sufficient to account for the development and maintenance of that behavior. However, previous learning theories have paid insufficient attention not only to the social context in which this behavior arises but also to the fact that much important learning takes place vicariously. That is, in the course of observing others’ behavior, individuals learn to imitate that behavior or in some way model themselves after others. In their 1941
book, *Social learning and imitation*, Miller and Dollard had recognized the significant role played by imitative processes in personality development and had sought to develop explanations of certain kinds of imitative behavior. But few others interested in personality had attempted to incorporate the phenomenon of observational learning into their learning theories, and even Miller and Dollard seldom referred to imitation in their later publications. Bandura has sought not only to redress this neglect but also to extend the analysis of observational learning beyond the limited types of situations considered by Miller and Dollard.

Bandura's 1974 article, "Behavior theories and the models of man," provides a relatively succinct summary of his point of view:

> Contrary to popular belief, the fabled reflexive conditioning in humans is largely a myth. Conditioning is simply a descriptive term for learning through paired experiences, not an explanation of how the changes come about. Originally, conditioning was assumed to occur automatically. On closer examination it turned out to be cognitively mediated. People do not learn despite repetitive paired experiences unless they recognize that events are correlated. . . . So-called conditioned reactions are largely self-activated on the basis of learned expectations rather than automatically evoked. The critical factor, therefore, is not that events occur together in time, but that people learn to predict them and to summon up appropriate anticipatory reactions (p. 859).

> Our theories have been incredibly slow in acknowledging that man can learn by observation as well as by direct experience. . . . The rudimentary form of learning based on direct experience has been exhaustively studied, whereas the more pervasive and powerful mode of learning by observation is largely ignored. A shift of emphasis is needed. (p. 863)

Bandura's career has been devoted to encouraging that shift.

**RECONCEPTUALIZATION OF REINFORCEMENT**

Bandura greatly broadens the definition of reinforcement. Rather than functioning in a mechanistic manner, behavioral consequences alter subsequent behavior by providing information. When people observe the outcomes of their own behavior and the behavior of others, they develop hypotheses about the likely consequences of producing that behavior in the future. This information then serves as a guide for subsequent behavior. Accurate hypotheses produce successful performance, and inaccurate hypotheses lead to ineffective behavior. (Notice the similarity to George Kelly's point about "construing replications"; see Chapter 10.) In other words, reinforcers provide information about what
a person must do in order to secure desired outcomes and to avoid punishing outcomes. As a consequence, reinforcement can only occur when a person is aware of the contingencies and anticipates that they will apply to future behavior. Humans' ability to anticipate outcomes also accounts for the incentive value of reinforcers: "By representing foreseeable outcomes symbolically, people can convert future consequences into current motivators of behavior. Most actions are thus largely under anticipatory control" (Bandura, 1977b, p. 18). For Bandura, then, a reinforcer functions primarily as "an informative and motivational operation rather than as a mechanical response strengthener" (1977b, p. 21). As a consequence, Bandura considers "regulation" to be a more appropriate term than "reinforcement."

Bandura also rejects the Skinnerian understanding of how reinforcement functions. In observational learning, reinforcement serves as "an antecedent" rather than a "consequent" influence. That is, anticipated reinforcement is one of several factors that can influence a person to pay attention to a model, and it can also encourage a person to rehearse the behavior that has been observed. As illustrated in Figure 14.1, Skinnerian learning theory suggests that reinforcement acts backward to strengthen an imitative response and its connection to surrounding stimuli. From Bandura's point of view, however, a reinforcement facilitates learning in an anticipatory manner by encouraging the observer to pay attention and to rehearse the observed behavior. Bandura even proposes that direct reinforcement is not necessary in order for learning to occur.

In addition to these modifications in the mechanics of motivation, Bandura adds two other types of reinforcement to the classical concept of "direct reinforcement" as a stimulus whose presence increases the frequency of occurrence for a behavior with which it is paired. First, "self-reinforcement" occurs...
when an individual compares his or her own behavior to internal standards. If the behavior meets those standards, the person may experience satisfaction or pride, but if the behavior violates or falls short of those standards the person responds with guilt, shame, or dissatisfaction. As we shall see during our discussion of the self-system, individuals serve as powerful reinforcers for their own behavior. This self-reinforcing function gives people "a capacity for self-direction. They do things that give rise to self-satisfaction and self-worth, and they refrain from behaving in ways that evoke self-punishment" (Bandura, 1974, p. 861). Bandura is suggesting that any behavior produces two sets of consequences: self-evaluations and external outcomes. External consequences have the greatest effect on behavior when they are compatible with self-generated consequences. Behavior is maintained by its consequences, but those consequences are not only externally applied. The reader will notice similarities between Bandura's self-reinforcement and Gordon Allport's concept of a generic conscience functioning on the basis of a personal sense of what we ought to do rather than an external sense of what we ought to do. Self-reinforcement also is analogous to the Freudian concept of superego, but Bandura (1978) argues that such "incorporated entities" are not able to account for the variable operation and occasional disregard of internal moral controls. We will return to self-reinforcement when we discuss Bandura's self-system.

As a second new type of reinforcement, Bandura suggests that "vicarious reinforcement" occurs when an individual witnesses someone else experience reinforcing or punishing consequences for a behavior, and that individual anticipates similar consequences if she or he produces the same behavior. Thus, an individual may be reinforced without producing a behavior or experiencing a consequence. Observed consequences can change behavior in much the same manner as directly experienced consequences. Much as Skinner had suggested that Thorndike's trial-and-error learning was an inefficient and unlikely way to acquire complex behaviors, so Bandura suggests that Skinner's operant conditioning is an impractical and dangerous means for humans to acquire many behaviors. In contrast, most human behavior is learned observationally by modeling: We observe the behavior of others and use the information as a guide for our own subsequent behavior. We turn now to Bandura's description of modeling.

Bandura (1962, 1977b, 1986) proposes that a fundamental way humans acquire skills and behaviors is by observing the behavior of others. Such observational learning, or modeling, is governed by four constituent processes: attention, retention, production, and motivation (see Figure 14.2).
People cannot learn anything unless they pay attention to and accurately perceive significant features of the to-be-modeled behavior. We are most likely to pay attention to behaviors that are salient, simple, and promise to have some functional value. As a consequence, a model that is vivid, attractive, competent, and seen repeatedly is more likely to catch our attention. In addition, what a person notices is influenced by his or her knowledge base and current orientation. The characteristics of the observers also determine how much imitative behavior takes place in a given situation. Highly dependent children, for example, have been found to be more influenced by the behavior of a model than the less dependent (Jakubczak & Walters, 1959).

The characteristics of both model and observer often jointly determine what will occur. A particularly informative study showing the interplay of model and observer was performed by Hetherington and Frankie (1967) with young children and their parents. The investigators first determined by observing the parents the degree of warmth and nurturance each expressed toward the child and which parent was dominant in matters of child care. Subsequently, the child watched each parent play with toys and games supplied by the investigator, following which the child was allowed to play with the same materials and the amount of his or her imitative behavior recorded. Children of both sexes were much more likely to imitate a warm, nurturant parent than a cool or punitive one, but the largest effect was found with girls whose mothers were warm. By and large, the dominant parent also commanded more imitative behavior, although when the father was dominant, girls imitated the mother somewhat more than the father.
Retrieval Processes

A behavior cannot be reproduced unless we have remembered it by coding it in symbolic form. Retention of observed behavior depends mainly upon mental images and verbal representations. Memory can be enhanced by organization of the material and by rehearsal. The material that is retained often is transformed to correspond to some existing knowledge or expectation on the part of the learner.

Production Processes

The learner must be able to reproduce the behavior that has been observed. An observed behavior, no matter how well it has been retained, cannot be enacted without the necessary skills and abilities. Sometimes the production problem stems from a lack of the requisite cognitive or motor skills, but often it reflects the performer’s lack of feedback about what she or he actually is doing. This is true in learning many athletic skills, but it also is a frequent problem with social behaviors. It can be extremely informative, and unnerving, to see or hear tapes of our own behavior. Trial and error, practice, and feedback all contribute to what is often a gradual process of translating knowledge into action.

Motivational Processes

Bandura’s social learning theory emphasizes the distinction between acquisition and performance because people do not enact everything they learn. Performance of observed behavior is influenced by three kinds of incentives: direct, vicarious, and self-administered. A learned behavior will be enacted if it leads directly to a desired outcome, if it has been observed to be effective for the model, or if it is self-satisfying. In other words, we are likely to produce a behavior if we believe that it is in our best interest to do so.

The critical role Bandura assigns to imitation in personality development is best seen in his analysis of its contribution to the acquisition of novel responses. In a series of experiments done with children, Bandura and his colleagues have demonstrated that subjects allowed to observe an unusual set of responses performed by another individual (the *model*) tend to exhibit these same responses when placed in a similar setting. In one representative study (Bandura, Ross, & Ross, 1961), nursery school children, tested one at a time, watched an adult model perform a series of particular aggressive acts, physical and verbal, toward a large toy doll. Other children saw a nonaggressive adult who sat quietly in the experimental room and paid no attention to the doll. Later, the children were mildly frustrated and then placed alone in the room with the doll. The behavior of the groups tended to be congruent with the adult model’s. The children who had seen an aggressive adult themselves performed more aggressive acts than a control group given no prior experience with a model and made more responses than the control children that were quite exact imitations of the model’s behaviors. Further, the children who had observed a
nonaggressive adult made even fewer aggressive responses than the control subjects.

As this experiment illustrates, children can learn novel responses merely by observing others. Of equal importance, it shows that learning can take place without the children having had the opportunity to make the response themselves and without either the model or themselves having been rewarded or reinforced for the behavior.

The capacity to perform novel responses observed some time before but never actually practiced is made possible by the human’s cognitive abilities. The stimuli provided by the model are transformed into images of what the model did or said or looked like and, even more important, are transformed into verbal symbols that can later be recalled. These symbolic, cognitive skills also allow individuals to transform what they have learned or combine what they have observed in a number of models into new patterns of behavior. Thus, by observing others, one may develop novel, innovative solutions and not merely slavish imitations.

In human cultures, novel behavior is very frequently acquired by observing the behavior of others. Often the instruction is quite direct; a child, for example, learns what he or she sees others do. But individuals may also be influenced by models presented in more symbolic forms. Pictorial presentations, such as those in movies and television, are highly influential sources of models. Bandura, Ross, and Ross (1963a), for example, found that children who watched the aggressive behavior of a live adult model were no greater in their tendency to imitate than children shown a movie of the same behavior or even an animated cartoon.

Bandura suggests that exposure to models, in addition to leading to the acquisition of novel behavior, has two other types of effects. First, a model’s behavior may simply serve to elicit the performance of similar responses already in the observer’s repertoire. This facilitating effect is especially likely to occur when the behavior is of a socially acceptable nature. The second way a model may influence an observer occurs when the model is performing socially proscribed or deviant behavior. The observer’s inhibitions about performing the behavior may be strengthened or weakened by watching the model depending on whether the model’s behavior has been punished or rewarded. Rosekrans and Hartup (1967), for example, demonstrated that children who saw a model’s aggressive behavior being consistently rewarded subsequently showed a high degree of imitative aggression while those who saw it consistently punished exhibited practically no imitative behavior. Children exposed to a model sometimes rewarded and sometimes punished displayed an intermediate amount of aggression.

The types of vicarious learning we have been discussing involve actions falling into the general category of instrumental or operant responses. Bandura (1969) has pointed to another kind of learning based on the observation of a
model that is crucial in social learning theory, namely the vicarious acquisition of classically conditioned emotional responses. Not only may observers exposed to the emotional reactions of a model experience similar reactions, but they may also begin to respond emotionally to stimuli that produced these reactions in the model. In an illustrative experiment, Bandura and Rosenthal (1966) had each subject watch as a model, introduced as an actual subject, was presented with a series of buzzer signals. Following each occurrence of the buzzer, the model simulated a variety of pain reactions that the subject was falsely told were elicited by an intense shock delivered immediately after the buzzer. As indicated by a physiological measure of emotional responsivity, the subjects came to exhibit a conditioned emotional response to the buzzer, even in test trials in which the model was absent and despite the fact that they never directly experienced the painful unconditioned stimulus supposedly administered to the model.

Bandura (1978) suggests that explanations of human behavior typically have been provided in terms of a limited set of determinants acting in a unidirectional manner. Learning theorists, for example, suggest that behavior is controlled by situational forces. It is true that Skinner comments on organisms' capacity for countercontrol, but even this notion paints the environment as the instigating force that the individual attempts to counteract. Skinner's environment serves as "an autonomous force that automatically shapes, orchestrates, and controls behavior" (1978, p. 344). Personality theorists account for behavior in terms of internal dispositions and motives. Even in interactionist formulations (e.g., Murray and Allport), the person and the environment largely operate in an autonomous or unidirectional manner.

In contrast, social learning theory conceptualizes behavior in terms of reciprocal determinism: that is, personal influences, environmental forces, and behavior itself function as interdependent rather than autonomous determinants. The effect of each of the three components is conditional on the others. For example, the environment is a potentiality whose effects depend on the organism's understanding of it and behavior in it. Similarly, a person plays different roles and has different expectations across different situations, people seek out and create the environments to which they respond, and behavior itself contributes to defining the environment and the person's understanding of who he or she is. Bandura is suggesting, in part, that people do not simply react to the external environment; rather, external factors influence behavior only through the mediation of a person's cognitive processes. By altering their environment or by creating conditional self-inducements, people influence the stimuli to which they respond.
Over the years, many writers have recognized that individual dispositions and situational forces interact to produce behavior, but these interaction processes have been conceptualized in three very different ways (see Figure 14.3). In unidirectional interaction, persons and situations are regarded as independent entities that combine to generate behavior. According to Bandura, this point of view is simplistic, because personal and environmental factors in fact influence one another. In a bidirectional conception of interaction, persons and situations are regarded as interdependent causes, but behavior is seen only as a consequence that does not figure in the causal process. In the social learning view of reciprocal determinism, behavior, environmental forces, and personal characteristics all function as “interlocking determinants of each other.”

Bandura (1978) offers three examples of how the relative contributions of these three components may vary. First, if people are dropped into deep water, the situation will dictate that they all begin to swim. Alternatively, behavior may be the central feature in the system. For example, when a person plays familiar piano selections for personal enjoyment, cognitive processes and the contextual environment contribute little. Finally, cognitive factors may predominate, as when false beliefs trigger avoidance responses that render the person oblivious to the actual environment and that are not altered by feedback about their ineffective and distorting quality.

Bandura is making the point that we must be flexible in considering the interactions of person, behavior, and environment. For example, suppose that we notice a student who is talking before class. How are we to understand that behavior? A personality approach might talk about the person being talkative, a learning approach would look for environmental reinforcers for the talking behavior, and an interactionist approach would consider the contributions of both the person and the situation to the behavior. Bandura, however,

**Figure 14.3**
Schematic representation of three alternative conceptions of interaction: B signifies behavior, P the cognitive and other internal events that can affect perceptions and actions, and E the external environment. (Reprinted with permission from Bandura, 1978, p. 345.)
suggests that we recognize the reciprocal determining relationship among
the person, the behavior, and the environment. That is, the person has a
tendency to talk and the environment reinforces talking, but it is also the
case that talking feeds back to make the person more likely to talk in the
future, and the talking behavior also contributes to making a classroom
the sort of setting in which talking occurs. Furthermore, we need to realize
that the person contributes to the nature of the environment, just as the
environment influences who the person is. Person, situation, and behavior
are inextricably intertwined.

In addition, reciprocal determinism requires that we dispense with the
fiction that any event can only be understood as a stimulus or a response or
a reinforcer. For example, suppose that a young girl takes a cookie from the
cookie jar just before dinner. Her father tells her to put it back, which she
does, and he responds by saying, “What a good girl you are.” How are we to
categorize this behavioral sequence? The father telling his daughter to
replace the cookie is a stimulus, her doing so is a response, and his praise is
a reinforcer. This seems straightforward enough, but Bandura points out that
behavior continues. The next event in the sequence may be for the daughter
to hug her father. Now her replacing the cookie serves as a stimulus, his praise
is a response, and her hug reinforces him for that praise. If he in turn gives
her a hug, then his praise is a stimulus, her hug is a response, and he reinforces
her hug with his hug. And so on. Our interpretation of an action depends
on where we localize it in the stream of behavior and in reciprocal deter-
minism.

Reciprocal determinism also provides Bandura with an account of freedom
and determinism that sounds much like that provided by George Kelly. That
is, people are free to the extent that they can influence the future conditions
to which they will respond, but their behavior also is bound by the reciprocal
relationship among personal cognition, behavior, and the environment. As
Bandura (1978, pp. 356–357) puts it, “Because people’s conceptions, their
behavior, and their environments are reciprocal determinants of each other,
individuals are neither powerless objects controlled by environmental forces
nor entirely free agents who can do whatever they choose.”

A complete analysis of behavior from the perspective of reciprocal deter-
minism requires consideration of how all three sets of factors—cognitive,
behavioral, and environmental—influence one another. This analysis makes
it clear that social learning theory in no way ignores internal, personal deter-
ninants of behavior. Rather than conceptualize such determinants as “static
trait dimensions,” however, Bandura treats them as cognitive, dynamic factors
that regulate and are regulated by both behavior and the environment. Bandura
discusses the personal determinants of behavior in terms of the self-system
and the individual’s self-efficacy. We now turn to consideration of these per-
son variables.
Bandura does not accept the radical behaviorist attempt to excise internal, cognitive determinants of behavior through the "conceptual bypass" of reducing them to the consequence of prior environmental events. Cognitions clearly have external origins, but their role in the regulation of behavior cannot be reduced to prior experience: "Ascribing a generalizable capacity to past experiences cannot substitute for current influences arising through exercise of that capability, any more than one would attribute Shakespeare's literary masterpieces to his prior instruction in the mechanics of writing" (Bandura, 1978, p. 350). Neither, however, does Bandura endorse the perspective of self theories in which a "global self-image" accounts for behavior across a wide range of situations. "In social learning theory, a self-system is not a psychic agent that controls behavior. Rather, it refers to cognitive structures that provide reference mechanisms and to a set of subfunctions for the perception, evaluation, and regulation of behavior" (1978, p. 348). Furthermore, an understanding of the self-generated influences subsumed in the self-system is necessary for the explanation and prediction of human behavior. Figure 14.4 summarizes the three component processes involved in the self-regulation of behavior through the activation of self-prescribed contingencies. Taken as a set, these processes define the self-system and provide the bases for self-reinforcement of behavior. We will consider each of the three components in turn.

**Figure 14.4**
Subprocesses involved in the self-regulation of behavior by internal standards and self-incentives. (Reprinted with permission from Bandura, 1986, p. 337.)

<table>
<thead>
<tr>
<th>Self-observation</th>
<th>Judgemental process</th>
<th>Self-reaction</th>
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</thead>
<tbody>
<tr>
<td>Performance dimensions</td>
<td>Personal standards</td>
<td>Evaluate self-reactions</td>
</tr>
<tr>
<td>Quality</td>
<td>Challenge</td>
<td>Positive</td>
</tr>
<tr>
<td>Rate</td>
<td>Explicitness</td>
<td>Negative</td>
</tr>
<tr>
<td>Quantity</td>
<td>Proximity</td>
<td>Tangible self-reactions</td>
</tr>
<tr>
<td>Originality</td>
<td>Generality</td>
<td>Rewarding</td>
</tr>
<tr>
<td>Sociability</td>
<td>Referential performances</td>
<td>Punishing</td>
</tr>
<tr>
<td>Morality</td>
<td>Standard norms</td>
<td></td>
</tr>
<tr>
<td>Deviancy</td>
<td>Social comparison</td>
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</tr>
<tr>
<td>Regularity</td>
<td>Personal comparison</td>
<td></td>
</tr>
<tr>
<td>Proximity</td>
<td>Collective comparison</td>
<td></td>
</tr>
<tr>
<td>Accuracy</td>
<td>Valuation of activity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Regarded highly</td>
<td>No self-reaction</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
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<td></td>
<td>Devalued</td>
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<td></td>
<td>Performance attribution</td>
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<td></td>
<td>Personal locus</td>
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<td>External locus</td>
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We continually observe our own behavior, noting such factors as the quality, quantity, and originality of what we do. The more complex the behavior being observed, and the more intricate the setting in which it is observed, the more likely that the self-observation will include some inaccuracies. Temporary mood states and motivation for change also can influence how one's performances are monitored and processed.

Behavior generates a self-reaction through judgments about the correspondence between that behavior and personal standards. We may define personal adequacy by reference to past behavior and knowledge of norms or by social comparison processes. The choice of the targets for the comparison obviously influences the judgments that will be reached: Self-judgments are enhanced when others of lesser ability are chosen for the comparison. Judgments also vary depending on the importance of the activity being judged as well as individual attributions as to the determinants of the behavior. We are more critical of behaviors that are important and for which we hold ourselves to be responsible.

The self-appraisals produced through the operation of the first two components set the stage for the individual to render an evaluation of the behavior. Favorable appraisals generate rewarding self-reactions, and unfavorable judgments activate punishing self-responses. Behaviors that are viewed as having no personal significance do not generate any reaction. The self-reactions produced at this stage alter subsequent behavior primarily by motivating people to generate the effort needed to attain some desired outcome (Bandura, 1991b).

The reciprocal influence that Bandura describes as existing between the person and the environment is illustrated in his contention that self-reinforcement systems are themselves acquired by the same learning principles responsible for the acquisition of other types of behaviors. Thus, what individuals come to reward and punish in themselves may reflect the reactions that their behavior has elicited from others. Parents, peers, and other socializing agents set behavioral standards, rewarding the individual for living up to them and expressing their displeasure when the person fails. These externally imposed norms may be “taken over” by the individual and form the basis for later self-reinforcement systems. It might thus be expected, Bandura notes, that individuals who as children were praised and admired for rather low levels of accomplishment will grow up to administer self-rewards more generously than those who were held to higher standards of excellence, and indeed, there is evidence to suggest that this is so (Kanfer & Marston, 1963).

Extensive evidence indicates that self-evaluative standards can also be acquired vicariously by observing others. In one representative experiment,
Bandura and Kupers (1964) had children observe a model who set either a high or a low standard of achievement for self-reward. Later observation of the children performing the same task showed that those exposed to the model with low standards rewarded themselves more indulgently than those who observed the stricter model.

As with other behaviors, characteristics of the model influence whether or not an observer will attend and attempt to emulate the model's self-reinforcement standards. Under certain conditions, children, for example, are more likely to model themselves after peers than adults (Bandura, Grusec, & Menlove, 1967b) or after models whose achievement standards are within their reach rather than those who set them beyond the child's capacity (Bandura & Whalen, 1966).

The components of the self-system do not function as autonomous regulators of behavior; rather, they play a role in the reciprocal determination of behavior. External factors affect these self-regulatory processes in at least three ways: First, as we have seen, the internal standards against which behavior is judged are extracted from our experiences. Second, environmental influences may alter the manner in which we judge our behavior. For example, people often experience negative sanctions from others for unmerited self-reward. In addition, upholding high standards is "socially promoted by a vast system of rewards including praise, social recognition, and honors" (Bandura, 1978, p. 354). Finally, there are external factors that promote the "selective activation and disengagement" of self-reactive influences. This influence merits further discussion.

Bandura is well aware that humane people may engage in inhumane behavior. He argues that "incorporated entities" such as Freud's superego cannot account for the "variable operation" of internal controls. From the social learning point of view, "considerate people perform culpable acts because of the reciprocal dynamics between personal and situational determinants of behavior rather than because of defects in their moral structures. Development of self-regulatory capabilities does not create an invariant control mechanism within a person" (1978, p. 354; see also Bandura, 1977b, 1986, 1990). When people engage in reprehensible behavior that should give rise to self-condemnation, they may be able to disengage themselves in a manner that protects them from self-criticism. Figure 14.5 illustrates how and at what point this may occur. At the level of the behavior itself, reprehensible behavior may be rendered acceptable by misperceiving it as occurring in the service of a moral cause. Moral justification and euphemistic labeling are often used to avoid self as well as social reproach, and acts that should be deplored can be made palatable by comparing them with flagrant inhumanities. Another set of defensive measures operates by distorting the relationship between an action and its effects. Thus, displacement of responsibility to higher authorities and diffusion of responsibility to a larger group can be used to dissociate oneself from culpability by creating the illusion that one is not personally responsible.
A third set of mechanisms for disengaging from self-condemnation functions by distorting the consequences of the act. Thus, we may choose to minimize, ignore, distort, or otherwise insulate ourselves from what should be apparent detrimental effects of our action. Finally, one may disengage expected self-punishing responses by devaluing, dehumanizing, or blaming the victim of an unjust act, thereby excusing the act itself. The existence of social stereotypes facilitates such defensive distortions.

Bandura (1978) suggests that “personal judgments” operate at each stage of self-regulation, thereby precluding “automaticity of the process.” As a consequence, there is “considerable latitude for personal judgmental factors to affect whether or not self-regulatory influences will be activated in any given activity” (1978, p. 355). What he does not explain, however, is the origin, operation, and triggering of those personal judgments. That is, why and when will we choose to disengage ourselves from certain behaviors and not others? Is it a question of level of arousal or extremity of the behavior? If so, what determines the threshold for activation? Finally, the reader should note the parallel between these mechanisms for selective disengagement and the defense mechanisms described by Freud and Rogers as well as the safeguarding strategies articulated by Alfred Adler.

APPLICATIONS TO THERAPY

As might be anticipated from this description of the major principles of social learning theory, Bandura is committed to the view that techniques based on
learning theory can be highly effective in modifying undesirable behavior. In fact, Bandura's first book, *Principles of behavior modification* (1969), is almost exclusively devoted to a discussion of such techniques, including several novel methods he and his associates have developed for eliminating unrealistic fear reactions (Bandura, 1968; Bandura, Grusac, & Menlove, 1967a; Bandura & Menlove, 1968).

These latter techniques, which grew out of experimental work on modeling and observational learning, assume not only that emotional responses can be acquired by both direct and vicarious experience with traumatic events but also that under the proper circumstances they can be both directly and vicariously extinguished. Thus, persons with unrealistic or exaggerated fears should be able to reduce their defensive and emotional reactions by watching a model interact fearlessly with the anxiety-provoking object or event and reduce them still further by practicing the model's behavior in a nonthreatening situation under the latter's guidance. Numerous experiments using various modeling techniques with both children and adults have yielded highly encouraging results. A study performed by Bandura, Blanchard, and Ritter (1969) is of particular interest since it incorporates several features of Wolpe's desensitization techniques into the modeling conditions and also includes, for purposes of comparison, a conventional desensitization condition. Adolescents and adults suffering from a severe snake phobia were assigned to one of three treatment groups. Members of the desensitization group were presented with a graded series of imaginal scenes involving snakes while deeply relaxed. In the second group a symbolic modeling condition was used in which the subjects watched a film showing models in progressively closer interactions with a large snake, also while maintaining a relaxed state. The third group observed a live model perform similar responses with an actual snake. After each of these interactions these latter subjects were asked to perform the same behavior as the model, initially with the model's assistance and later alone.

All subjects were asked to try to perform a graded series of tasks involving snakes both before and after treatment. While control subjects, who were given only these two test series and no intervening treatment, showed essentially no change in their behavior, a marked increase in approach behavior was noted in the desensitization and symbolic modeling groups following treatment. The most successful technique, however, was participant modeling, that is, the one in which subjects were exposed to an actual model and given guided experience in interacting with the phobic object.

Before the social learning theorists, therapeutic interventions based on the principles of learning were conceptualized in terms of the automatic effects of immediately administered reinforcers. In contrast, Bandura proposed that
cognitive processes play a critical role in the acquisition and persistence of pathological behaviors, just as they do in "normal" behavior. This was a radical proposal. Bandura (e.g., 1977a) rejected the dominant belief that emotional distress is the key element causing inability to deal effectively with a feared object or event, and he rejected the parallel assumption that therapeutic change is produced by the elimination of emotional distress. According to Bandura, what creates a problem for the individual who is suffering from fearful or avoidant behavior is the belief that he or she is unable to cope successfully with a situation. Therapeutic change, whatever its particular form, results from the development of a sense of self-efficacy, the expectation that one can, by personal effort, master a situation and bring about a desired outcome. In other words, the goal of therapy is creating and strengthening expectations of personal efficacy.

Bandura distinguishes between two components of self-efficacy: an efficacy expectation and an outcome expectation. As indicated in Figure 14.6, an outcome expectation refers to a person's belief that a given behavior will lead to a particular outcome. An efficacy expectation is the conviction that the person himself or herself can successfully produce the behavior required to generate the outcome. This distinction is important, because an individual may well believe that an action will lead to an outcome but may doubt that he or she can produce that action. Bandura assumes that self-efficacy affects initiation and persistence of coping behavior. People fear and avoid situations they perceive as exceeding their coping skills, but they confidently enter situations they believe they can master. Furthermore, efficacy expectations determine how hard people will try and how long they will persist at a behavior. Perceived self-efficacy does not guarantee success: "Given appropriate skills and adequate incentives, however, efficacy expectations are a major determinant of people's choice of activities, how much effort they will expend, and of how long they will sustain effort in dealing with stressful situations" (Bandura, 1977a, p. 194).

**Figure 14.6**
Diagrammatic representation of the difference between efficacy expectations and outcome expectations. (Reprinted with permission from Bandura, 1977a, p. 193.)

Person → Behavior → Outcome

Efficacy expectations

Outcome expectations
According to Bandura’s social learning perspective, expectations of personal efficacy are based on four major sources of information: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. Figure 14.7 lists these sources and the associated therapeutic procedures used to create expectations of mastery. Performance accomplishments provide the most effective method to induce mastery because they are based on actual mastery experiences. By permitting the individual to experience repeated successes, strong efficacy expectations are likely to develop, particularly if one can attribute success to one’s own efforts rather than to the intervention of some outside agency. Bandura suggests that participant modeling is a particularly useful technique since it not only allows the individual to perform with positive outcome tasks leading to the desired goal but also permits the introduction of other devices to induce the individual to persist until a sense of mastery is achieved. These include initial observation of a model, the performance of a graded series of tasks with the assistance of the model at carefully spaced intervals, and a gradual phasing out of supportive aids, leaving the individual progressively dependent on his or her own efforts (Bandura, Jeffery, & Wright, 1974).

Impressive evidence supporting the hypothesis that procedures bringing about behavioral change do so by increasing the strength of self-efficacy has been provided by Bandura, Adams, and Beyer (1977) in a study of severely

Figure 14.7
Major sources of efficacy information and the principal sources through which different modes of treatment operate. (Reprinted with permission from Bandura, 1977a, p. 195.)

<table>
<thead>
<tr>
<th>Efficacy expectations</th>
<th>Mode of induction</th>
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<tr>
<td>Performance accomplishments</td>
<td>Participant modeling</td>
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<td>Performance desensitization</td>
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<td>Performance exposure</td>
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<td>Self-instructed performance</td>
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<td>Vicarious experience</td>
<td>Live modeling</td>
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<td></td>
<td>Symbolic modeling</td>
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<td>Verbal persuasion</td>
<td>Suggestion</td>
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<td>Exhortation</td>
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<td>Self-instruction</td>
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<td></td>
<td>Interpretive treatments</td>
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<td>Emotional arousal</td>
<td>Attribution</td>
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<td></td>
<td>Relaxation, biofeedback</td>
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<td></td>
<td>Symbolic desensitization</td>
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<td></td>
<td>Symbolic exposure</td>
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snake phobic adults. As has consistently been found in prior experiments, subjects treated by the participant modeling technique that gave them successful mastery experiences with the phobic object were able in a posttreatment test to interact more closely with an unfamiliar snake than those who had been given only the vicarious experience of observing a model. Of critical significance to Bandura's theory was the relationship between the outcome of therapy and the participants' expectations of efficacy. When asked at the conclusion of treatment how certain they were that they would be able to perform each of the tasks in the test series, individuals in the participant modeling group indicated stronger expectations (and later were more successful in test performance) than those given only vicarious experience. Furthermore, the strength of each individual's efficacy expectations was highly accurate in predicting later behaviors, whatever treatment group the person happened to be in.

Vicarious experience also can enhance self-efficacy, albeit not as readily as direct performance. Observing someone else perform a threatening activity without negative consequences can contribute to an expectation in the observer that he or she can improve through persistence. Modeling that leads to successful outcomes is most effective. Similarly, multiple models are more effective than a single model (Bandura & Menlove, 1968).

Verbal persuasion, or encouraging a person to believe that he or she can cope effectively, is popular but generally proves less effective than other strategies. Finally, stressful situations often elicit emotional arousal, and this arousal can serve as a cue to trigger a perception of low efficacy. For example, a student with test anxiety may experience his increasing heart rate when an exam is placed in front of him as a signal that he is confronting a situation in which he will not be successful. As a consequence, teaching people techniques to reduce aversive arousal may eliminate some of the cues that trigger the perception of low self-efficacy. From this perspective, physiological arousal is understood as a source of information rather than an energizing drive state. Whatever strategy is employed, Bandura emphasizes that the effect on efficacy expectations depends on how the information is cognitively appraised. Success experiences are more likely to enhance self-efficacy if they are perceived as resulting from enhanced abilities than if they are attributed to luck or special circumstances.

Bandura argues that the importance of self-efficacy is not limited to clinical settings. He emphasizes, however, that self-efficacy is not an "omnibus motive," but rather it is specific to a particular domain. A person who has a strong sense of efficacy as a student will not necessarily feel efficacious in social or athletic situations: "The social learning approach is therefore based on a microanalysis of perceived coping capabilities rather than on global personality traits or motives of effectance. From this perspective, it is no more informative
to speak of self-efficacy in general terms than to speak of nonspecific approach behavior" (Bandura, 1977a, p. 203).

Bandura extended this microanalytic research strategy in subsequent work (e.g., Bandura, 1982, 1983; Bandura et al., 1977; Bandura & Cervone, 1983; Bandura, Reese, & Adams, 1982). Typically, participants in such research are presented with self-efficacy scales representing a series of tasks in some domain that vary in difficulty or stressfulness. They indicate what tasks they believe they can do along with their degree of certainty in the judgment. These judgments then are related to actual performance. The typical finding across a wide range of behaviors is that task performance is positively correlated with judgments of efficacy. Some of this work (e.g., Bandura, Adams, Hardy, & Howells, 1980) indicates that levels of fear arousal decrease and self-perceptions of efficacy increase after exposure to a variety of therapeutic interventions.

All this work on perceived self-efficacy suggests to Bandura (1982) an alternative way of conceptualizing human anxiety. Psychoanalytic theories account for anxiety in terms of intrapsychic conflicts over expression of forbidden impulses, and conditioning theory proposes that formerly neutral events acquire anxiety-provoking properties by association with painful experiences. In contrast to both these positions, the primary origin of anxiety within Bandura's social learning theory is perceived ineffectiveness in the ability to cope with potentially aversive events.

Bandura (1982) further elaborates on the connection between self-efficacy and affective reactions by returning to the distinction between efficacy and outcome expectations. People can give up trying either because they doubt that they can do what is required or because they expect their efforts to be fruitless due to the unresponsiveness of the environment. That is, a sense of futility can be either efficacy based or outcome based: "In any given instance, behavior would be best predicted by considering both self-efficacy and outcome beliefs" (1982, p. 140). Consider the four possible combinations of high and low judgments about self-efficacy and outcomes, as illustrated in Figure 14.8. A high sense of self-efficacy combined with a responsive environment in which effective performance is rewarded leads to assured, active behavior. Low environmental responsiveness fosters social activism, protest, and grievances in individuals with high self-efficacy. The same lack of responsiveness leads to apathy, resignation, and anxiety in individuals who are low in self-efficacy. Finally, it is the combination of low self-efficacy and a potentially responsive environment that breeds depression. That is, despondency occurs when people are unable to produce those behaviors that are being rewarded for other people. This is an intriguing analysis.

Bandura's work on self-efficacy, in conjunction with his notions of reciprocal determinism and the self-system, also provides him with a powerful tool to account for human agency. According to this model, and in contrast to a
Skinnerian analysis, humans possess the ability to exercise control over events in their lives. We do not control outcomes in any autonomous or mechanical way. Instead, the distinctive human abilities to form goal representations and to anticipate likely outcomes, as incorporated in self-efficacy and the self-system, lead to a model of "emergent interactive agency (Bandura, 1986). Persons are neither autonomous agents nor simply mechanical conveyers of animating environmental influences. Rather, they make causal contribution to their own motivation and action within a system of triadic reciprocal causation. In this model of reciprocal causation, action, cognitive, affective, and other personal factors, and environmental events all operate as interacting determinants" (Bandura, 1989, p. 1175). As we will see subsequently in this chapter, Walter Mischel adopts a very similar perspective.

One of the most admirable features of Bandura's model is the extent to which his theory is based on empirical research. As a consequence of this close linkage, we already have presented a number of research findings, and in this section we discuss additional studies. We do not include a Current Research section in this chapter for two reasons. First, because of the tight reciprocal
relationship between theory and research for Bandura and Mischel, it is impossible to articulate their theoretical postures without frequent reference to the empirical literature they have generated and provoked. Second, Bandura's and Mischel's theories are "current"; indeed, they continue to evolve.

In an extremely influential series of studies to which we alluded earlier in the chapter, Bandura (1965, 1973; Bandura, Ross, & Ross, 1961, 1963a,b) demonstrated how children can learn aggressive behavior through observations. In one study, three-to-five-year-old children watched a film of an adult engaging in aggressive behaviors such as punching a large inflated Bobo doll and hitting it with a mallet. The actors also made distinctive comments (e.g., "Pow, right in the nose" and "Sockeroo") to ensure that the behaviors being modeled were novel. Some children observed the adult being punished for the aggression, in another condition the adult was rewarded, and in a third condition there were no consequences for the model. The children were then observed when they were given the opportunity to interact with the Bobo doll. The children who had viewed adults rewarded for aggressive behaviors produced the most aggressive behavior, and the children who saw the adult punished exhibited the least aggression. Boys and girls both showed this effect, but girls in general exhibited less aggression. This research demonstrates that aggressive behavior can be acquired through modeling. It also suggests that observed consequences for the model play a large role in determining the likelihood that observers subsequently will exhibit aggressive behavior, but the situation is in fact more complex. In a subsequent study, Bandura offered children incentives if they could reproduce the aggressive behavior they had witnessed. Children in all conditions could reproduce the aggression, regardless of whether they had observed reward, punishment, or no consequences for the model. Thus, it is critically important to maintain a distinction between learning and performance. The children learned new aggressive behaviors in all conditions; negative consequences for the model led to suppression of what had been learned through observation, but a change in the incentives provided the occasion for the behavior to emerge. Bandura uses such findings as a strong rebuttal to those who argue that the violent behavior that is so prevalent on television will not be reproduced by viewers as long as the television perpetrators are punished for their actions. Behavior can be learned through observation regardless of consequences for the model; the key question is whether the observer will anticipate positive consequences for reproducing the behavior. Similarly, other research in this series demonstrated that children modeled aggressive behavior when the actors were dressed in cartoon costumes. These results contradict the argument that cartoon violence will not be reproduced because the characters are not real.

Bandura's self-efficacy model also has generated a great deal of research. This model originally was supported in research on the treatment of anxiety and phobic behavior. For example, Bandura et al. (1977) compared treatments
based on performance accomplishments or vicarious experience with no treatment for a group of snake phobics. They found that performance accomplishment or mastery-based treatment produced higher, stronger, and more generalized self-efficacy expectations than treatment based solely on vicarious experiences. Self-efficacy also was linked to subsequent performance with snakes.

Self-efficacy has generated a great volume of research in other domains as well. For example, Weinberg, Hughes, Critelli, England, and Jackson (1984) solicited subjects who wanted to lose weight. Subjects were classified as high or low in preexisting self-efficacy based on self-reports of how many pounds they wanted to lose during the next two months plus ratings of how certain they were they could lose this amount of weight. Subjects who indicated that they were at least 60 percent certain of losing their desired weight were designated high in preexisting self-efficacy, and subjects who reported being less than 50 percent certain were classified as low in preexisting self-efficacy. Subjects who were assigned to a high manipulated self-efficacy condition were told that they had been specially selected for the study because tests revealed that they were the type of person likely to succeed; during the program, their behavior frequently was attributed to "previously unrecognized capacity for self-control." Participants assigned to the low manipulated self-efficacy condition received no such special feedback. Results revealed that subjects in the high preexisting and high manipulated self-efficacy conditions lost more weight than subjects in the corresponding low groups (see also Weinberg, Gould, Yukelson, & Jackson, 1981).

Hawkins (1992) acknowledges that Bandura's self-efficacy theory has had a considerable impact and that there is "an abundance of evidence indicating a relationship between self-efficacy and behavior" (p. 252). Although self-efficacy may be useful in predicting behavior, however, he argues that it has no valid claim to being a cause of behavior: Self-efficacy is better conceptualized as a consequence of behavior than as a cause of behavior (see other criticisms by Eastman & Marzillier, 1984; Marzillier & Eastman, 1984; and Kirsch, 1980; see also replies by Bandura, 1980, 1984a, 1991a). Litt (1988) investigated whether self-efficacy serves as a causal determinant of behavior change or is better understood as a correlate of change that already has occurred. Litt manipulated self-efficacy for a group of female undergraduates and measured their pain tolerance on a cold-pressor task. He found that "self-efficacy expectations affected performance beyond what would have been expected from past performance alone. Changes in self-efficacy expectations predicted changes in cold-pressor tolerance. These findings suggest that self-efficacy expectations can be causal determinants of behavior in an aversive situation" (Litt, 1988, p. 149). Other studies in this voluminous literature have investigated self-efficacy and sex differences (Poole & Evans, 1989), self-efficacy and aging (Seeman, Rodin, & Albert, 1993), and physiological correlates of self-efficacy
(Bandura, Cioffi, Taylor, & Brouillard, 1988; Bandura et al., 1982; Bandura, Taylor, Williams, Mefford, & Barchas, 1985; Wiedenfeld et al. 1990).

One additional study on self-efficacy deserves mention, both because it provides a nice example of the approach and because the author articulates the connection between self-efficacy and some traditional personality variables. Cozarelli (1993) used self-efficacy to predict psychological adjustment among women undergoing an abortion. She also obtained preabortion measures of the personality dimensions of optimism, control, self-esteem, and depression. She included these personality or dispositional variables because of a belief that such dispositional variables influence an individual's ability to cope with stress by means of their influence on feelings of self-efficacy. There are several reasons to believe that self-efficacy can be considered a more proximal predictor of poststressor adjustment than personality. First, feelings of self-efficacy represent a specific cognitive assessment of one's ability to achieve a desired outcome in a particular situation. As more generalized assessments of personal skills and capacities, dispositional variables would be expected to be important contributors to efficacy beliefs across a wide variety of circumstances. . . . However, although dispositional factors may apply across a wide variety of circumstances, they are not likely to provide responses that are as good a fit with the demands of a particular situation as are more event-specific feelings of self-efficacy. . . . Individuals high in self-esteem, optimism, or chronic feelings of control are likely to recall their past accomplishments in an overly positive light . . . and to have a past history of more successful coping experiences. . . . Finally, feelings of control, optimism, and high self-esteem have all been related to an increased ability to cultivate or utilize social support. (Cozarelli, 1993, p. 1225)

Cozarelli's sample included 291 women obtaining a first-trimester abortion. These women completed measures of self-esteem, optimism, control, and depression one hour prior to having their abortions. They also completed a self-efficacy measure that asked the women how sure they were that within the next two months they would be able to perform five postabortion coping behaviors (think about babies comfortably, drive past the abortion clinic, spend time around children comfortably, continue to have good sexual relations, and watch television programs or read stories about abortion). Just prior to leaving the clinic, the women completed adjustment measures. Three weeks later, they were asked to complete postabortion adjustment measures.

Cozarelli conducted separate analyses for immediate adjustment and for three-week adjustment, and the results were consistent with her hypotheses. Feelings of self-efficacy exhibited a strong positive correlation with immediate
adjustment. High self-esteem, optimism, and perceived control had slightly smaller positive correlations with self-efficacy, but path analyses revealed that their direct effects on adjustment were small. In other words, the personality factors exerted their influence on adjustment primarily through the mediation of self-efficacy. Similar results were obtained for three-week adjustment. Cozzarelli concludes that personality variables help people confront stressful life events by increasing the feelings of self-efficacy that in turn lead to coping efforts: "The fact that self-efficacy was a more proximal predictor of postabortion adjustment than the personality variables may reflect the fact that, as an event-specific cognition, feelings of self-efficacy are more likely to generate goals that are specifically tailored to meeting the requirements of a particular situation" (p. 1232). Conversely, given their global nature, personality variables can contribute to self-efficacy beliefs across a wide range of situations. This focus on cognitive variables that influence behavior in a specific setting, rather than global dispositions that apply more weakly across a broad range of settings, is a hallmark of the social learning approach articulated by Bandura and by Walter Mischel.

**WALTER MISCHEL**

As we discussed at the end of Chapter 7, Walter Mischel's (1968) *Personality and assessment* contained a highly influential critique of traditional theories of personality. His widely quoted conclusion was that "with the possible exception of intelligence, highly generalized behavioral consistencies have not been demonstrated, and the concept of personality traits as broad predispositions is thus untenable" (Mischel, 1968, p. 140). Notice the two key terms in this conclusion: "highly generalized" and "broad predispositions." Mischel did not repudiate the idea that individuals have distinctive personalities that influence their behavior. He did propose that the idea of global tendencies that operate autonomously across a wide range of situations has no convincing empirical support. Mischel himself (e.g., 1965) had attempted to use broad personality characteristics to predict the success of Peace Corps teachers. That attempt failed, and his survey of the literature on the predictive validity of broad, self-report measures of personality indicated that correlations between scores on those measures and actual behavior rarely exceeded the level of .30. Mischel coined the term "personality coefficient" to refer to this low level of predictive utility, and his criticism was phrased as an empirical challenge: Either provide data demonstrating that broad personality variables do exhibit cross-situational consistency or move on to other theoretical approaches to account for the role of individuals in generating behavior.

Mischel's challenge provoked a person–situation debate that dominated the literature for almost two decades. A number of personality researchers rose to the challenge and attempted to provide the requisite data (e.g., Bem & Allen, 1974; see Chapter 7), while many others returned to the "interactionist"
Walter Mischel
formulations previously championed by such theorists as Henry Murray (see Chapter 6), albeit often with apparent ignorance of these intellectual ancestors, Mischel himself attempted to respond to his own challenge, both by generating data and by providing a "cognitive social learning reconceptualization of personality" (1973; see also 1977, 1979, 1984, 1990, 1993). Kenrick and Funder (1988) conclude that the field has "profited" from this controversy. One of the clear gains has come in the form of Mischel's new model of personality.

Before we turn to Mischel's reconceptualization, it is important to recognize three central features of his approach that link him closely with Albert Bandura. First, Mischel's model is inextricably linked to and rooted in empirical results. Second, Mischel emphasizes the individual's construction of the environment in which he or she behaves. In this respect, Mischel's link with George Kelly, with whom he studied at Ohio State, is clear. Finally, Mischel conceptualizes the person's contribution to behavior in terms of a set of cognitive person variables that in turn define personality. These are not global, transsituational tendencies; rather, much like Bandura's specific self-efficacies, they are linked to a specific setting and/or behavioral domain. There is a remarkable irony here. Mischel believes that individual differences in behavior occur because individuals have distinctive "if . . . then . . ." strategies that lead them to behave in characteristic ways in a given situation but that lead to behavioral variability across situations. As a consequence, because of their implicit strategy of aggregating behavior across situations by constructing broad dispositions, traditional personality theorists and researchers in fact destroy the distinctive individuality they purport to study! Personality psychologists have criticized experimentalists for precluding the discovery of personality effects by aggregating across subjects, but they engage in an analogous error when they aggregate across situations. Mischel's goal is to develop a way of conceptualizing personality that recognizes and preserves the individual's characteristic tendency to behave a particular way in a particular situation. Like Bandura, Mischel adopts a "micro" approach to behavior, and it is this orientation that distinguishes his model from those of traditional personality theorists.

Walter Mischel was born in Vienna in 1930, but his family fled from the Nazis in 1938 and emigrated to New York City. He started out with an interest in art, but in 1951 he began the study of clinical psychology at the City College of New York. He worked as a social worker, then completed his graduate training at Ohio State University in the 1950s, where he was influenced by Kelly as well as Julian Rotter and the first generation of American social learning theorists. Mischel taught at several universities before moving to Stanford in 1962, where he and Bandura anchored the social learning approach to personality. He moved to Columbia in 1983, where he continues his influential career. Mischel received Distinguished Scientific Contribution Awards from
the Division of Clinical Psychology of the American Psychological Association in 1978 and from the American Psychological Association in 1982.

In his original cognitive social learning reconceptualization of personality, Mischel (1973) made it clear that he was not implying that people show no consistency in behavior or that individual differences are unimportant or that situations are the major determinants of behavior. What he did argue was that people have an impressive ability to discriminate between situations and that our models of personality must account for the divergence of behavior across situations as well as its consistency. Our "idiosyncratic social learning histories" produce idiosyncratic stimulus meanings. Mischel's work on children's ability to delay gratification (e.g., Mischel, Ebbesen, & Zeiss, 1972) convinced him of the power of such "cognitive transformations" of stimuli. Children who are taught to cognitively transform reward objects such as pretzel sticks or marshmallows into little brown logs or cotton balls, respectively, greatly enhance their ability to wait for the reward: "Recognition of the idiosyncratic organization of behavior in each person suggests that individually oriented assessments are bound to have very limited success if they try to label a person with generalized trait terms, sort him into diagnostic or type categories, or estimate his average position on average or modal dimensions" (Mischel, 1973, p. 260). What does have utility is direct self-reports or information about the person's past behavior in similar situations: "Thus while the traditional personality paradigm views traits as the intrapsychic causes of behavioral consistency, the present position sees them as the summary terms (labels, codes, organizing constructs) applied to observed behavior" (1973, p. 264). Sounding very much like George Kelly, Mischel concludes that the study of global traits may tell us more about the cognitive activity of the trait theorist than about the causes of the target person's behavior.

In place of broad trait dimensions, Mischel proposes that we conceptualize individual differences in behavior in terms of five "cognitive social learning person variables" that account for individual differences in how people mediate the impact of stimuli and generate characteristic behavior patterns. He describes the rationale for and nature of these variables in the following passage:

"It seems reasonable in the search for person variables to look more specifically at what the person constructs in particular conditions, rather than trying to infer what broad traits he generally has, and to incorporate in descriptions of what he does the specific psychological conditions in which the behavior will and will not be expected to occur. . . ."
The proposed cognitive social learning approach to personality shifts the unit of study from global traits inferred from behavioral signs to the individual's cognitive activities and behavior patterns, studied in relation to the specific conditions that evoke, maintain, and modify them and which they, in turn, change (Mischel, 1968). The focus shifts from attempting to compare and generalize about what different individuals "are like" to an assessment of what they do—behaviorally and cognitively—in relation to the psychological conditions in which they do it.

The proposed cognitive social learning person variables deal first with the individual's competencies to construct (generate) diverse behaviors under appropriate conditions. Next, one must consider the individual's encoding and categorization of events. Furthermore, a comprehensive analysis of the behaviors a person performs in particular situations requires attention to his expectancies about outcomes, the subjective values of such outcomes, and his self-regulatory systems and plans. (Mischel, 1973, p. 256)

In subsequent work, Wright and Mischel (1987) elaborate on this position. Adopting a position previously articulated by Henry Murray and Gordon Allport, they demonstrate that a given trait will affect behavior only under certain conditions. For example, a given person will display aggressive behavior only in a limited set of circumstances, perhaps when he or she is verbally abused or challenged; consequently, a generic label of "aggressive" will be inaccurate and misleading when applied to that person. In addition, Wright and Mischel (1988) show that laypeople usually "hedge" when they describe someone else's behavior by incorporating a conditional modifier to indicate when a given behavior will occur. People are more likely to say "Fred is aggressive when someone challenges his authority" than to say "Fred is aggressive."

THE CONSISTENCY PARADOX AND COGNITIVE PROTOTYPES

In their attempt to generate data that support the existence of cross-situational consistency of behavior, Bem and Allen (1974) pointed out the existence of a paradox: On the one hand, people experience compelling intuitive support for the existence of broad dispositions that lead to cross-situational consistency of relevant behaviors, but on the other hand the research data do not support the existence of such consistency. Mischel and Peake (1982) respond to this paradox in two ways: They replace it with a new paradox, and they attempt to account for this new paradox in terms of a "cognitive prototype" approach. To begin, Mischel and Peake replicated Bem and Allen's study using data collected at Carleton College on the cross-situational consistency of a variety of referents for conscientiousness. As in the Bem and Allen study, they found
that different sets of raters agreed on their ratings of conscientiousness for members of the sample who reported low variability in how conscientious they were, but there was little agreement in ratings of conscientiousness for the subjects who reported high variability in how conscientious they were. When a similar analysis was performed on actual conscientiousness behavior in various situations, however, rather than peer ratings, there was little evidence of cross-situational consistency for either group of subjects. Mischel and Peake point out that interrater agreement about the subjects’ conscientiousness was substantial in both studies for low variability students, but this agreement was not reflected in substantially higher cross-situational consistency of behavior for these presumably consistent subjects. Mischel and Peake thus confront a new replicable paradox: Subjects classified as low variability (and therefore presumably consistent) are indeed rated as consistent, but they do not actually show higher levels of cross-situational consistency in behavior. As in Bem and Allen’s paradox, intuitions about consistency of behavior do not agree with the data.

Mischel and Peake’s attempt to account for this “replicable paradox” is guided by Mischel’s earlier cognitive social learning reconceptualization of personality and by a “cognitive prototype” view of person categorization previously articulated by Cantor and Mischel (e.g., 1979). They begin with the conclusion that, although the data provide little evidence of cross-situational consistency of behavior, they do demonstrate temporal stability. This makes sense when viewed from the perspective of Mischel’s reconceptualization, both because the contingencies in a given situation can be expected to be stable across time and because one’s competencies, encodings, expectancies, values, and plans endure across time. In contrast, very different levels of the person variables may be triggered by differing situations. These effects can account for temporal consistency, but, what accounts for the illusory perception of cross-situational consistency? The cognitive prototype approach suggests that natural categories have “fuzzy” definitions and that members of those categories vary in how “prototypic” they are. For example, membership in the category “bird” is difficult to specify unambiguously and definitively, but most people would agree that a robin is a good (or prototypic) example of a bird and an ostrich is not. The cognitive prototype approach to consistency suggests that “the impression of consistency is based substantially on the observation of temporal stability in those behaviors that are highly relevant (central) to the prototype but is independent of the temporal stability of behaviors that are not highly relevant to the prototype. Conversely, the perception of variability arises from the observation of temporal instability in highly relevant features” (Mischel & Peake, 1982, p. 750). Applied to the Carleton data on conscientiousness, this analysis leads to the hypothesis that people who say they are consistent across situations will exhibit greater temporal stability but not greater cross-situational consistency than those who say they are not consistent;
however, the difference in temporal stability will occur only on behaviors that are prototypic examples of conscientiousness. To test this hypothesis, the conscientiousness behaviors were separated into those that were more and less prototypical. The pattern of results supported the hypothesis. That is, there was no evidence of cross-situational consistency for either group of subjects on either set of behaviors. In contrast, subjects who perceived themselves as highly consistent in conscientiousness demonstrated significantly greater temporal stability on the prototypic behaviors than subjects who perceived themselves to be highly variable, but there was no difference between the two groups in average temporal stability on the less prototypic behaviors. Mischel and Peake’s inference is that a judgment of temporal stability on prototypic behaviors leads people to the (erroneous) conclusion that they are consistent, regardless of actual levels of cross-situational consistency of behavior. In other words, we make a cognitive error by confusing temporal stability on key behaviors with pervasive cross-situational consistency, leading to an overestimate of the latter. This cognitive bias accounts for the replicable paradox that Mischel and Peake (1982; see also Mischel & Peake, 1983; Peake & Mischel, 1984; and Mischel, 1984) observed. Bem and Allen concluded that the consistency paradox arose because researchers looked for consistency in the wrong place and that we can only expect cross-situational consistency for “some of the people some of the time.” In parallel fashion, Mischel and Peake conclude that we can expect evidence of temporal consistency but not cross-situational consistency:

The consistency paradox may be paradoxical only because we have been looking for consistency in the wrong place. If our shared perceptions of consistent personality attributes are indeed rooted in the observation of temporally stable behavioral features that are prototypic for the particular attribute, the paradox may well be on the way to resolution. Instead of seeking high levels of cross-situational consistency—instead of looking for broad averages—we may need, instead, to identify unique bundles or sets of temporally stable prototypic behaviors—key features—that characterize the person even over long periods of time but not necessarily across many or all possibly relevant situations. (1982, pp. 753–754)

In his most recent work, Mischel has collaborated with Yuichi Shoda (Mischel & Shoda, 1995; see also Shoda, Mischel, & Wright, 1989, 1993a, b, 1994) to provide a cognitive–affective system theory of personality that reconciles the presumed invariance of personality attributes across time and situation with the apparent variability of behavior across situations. Shoda and Mischel begin by distinguishing between two different approaches to personality. The classic
approach conceptualizes personality in terms of behavioral dispositions. In
general, this approach tries to obtain a person's "true score" on a given
characteristic by averaging or aggregating his or her behavior on that dimen-
sion across a number of situations. For example, an estimate of a person's
friendliness could be obtained by adding or averaging the amount of friendliness
the person exhibits across a range of situations. The implicit assumption
here is that variations in behavior across situations reflect error. The second
approach conceptualizes personality in terms of characteristic mediating pro-
cesses. These processes interact with specific situations to produce behavior
that differs across situations in a reliable manner. Mischel's cognitive social
learning reconceptualization of personality is an example of this approach.
The focus in this approach is on the pattern of an individual's behavior rather
than the average amount of the behavior.

Figure 14.9 illustrates the amount of behavior X exhibited by person A
and person B across a variety of situations. In the behavioral disposition
approach, the variability in amount or likelihood of the behavior across situa-
tions reflects error, and the average across situations provides a measure of
the "true" level of the characteristic. In the process approach, however, the
issue is determining whether the different patterns of behavior shown by A
and by B are stable and meaningful. In other words, the focus is not on the
the individual's overall level of the behavior, but on his or her distinctive and
stable "if...then...situation-behavior pattern." Shoda and Mischel's
goal is to develop a process theory that provides an account of individual
differences in cognitive and emotional responses to situations. Such a theory
would in turn account for individual differences in overall average level of
behavior and in stable if...then...profiles of behavior variability across
situations as an expression of the same underlying personality system.

Figure 14.9
Typical individual differences in the conditional probability of a type of behavior in different
situations. (Reprinted with permission from Mischel & Shoda, 1995, p. 247.)
Table 14.1 lists the mediating units in Shoda and Mischel’s cognitive-affective personality system. These “cognitive-affective units” are basically the same cognitive person variables that Mischel proposed in his 1973 “reconceptualization” with two changes. First, competencies have been combined with strategies and plans. A much more significant change is the addition of affects and emotions as influences on the processing of social information. These units interact as the person selects, interprets, generates, and responds to situations. Indeed, Shoda and Mischel “propose a unifying view of a personality system in which individuals are characterized both in terms of (a) the cognitions and affects that are available and accessible [Table 14.1 in this text], and (b) the distinctive organization of the interrelations among them and psychological features of situations” (1995, p. 254). Figure 14.10 provides a schematic illustration of such a personality system. (The reader should notice the functional parallel between such “cognitive-affective domain maps” and the dynamic lattice described by Raymond Cattell; see Chapter 8.) Over time, the personality system will “generate distinctive if . . . then . . . , situation-behavior profiles of characteristic elevation and shape” (1995, p. 255). The organization of relations among the units remains relatively stable across situations, but different units become activated by different situations. Behavioral variability in terms of the if . . . then . . . situation-behavior profiles is a characteristic and stable function of the underlying cognitive-affective personality system (CAPS): “To summarize, through the interactions of the personality system’s structure with the features of situations that activate characteristic processing dynamics, individuals may select, seek, interpret, respond to, and generate stable social situations and experiences in patterns

Table 14.1

Types of cognitive-affective units in the personality-mediating system

| 1. Encodings: categories (constructs) for the self, people, events, and situations (external and internal) |
| 2. Expectancies and beliefs: about the social world, about outcomes for behavior in particular situations, and about self-efficacy |
| 3. Affects: feelings, emotions, and affective responses (including physiological reactions) |
| 4. Goals and values: desirable outcomes and affective states; aversive outcomes and affective states; goals, values, and life projects |
| 5. Competencies and self-regulatory plans: potential behaviors and scripts that one can do, and plans and strategies for organizing action and for affecting outcomes and one’s own behavior and internal states |

Note: Based in part on Mischel (1973).
that are typical for them” (1995, pp. 259–260). In the process, the CAPS theory provides an integrative account for both variability in behavioral expressions of personality and stability in the underlying personality system that generates them. Figure 14.11 illustrates the behavioral implications of and developmental influences on the CAPS. The CAPS model is too recent to have been tested, but it is a provocative theoretical initiative.

With the introduction of this model, Mischel is continuing his career as a provocative thinker at the interface of personality and social psychology. The new model is eminently reasonable. The question now is whether his formula-
Albert Bandura’s social learning theory is built around a number of key components. First, he has substantially modified the construct of reinforcement by explaining its action in terms of (a) information rather than mechanistic associationism and (b) attention and anticipation of consequences rather than a backward strengthening of behavior. He also moves from a focus on direct reinforcement to an emphasis on vicarious reinforcement and self-reinforcement. As part of these modifications, he reintroduces cognition in the causal chain of behavior. Second, he emphasizes observational learning as a mechanism through which humans acquire and modify behavior. Modeling includes the subprocesses of attention, retention, reproduction, and motivation. Third, he proposes that humans play an active role in constructing and interpreting the environment in which they behave. As part of this active process, people observe their own behavior and evaluate it in terms of internal standards through the operation of a self-system. Finally, Bandura describes self-efficacy as a person’s judgment of his or her ability to produce a behavior.
that will lead to desired effects and he uses this construct to account for the persistence and degree of effort in a given domain.

Bandura's model has been extremely influential in contemporary personality psychology. The compatibility between this model and the cognitive orientation that is so dominant in psychology today certainly contributes to this stature, but its influence largely is attributable to its conceptual clarity, explanatory power, and practical applicability. In addition, Bandura provides a well-traveled bridge between classic models of personality that confront the complexity of human behavior and learning formulations that articulate powerful mechanisms for the acquisition of behavior but are relatively barren of content. Bandura comes out of a Skinnerian learning tradition that largely rendered notions of personality irrelevant, but in profoundly modifying the Skinnerian notion of reinforcement and in the process of introducing a reliance on a self-system and self-efficacy, Bandura comes full circle to a model that has much in common with "traditional" models of personality. In that sense, Bandura is a most fitting theorist with whom to conclude this consideration of personality theories. His discussion of the self-system, plus the associated strategies for selective activation and disengagement of self-control, are in fact analogous to mechanisms for self-control described by Murray, Allport, and a number of psychoanalytic theorists. Bandura's microanalysis approach and his attention to cognitive factors that mediate distinctive behavior in particular situations do, however, distinguish him from theorists who rely on global transsituational dispositions. These same points can be made with even greater emphasis for Walter Mischel. Similarly, Bandura describes self-efficacy as a specific variable, in distinction to earlier constructs of self-esteem and competence, but the similarity in content across the theorists is striking. Self-efficacy also allows Bandura to provide a distinctive account of the dynamics of anxiety. The model also is appealing because it is so closely linked with empirical research; indeed, the model is exemplary for its grounding in and generation of experimentation. Finally, Bandura employs modeling and self-efficacy to provide a convincing account of the origins of anxiety-based psychopathology. This account leads to specific intervention strategies whose effectiveness has been demonstrated.

Despite these very positive characteristics, there are several points on which one may object to Bandura's theory. In particular, Bandura does not discuss the physiological grounding of personality characteristics, aside from some attention to physiological correlates associated with changes in self-efficacy. Similarly, there is only very limited focus on conflict, arousal, affect, and motivation. We are given a clear picture of the mechanisms involved in observational learning, self-efficacy, and the self-system, but there is none of the emotional coloring that renders psychoanalytic formulations so real. Neither are there details about the structural units that provide explanatory and predictive power in classic personality theories. Having said this, it is important
to acknowledge that trade-offs exist, and Bandura’s theoretical structures receive high marks for accessibility and testability. Furthermore, Mischel’s recent inclusion of affect as one of the units in his CAPS theory is a step toward inclusion of the missing affective contributions in social learning accounts of behavior.

This last comment leads to a final observation. In many respects, Bandura’s and Mischel’s positions complement one another. Bandura describes the mechanics of the learning processes through which people acquire behavior tendencies, and he describes a self-system through which people monitor and evaluate their behavior. What he does not provide is a structural or dynamic model of personality, as noted above. Mischel, on the other hand, describes general person variables, and he articulates a connection between those general structures and the individual’s more specific characteristic behaviors. Mischel, however, has not been specific about the mode of acquisition of these structural and dynamic units. As a pair, then, Bandura’s and Mischel’s social learning models have much to offer. Subsequent models of personality certainly will benefit from their noteworthy features.
We have now completed our survey of personality theories. Each of those theories, as the reader will have seen, adopts a particular perspective in its attempt to describe and to account for the characteristic behavior of individuals. Perhaps the central reality to which all personality theories respond is a recognition that the person we have become as a function of our own distinctive life history seems to constrain us to continue to act in characteristic ways. This is not to suggest that behavior is immutable, or that our life course is fully charted at an early age. Personality unfolds gradually, as Erikson points out, and change certainly occurs across time and experience. Furthermore, our understanding of our own nature may well be incomplete or illusory, as Freud, Skinner, and virtually every other theorist except Allport have proposed. But the message of personality theory is that our evaluation of and response to the world in which we move is constrained by the person we have become.

The goal of personality theories is to provide a framework for conceptualizing the characteristic and integrated nature of an individual, and for relating that nature to his or her behavior.

In this final chapter, we reconsider the individual theories we have presented, as well as the study of personality itself. We first compare those theories in terms of the underlying issues introduced in Chapter 1, and we conclude with an attempt to provide some perspective on the field.
We have now reached the end of our tour through thirteen major types of personality theories. The reader who has faithfully completed the journey must surely be impressed with the diversity and complexity of these viewpoints. Each type has proved to have certain distinctive features, and in each case we have found something about the position to approve or admire. It seems appropriate at this point to pause and attempt to identify general trends that exist in spite of the tremendous differences among personality theories. It is important that students should have a sense of the individuality and distinctiveness of each viewpoint, but it is equally important that they be aware of whatever common qualities may exist in the midst of this welter of conflicting assertion and individual expression.

In this, our final chapter, we provide a retrospective look at the personality theories under consideration in pursuit of the goal of generality. Our discussion is organized around the dimensions proposed in the initial chapter as appropriate for comparing theories of personality. We also present a small number of issues that seem to us important in determining future developments in this area. As a concluding note we consider the advisability of attempting a synthesis
of personality theories in order to arrive at a general theory that will be maximally acceptable to all persons working in this area and at the same time more useful than any existing theory.

In comparing the theories we will focus upon differences in content rather than differences in form. Our principal reason for overlooking formal differences derives from our conviction that at this stage of development there is little basis for choice among these theories on such grounds. All are in need of considerable improvement before they can be considered even minimally adequate in terms of formal criteria such as explicitness of statement and adequacy of definition. Although there are differences between the theories on these criteria, these differences are less interesting and important than the existing differences in substance or content. Something should be said, however, concerning the relative fruitfulness of the various viewpoints as generators of research. We will return to consider this issue when we have completed our discussion of the substantive differences between the theories.

Our discussion of contemporary personality theory reveals that the importance of conceiving of the human organism as a striving, seeking, purposive creature is less central today than it was in the past. During the first third of this century this was an issue that provided a dramatic cleavage between various psychological theorists. McDougall, Watson, Tolman, and other leading figures focused much of their attention upon the question of whether humans were necessarily purposive. While it is still true that some contemporary theorists, such as Allport, Murray, Kelly, Rogers, and Adler, place a heavy emphasis upon the purposive nature of behavior, there is little strong resistance to this point of view. Even theorists such as Miller and Dollard and Skinner, who do not appear to view purpose as a crucial consideration in understanding behavior, make no attempt to pose this as a central distinction between their own position and other theories. One may suspect that the relatively general question concerning human purposive nature has been replaced by a series of more specific questions concerning such matters as the role of reward, the importance of the self, and the centrality of unconscious motivation. In general, then, most personality theorists seem to conceive of humans as purposive creatures. Even where this is not taken for granted, it does not seem to be a matter of hot dispute.

The relative importance of unconscious determinants of behavior as opposed to the importance of conscious determinants persists as a key factor in the distinction between the various theories of personality. Although this remains a central issue, the exact grounds for disagreement between theorists seem to have shifted considerably in recent years. Originally the debate focused about the reality or existence of unconscious motivation, but today the question
seems to be less a matter of whether such factors exist than a matter of under what conditions and how strongly they operate. Clearly Freud’s theory gives the heaviest emphasis to unconscious factors, and a variety of theories influenced by the orthodox psychoanalytic position such as Murray’s and Jung’s also give a heavy weighting to such factors. At the other extreme we find theories such as Allport’s, Skinner’s, Rogers’s, and Bandura’s, where unconscious motives are deemphasized or ceded an important role only in the abnormal individual. It is true that personality theorists have displayed a trend toward increased acceptance of the role of unconscious motives, but there remains a great deal of variety among the theorists in the extent to which this role is emphasized.

The considerable variation among theories in their concern with the learning process is anchored at one end by the detailed exposition provided by Skinner, Bandura, and Miller and Dollard and at the other end by the absence of any specific treatment of learning in the theories of Jung and Adler. Eysenck and Cattell devote considerable attention to this process, but for the most part their ideas represent attempts to pull together principles that have been developed by other theorists. Most personality theorists have been content to view development in terms of global principles such as maturation, individuation, identification, self-actualization, or the like, rather than attempting to provide a detailed picture of the learning process. Despite this lack of detailed discussion, notice that learning processes play an important, albeit implicit, role in a number of the theories under consideration. Thus, Freud’s discussion of the child’s acquisition of object choices certainly needs to be understood in the context of principles of learning. Similarly, Murray’s attention to the role of childhood press in developing needs, cathexes, and complexes represents a clear acknowledgment of the centrality of learning, not to mention his statement that “the history of the personality is the personality.”

Although there may be some neglect of the learning process, there is an abundance of interest in the products of learning or personality structure. One of the most distinctive features of personality theories is their numerous and distinctive schemes for representing personality structure. Among those who have been most detailed in their treatment of the acquisitions of personality are Allport, Cattell, Freud, Jung, Murray, and Eysenck. Historically there has been a tendency for those theorists who were most concerned with the learning process to be least concerned with the acquisitions of learning and vice versa. At present, however, those theorists who are sharply deficient in their treatment of either learning or structure tend to compensate for this deficiency by borrowing a set of formulations from another theory whose conceptual focus includes this neglected area. The best illustration of this trend is provided by the efforts of Miller and Dollard to incorporate into their learning theory the structural concepts of psychoanalysis.
We have already pointed out that as a group American psychologists have minimized the role of hereditary factors as determinants of behavior. Yet many of the theorists we have considered clearly and explicitly emphasize the importance of such factors. Cattell was convinced of the centrality of genetic determinants, and he hoped that his approach to the study of behavior would shed light on the details of the relation between genetic and behavioral events. Cattell has displayed both theoretical and empirical interest in the role of heredity in behavior. His investigations have actually tended to supply strong support for his theoretical convictions on this score. Hans Eysenck has been an outspoken advocate of the critical importance of genetic factors. Indeed, Eysenck (1991) argues that "consideration of genetic causes" is one of the criteria for a proper theory of personality. Similarly, the model developed in response to Eysenck by Gray, as well as Zuckerman's work on sensation seeking and the "alternative Big Five," places heavy reliance on genetic mechanisms.

Jung's theory was deeply committed to the importance of the genetic, and Freud considered hereditary factors of prime importance. Murray, Allport, and Erikson also accepted the significance of heredity, although they placed somewhat less emphasis upon this issue than the previously mentioned theorists. B. F. Skinner often is misunderstood as ignoring genetics, but he repeatedly described the importance of the individual's genetic endowment as well as the powerful effects of evolutionary history (the "contingencies of survival") on development of species characteristics. Furthermore, as we noted in the end of Chapter 8, two of the new and exciting lines of research in contemporary personality research concern behavior genetics and evolutionary personality theory. Of the personality theorists we have considered, it seems that Horney, Kelly, Bandura, and Sullivan place the least emphasis upon such factors. We find, then, that the majority of personality theorists have accepted or emphasized the importance of hereditary factors, and several have coupled this theoretical emphasis with relevant empirical research.

The contrast between Freud's and Kelly's theoretical positions nicely illustrates the variation among personality theorists in their emphasis upon the significance of contemporary factors as opposed to the significance of events taking place early in development. Erikson's approach, the stimulus-response theory of Miller and Dollard, Murray's personology, and Sullivan's interpersonal theory resemble Freud's theory in their emphasis upon early experience, and Allport's and Rogers's theories resemble Kelly's position in stressing the contemporaneous. The real and important theoretical differences existing here are sometimes concealed by the implication that the theorists who emphasize early experience do so only out of a fascination with history or the past and not because of the predictive power or current significance of such events. The defenders of the importance of the ongoing present maintain that the past can be of significance now only through the operation of factors in the present. Thus, if we fully understand the present, there is no need to deal with the past.
Actually, there is no real disagreement over the fact that the past influences the present only through the operation of present factors, forces, or attributes (ideas, archetypes, memories, dispositions). The individual who emphasizes the importance of past events maintains, however, that the past is indispensable in order to understand development and also to provide information about forces that are operating in the present. The chief disagreement between these two theoretical camps centers about the question of whether factors influencing present behavior can be assessed adequately from viewing present behavior or whether knowledge concerning past events may not provide special information of a crucial nature. On this issue personality theorists seem rather evenly divided.

The most extreme emphasis upon the continuity of development appears in the theories of Erikson, Freud, Murray, Miller and Dollard, Bandura, and Skinner, although to a lesser degree the same theme is present in the theories of Adler and Sullivan. These theories clearly imply that events taking place in the present are systematically linked to events that took place in the past and that development is an orderly and consistent process accountable in terms of a single set of principles. In contrast, Allport, Kelly, and to some extent Rogers explicitly stressed the lack of continuity in development and the relative independence of the functioning adult from the events of childhood or infancy. Jung also emphasized the disjunctiveness of development, although he saw the major discontinuity as occurring at middle age when biological motives are largely replaced by cultural and spiritual needs. All of these theorists suggest that somewhat different principles may be needed to account for what takes place at different stages of development. Not all theories of personality display much interest in the process of development, but most of those that do seem to conceive of development as a continuous process to be represented in terms of a single set of theoretical principles.

We have already agreed that one of the features that distinguished personality theory historically from other varieties of psychological theory was an emphasis upon holism. Consistent with this observation is the fact that most contemporary personality theorists may be accurately classed as organismic. As a group they emphasize the importance of considering the individual as a total, functioning unit. Thus Allport, Goldstein, Jung, Murray, and Rogers all stressed the fact that an element of behavior is not to be understood when studied in isolation from the remainder of the functioning person including the person's biological make-up. Only Skinner and Miller and Dollard seemed willing to resist convention on this issue and questioned the importance of studying the "total individual." The importance of the field was emphasized by Adler, Erikson, Kelly, Lewin, Murray, Rogers, and Sullivan. Only Lewin and Murray, however, attempted to provide a detailed set of variables in terms of which the field can be analyzed, although Rogers and Kelly went to great lengths to emphasize the phenomenological outlook of the individual. This
relative lack of interest in the details of analysis is a logical outgrowth of the
holistic convictions of field theorists that lead them to be wary of specific sets
of variables. Almost no one denies that the individual's perception of the
situation within which behavior occurs is important, although Freud, Jung,
Miller and Dollard, and Skinner gave this matter less explicit attention than
other theorists. It is evident that the usual contemporary personality theory
places heavy emphasis upon the importance of studying behavior "organically"
without attempting to isolate small segments of behavior for microscopic study.
At the same time there is a growing tendency for the personality theorists to
provide a full representation of the situation or context within which behavior
occurs.

An individual who adopts a holistic position may be recommending one of
two approaches to the representation of behavior. He or she may simply be
suggesting that a successful theory must be complex, be multivariate, and
include reference to the situation within which a behavioral event occurs as
well as to other behavioral events of the actor. On the other hand, he or she
may be suggesting that all of the individual's behavior is so tightly cemented
together and, further, that it is so closely linked to its environmental context
that any attempt to abstract elements or variables for study is doomed to
failure. The first point of view accepts the complexity of behavior and suggests
that a reasonably complex model of behavior is necessary to achieve much
efficiency in predicting behavior. The second point of view takes the complexity
of behavior as a point of emphasis and insists that "all" aspects of the individual
and his or her situation must be given their due before progress can be made.
It is easily understandable that those theories representing the latter position
have customarily placed a heavy emphasis upon the distinctiveness or uniqueness
of the individual. As the theory insists that the observer consider more
and more different facets of the individual, the person's behavior and the
context of this behavior and the distinctiveness of each individual and indeed
each act must become obvious and a matter of concern. Allport's theory is by
far the most thoroughgoing in its stress upon the importance of giving a full
consideration to individuality. In fact, as we have seen, this emphasis led
Allport to propose that more attention be given to the idiographic method of
studying behavior. This same general point of view is given central emphasis
in the theories of Adler and Murray. The learning theorists are most explicit
in denying the crucial significance of the uniqueness of behavior. Although there
are a number of personality theorists who deal centrally with the uniqueness
of behavior, this seems less typical of modern personality theory than the
organismic emphasis.

It is commonly recognized that Dollard and Miller and Skinner dealt with
rather small units of behavior whereas the organismic theorists were more
concerned with units that embrace the whole person. Cattell favored smaller
units and Allport and Rogers favored larger units in describing behavior. The
remaining theorists range more widely over the molecular-molar spectrum. Freud, for example, could analyze behavior into very small units when the need arose, but he also had the facility of dealing with the whole person as a unit. Much the same can be said about Erikson.

The significance of the psychological environment, or the world of experience as opposed to the world of physical reality, is accepted by most personality theorists and is a matter of focal emphasis for several. Kelly and Rogers are the most explicit and thoroughgoing in their development of this point of view. In fact, they have been accused of largely ignoring the world of reality as a result of their preoccupation with the world of experience. This point of view also receives considerable attention in many of the psychoanalytic theories and in Murray's theory. Although no one questions that the manner in which the individual perceives a given event has some influence upon the way in which he or she will respond to this event, we find that this process receives little attention in the theories of Cattell, Miller and Dollard, Eysenck, and Skinner. All in all, it is probably fair to say that personality theorists are more impressed with the importance of the psychological environment than with the importance of the physical environment.

We have seen that there are several senses in which the self-concept is employed by personality theorists. Either the self is seen as a group of psychological processes that serve as determinants of behavior or else it is conceived of as a cluster of attitudes and feelings the individual has about him- or herself. In one form or the other, however, the self occupies a prominent role in most current personality formulations. Not only are there specific theories that are identified as self theories, but a large number of other theories employ this concept as a focal theoretical element. Among the theorists who, in some way, make prominent use of the ego or self-concept are Adler, Allport, Cattell, Freud, Horney, Erikson, Jung, and Rogers. Only Eysenck, Skinner, Miller and Dollard, and Kelly seem to conceive of behavior in such a manner that the self is not ceded an important role. It is true that many of the current formulations of the self have avoided or lessened the subjectivity that inhered in early conceptions. There has been a definite trend in the direction of providing operations whereby the self or aspects of it can be measured. One might say that in the early days of psychological theorizing the self tended to have mystical or vitalistic implications whereas the contemporary self seems to have lost these qualities as it gained at least a partial quantification. Clearly personality theorists today are characterized by an increased interest in the self and attendant processes.

One component of the self singled out for special attention in a number of theories is the individual's sense of competence. The motive to develop areas of excellence in interactions with the environment was introduced formally by White (1959) and subsequently used to modify Freud's psychosexual stages of development (White, 1960). This motive appears in personality theories in
the form of Adler's emphasis on overcoming inferiority and striving for superiority, as one of Erikson's proposed basic crises, in Allport's proposal that mastery and competence account for the functional autonomy of certain motives, in Kelly's focus on accurate anticipation of consequences, and in Bandura's specification of self-efficacy. No corresponding motive exists in the theories developed by Jung, Eysenck, Rogers, Skinner, or Dollard and Miller.

The importance of group membership determinants of behavior is a matter for concerted emphasis primarily within those theories that have been heavily influenced by sociology and anthropology. Illustrative of this are the positions of Adler, Erikson, Horney, and Sullivan. It is quite natural that those theorists who have stressed the "field" within which behavior occurs should also manifest an interest in the social groups to which the individual belongs. Consistent with this is the fact that all of the above theorists may be considered field theorists. None of the theorists we have examined believes that group membership factors are unimportant, although Allport, Jung, and Skinner have chosen not to focus upon these factors. In general, it seems that there is a growing tendency for personality theorists to give explicit attention to the sociocultural context within which behavior occurs.

We have observed that it is customary for personality theorists to attempt some form of interdisciplinary anchoring of their theories. Most of these efforts center about the possibility of interpenetrating psychological concepts with the findings and concepts of the biological sciences. Illustrative of this tendency are the theories of Allport, Freud, Jung, Murray, and Eysenck. None of the personality theorists we have discussed, with the possible exceptions of Freud and Jung, seems oriented toward linking their formulations with the disciplines of anthropology and sociology. However, Dollard and Miller, Freud, and Murray show a balanced interest in establishing theoretical links with both biology and the social sciences and Erikson shows a special interest in relating his theory to the field of history. From this it is clear that personality theorists as a group are more oriented toward the biological than toward the social sciences. There is, however, some evidence for an increased interest in the findings and theories of sociology and anthropology.

The diversity and multiplicity of motivation in the human is given a full recognition in the theories of Allport, Cattell, Maslow, and Murray. In each of these theories there is a firm emphasis upon the fact that behavior can be understood only with the identification and study of a large number of motivational variables. The theories of Cattell and Murray provide the only detailed attempts to translate this multiplicity into a set of specific variables. Adler, Erikson, Freud, Eysenck, Bandura, Horney, Rogers, and Skinner seem willing to approach the study of human behavior with a much more abbreviated set of motivational concepts. Thus, although personality theorists share a detailed concern with the motivational process, they are divided between those who
choose to represent motivation in terms of a relatively small number of variables and those who consider a very large number of such variables necessary.

A large number of personality theorists demonstrate detailed and continuous concern with the actualized, mature or ideal personality. This is a primary feature of the theories of Rogers, Allport, and Jung. It is also prominent in the writings of Freud, Adler, Horney, and Erikson. Those theorists who have shown the least interest in specifying or accounting for maturity and self-actualization include Cattell, Miller and Dollard, Skinner, Bandura, Eysenck, and Kelly.

We have observed considerable variation among personality theories in their relevance to abnormal behavior. Not only have some theories been based largely upon the study of neurotic or other disturbed individuals, but also many theories have a good deal to offer in the way of proper methods of altering or treating the various forms of psychopathology. The origins of psychoanalysis in the observation of patients undergoing psychotherapy is well known, as is the profound impact that this theory has had upon the understanding and treatment of all varieties of behavior deviation. Much the same association can be seen between behavior disorder and the theories of Jung, Adler, Horney, and Sullivan. The theorist who has shown the least concern with the world of psychopathology is Allport.

Our discussion to this point has been quite general, and little attempt has been made to assess each theory in connection with each issue. We have been more concerned with the overall status of personality theory than with a detailed comparison of the specific theories. Table 15.1 provides a partial correction for this generality through indicating for the individual issues whether each of the theories emphasizes, occupies a moderate position of, or deemphasizes this issue. Obviously these judgments are broad and approximate. Their lack of precision is due to the extremely general categories used in the rating as well as complexity of the theories, which in certain instances makes it impossible to know with certainty just how a particular theorist stands on a given issue. In any case, the justification for these ratings has been presented in the preceding chapters along with appropriate references to the original sources. Consequently, there is no need for readers to accept our judgments uncritically as they can freely make their own ratings using the same sources of data we have employed.

In Table 15.1 the symbol H indicates that the theory emphasizes the importance of this issue or this set of determinants. M indicates that the theory occupies a middle ground, and I suggests that the issue or position is deemphasized within this theory.

We may note—without additional discussion—that to our knowledge five multivariate analyses have been performed on the data presented in previous editions of Theories of personality. The first such study was carried out by Desmond Cartwright (1957) and appeared shortly after the first edition was
published. Using factor analysis, four factors were extracted. Factor A includes the attributes of purpose and group membership determinants. Theories highly saturated with this factor are those of Adler, Fromm, Horney, Rogers, and Sullivan. Factor B comprises the attributes of structure, heredity, and biology. Angyal, Eysenck, Freud, Jung, Murray, and Sheldon are high on this factor. Purpose, organismic emphasis, and self-concept are the principal attributes comprising factor C. Theories loaded with this factor are those of Allport, Angyal, Goldstein, and Rogers. The fourth factor consists of structure and heredity and is of importance only with respect to the factor theories.

A few years later, Taft (1960) reported the results of a cluster analysis of the data in Table 1 (first edition). Five main clusters emerged. Cluster I includes Adler, Fromm, Horney, Murray, and Sullivan, and the name suggested for this cluster is functionalist social field theories. The second cluster, called developmental approach to unconscious complexes and personality structures, includes only the three original psychoanalytic theorists, Freud, Adler, and Jung. Angyal, Goldstein, Jung, and Rogers form a cluster labeled innate organismic self-actualization. Cluster IV is identified as continuous development in interaction with social environment. Theories heavily loaded with this factor are those of Adler, Freud, Murray, and Sullivan. The last cluster includes Allport, Cattell, Eysenck, Freud, Jung, and Sheldon and is labeled constitutional personality structures.

Schuh (1966) performed a cluster analysis for both the attributes and the theorists. We shall report only his results for the theorists. They fall into four clusters. The first cluster consists of Adler, Fromm, and Horney and is named social emphasis. The second cluster, composed of Allport, Angyal, Goldstein, Miller and Dollard, and Rogers, is called self emphasis. The third cluster includes Eysenck, Freud, Lewin, Murray, and Sheldon and the fourth Cattell, Jung, and Sullivan. These two clusters were not named since no common features could be found by which to characterize the diverse viewpoints.

The study by Evans and Smith (1972) involved the factor analysis of both attributes and theorists and a comparison with the results of Schuh. In spite of the addition of new dimensions and theorists in the revised version of this book, as well as the use of a different method of analysis, Evans and Smith found considerable similarity between their findings and those reported earlier. Their first theorist factor was comprised of Binswanger and Boss, Miller and Dollard, Cattell, Rogers, Goldstein, Angyal, and Allport and corresponds to Schuh’s second factor, which was called self emphasis. Their second factor included Fromm, Horney, Adler, and Freud and corresponds to Schuh’s first cluster, which was referred to as social emphasis in the previous study and psychoanalytic emphasis in the more recent report. The third factor consisted of Sheldon, Murray, Lewin, and Freud and corresponds to Schuh’s third cluster. Evans and Smith label it biological emphasis. A fourth factor is called learning emphasis and is composed of Binswanger and Boss, Skinner, Miller and Dol-
### Table 15.1
Dimensional comparison of theories of personality

<table>
<thead>
<tr>
<th>Parameter compared</th>
<th>Freud</th>
<th>Jung</th>
<th>Adler</th>
<th>Horney</th>
<th>Sullivan</th>
<th>Erikson</th>
<th>Murray</th>
<th>Allport</th>
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<td>Purpose</td>
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<td>Unconscious determinants</td>
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<td>Structure</td>
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*Note: H indicates high (emphasized), M indicates moderate, L indicates low (deemphasized).*

A final study (Campbell, 1980) analyzed the corresponding table of theories in the third edition of this text using cluster analysis and factor analysis. The results differed from those obtained in previous studies, both because of differences introduced in the third edition and because the analyses treated the ratings data as ordinal rather than interval data. We present the six clusters obtained in the clustering procedure. Freud and Erikson, the tightest cluster, share an emphasis on early development. Murray, Rogers, and Goldstein provide an organismic emphasis plus a stress on uniqueness, and they deemphasize learning processes. Skinner and Cattell both disregard the psychological environment. Miller and Dollard and Binswanger and Boss form the fourth cluster, apparently because of their lack of concern for the structure of personality. Horney and Angyal both emphasize the self-concept and the ideal personality, and they provide a limited number of motivational constructs. The final cluster, containing Allport, the Eastern psychologists, and Sheldon, share an organismic emphasis and a stress on uniqueness plus a relative lack of concern.
with reward, early development, group membership, and unconscious processes. A cautionary note, provided in this paper points out that such analyses weight each dimension equally, both within and between theorists. This is reasonable as a general assumption, but it does obscure certain features of the theories. For example, Allport is rated high on uniqueness, self-concept, and biological mechanisms. These ratings are accurate, but they fail to capture the salience of uniqueness and the self-concept within Allport’s theory. Because the analyses take the ratings literally, when in fact the scaling fluctuates within and between theories, we must consider the resulting groups as approximations.

This brings us to the question of how well the various theories have functioned as generators of research. We have already agreed that this is the most important evaluative comparison that can be made among theories; unfortunately it is likewise the most difficult comparison to make with assurance. We have discussed some of research generated by each theory in the individual chapters on the theories. All of the theories have had some function as generators of investigation, but the varied nature of the studies that have resulted, as well as the complexity of the relationship between the theory itself

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and pertinent research, makes anything other than a rough judgment impos-
sible.

Granted the subjectivity and the tentative nature of our verdict, we propose
that theories may be divided into three clusters in terms of how fruitful they
have been as stimulants to research. The first group includes theories that
have led to many investigations carried out in a variety of areas by a diverse
group of investigators. Here we place Eysenck’s theory, Skinner’s position,
and Bandura’s theory. In each case the message of the theory has transcended
the bounds of one small group working in close collaboration so that issues
related to the theory have been explored in a variety of different settings and
by individuals who represent rather heterogeneous backgrounds.

The second cluster includes those theories that have been accompanied
by a large bulk of studies that either are quite limited in scope or else have
been carried out by individuals intimately involved with the theory and its
development. In this group we would place the theories of Allport, Cattell,
Erikson, Jung, Murray, Sullivan, Dollard and Miller, and Rogers. As the individ-
ual chapters made clear, each of these theories is accompanied by, or grew
out of, a large body of relevant research. In most cases, however, the research
deals with a limited range of problems or else the application of a small number
of techniques. Further, in the usual instance the research has been carried
out by a small number of closely knit investigators. We would also include
Freud in this category, despite the great wealth of work generated by his theory
within and outside of psychology, because of the inherent difficulty in testing
propositions about person characteristics that are by definition inaccessible
to the individual. The third group consists of those theories where there is
little evidence of accompanying investigation. Here we place Adler, Kelly,
and Horney.

It is reassuring that, in spite of the limitations of theories of personality
as generators of research, the large majority of such theories have been
accompanied by a considerable quantity of research. Whatever procedural
limitations may be inherent in these investigations, the fact remains that they
document the interest of the theorists in examining the effectiveness of their
theories in the face of empirical data.

SOME
REFLECTIONS ON
CURRENT
PERSONALITY
THEORY

What of the future development of personality theory? Are there qualities
missing at present from the theoretical scene that should be added? Are there
specifiable shortcomings in the theoretical approach of most psychologists?
Are there issues that today are of ascending importance and point the way to
probable future progress? It seems to us there are, although it must be admitted
not all, or perhaps most, psychologists would agree with us as to their pre-
cise identity.
We believe the field of personality would benefit enormously from an increased sophistication on the part of psychologists concerning the nature and function of theoretical formulation. While there are many aspects to this sophistication, perhaps the most important has to do with understanding the central importance of theories as a means of generating or stimulating research. Psychologists should give up the idea that they have discharged their obligations if they provide a theoretical formulation that takes into account or makes consistent what is already known in a given empirical area. If the theory does nothing more than organize known facts, we might as well remain at a descriptive level and forsake theorizing. The plea here is simply that theories be evaluated in terms of their capacity to generate new research. Psychologists should also show themselves more willing to accept the fact that assumptions concerning behavior that do not have eventual consequences for the kind of predictions to be made, or the type of data to be collected, are valueless and a waste of time, effort, and print. Let theorists focus attention upon formulations that have some meaningful relation to the business they are about—studying behavior.

Personality theory and research are in need of an increase in both radicalism and conservatism. One might choose to express this alternatively as an increase in both creative imagination and critical evaluation. The successful theorist must develop a dispassionate willingness to do radical violence to common assumptions concerning behavior. One should, so far as possible, be able to free oneself from common preconceptions concerning the nature of behavior. Once having displayed a capacity to innovate or create a theory that is not tied tightly to existing conceptions of behavior, the theorist should then display a rigid conservatism in extending, formalizing, applying, and testing the consequences of this point of view. In other words, theorists should be convention breakers, but once they have established a new set of conventions, they should be willing to explore exhaustively the implications of these conventions. It is impossible to test the consequences of a theory unless the theorist is willing to remain in one position long enough for verification procedures to be instituted and completed. This does not mean that the person should cling to their formulations stubbornly in the face of empirical disconfirmation. It does mean that, given a stable body of theory, change should be introduced as a result of controlled empirical evidence rather than because of whim or passing observation. It is of crucial importance that the theorist and his or her followers devote themselves to empirical investigation instead of polemic or verbal argument. It is of little significance which personality theorist is the most effective protagonist in a debate, but it is of crucial significance which personality theory is most useful in generating important and verifiable empirical consequences.

It is high time that the personality theorist was freed from obligation to justify theoretical formulations that depart from normative or customary views.
of behavior. It is all too common to find that a given theory is criticized for the fact that it emphasizes too strongly the negative aspects of behavior or overemphasizes the importance of sexual motives. It is true that a commonsense view of behavior sees humans as possessing both good and bad attributes and further considers them to possess not only sexual motives but other motives as well. This, however, is a complete non sequitur so far as the development of a theory of behavior is concerned. The theorist has complete freedom, as we have just emphasized, to depart from customary preconceptions about behavior and is required only to make statements about behavior that are empirically useful. The question of whether these statements please or offend the average individual is of no importance. It is quite possible that the most fruitful theories of behavior will prove eventually to be highly offensive to an average member of our society. Of course the opposite alternative is also perfectly possible. The point we are making here is that theorists must deny customary views of behavior or that they must accept such views. They are at liberty to do either. Their position is neutral in regard to these views, and they may conform or deviate as they wish, with the evaluation of their decision resting upon criteria altogether removed from the normative acceptability or deviance of their theory. Many other criticisms of theoretical formulations that are frequently encountered have an equally dubious status. Thus, the suggestion that a given theory is too molecular, too rational, or too mechanistic simply reflects preconceptions about behavior that the particular critic possesses. These remarks serve more to reveal the position of the critic than to evaluate the theory. In the final analysis the only telling criticism of an existing theory is an alternative theory that works better. If one says that a given theory is too molecular, it remains for someone to demonstrate that an alternative theory employing larger units of analysis is able to do all the first theory can do and more besides.

One may argue that at present in psychology there is altogether too little value placed upon empirical research that bears directly upon existing theories and altogether too much value placed on the contribution of new theoretical formulation or speculation provided after a given set of findings has been observed. There is more prestige associated in the minds of many psychologists with the creation of a new but trivial theory, possessing little demonstrated superiority over existing theories, than there is in the execution of research that bears crucially upon an important theory already in existence. Psychologists, in their awe for theory and their failure to discriminate between after-the-fact explanation and before-the-fact prediction, have created a set of conditions where there is a maximum of interest in developing new theories and a minimum of interest in examining the consequences of existing theories.

An annoying and possibly malignant characteristic displayed by some contemporary personality theorists is the tendency toward what might be called theoretical imperialism. We refer here to the attempt, once a particular theoret-
Some Reflections on Current Personality Theory

atical position has been developed, to try to persuade the reader that this is the only feasible manner in which a theory of behavior can be formulated. Thus, numerous psychologists assert that the only defensible theoretical mode is one that involves continuous interaction with physiological processes, others suggest that only “molar” formulations are fruitful, and still others imply that the social context must be the center of the theorist’s attention. The point is not that these theorists are necessarily wrong in their faith but only that theoretical formulation is a “free enterprise” if ever there was one. No theorist has the right to tell fellow theorists their business. He or she is fully entitled to state their own convictions and link them with as much empirical evidence of their utility as possible. He or she may even wish to couple the theory and evidence with rational arguments that the theorist finds convincing as to why this approach will prove in the end to be fruitful. But to imply that this is the way in which theoretical progress must be made is nonsense and can only serve to confuse the student in the field. Let the theorist present the theory in the most forceful manner possible but let the theorist respect the fact that there is no such thing as theoretical certainty.

All personality theories make at least weak assumptions concerning the existence of some form of personality structure. Thus, although some theorists are more concerned with the relative importance of external or situational factors than others, all agree there is some degree of constancy to personality that generalizes across different periods of time and different situations. Theoretical differences between trait theorists such as Allport or Cattell and situational determinists such as Hartshorne and May (1928, 1929) led to active debate and programs of research in the two decades prior to World War II. As discussed in Chapter 7, this tissue reemerged in the 1970s and 1980s as a major topic of theoretical contention and research (e.g., Bem & Allen, 1974; Endler & Magnusson, 1976a, b; Epstein & O’Brien, 1985; Kenrick & Funder, 1988; Magnusson & Endler, 1977b; Mischel, 1968, 1984; Zuroff, 1986). As we have seen most clearly in the case of Cattell, trait theorists believe that individuals can be compared in terms of a number of traits or enduring dispositions, and with knowledge of the individual’s relative position or score on a given trait, it is possible to predict a good deal about the person’s behavior in a variety of different environmental settings. The believer in situational determinism is convinced that most behavior is a consequence of the environmental setting or situation in which the individual is behaving. Thus, behavior is elicited by stimuli rather than being emitted because of an enduring trait or disposition. An intermediate position asserts that the individual’s dispositions or traits influence the situations in which one finds oneself and the stimuli in the environment to which one attends. This interactionist position assigns a significant role to both situational variables and traits or dispositions. The interactionist perspective is inherent in a number of the theories we have considered. Thus, Henry Murray conceptualized behavior in terms of thema,
the combination of a person's need and the situational press. Indeed, his basic person variable is the serial thema, a recurring and characteristic need-press combination. Similarly, Allport proposed that a trait renders many stimuli "functionally equivalent" by virtue of shared meaning such that any of the situations gives rise to any of a set of linked behaviors. Kelly also argued that it is the individual's construal of situations that gives rise to behavior, rather than autonomous behavioral tendencies. Mischel and Shoda's (1995) "if . . . then . . . ." cognitive-affective approach to understanding behavior in specific situations is the latest instance of an interactionist perspective within personality psychology.

A related issue concerns the multiple levels of analysis at which behavior can be addressed. One of the central contributions of personality theorists has been their recognition that it is important to conceptualize and to investigate behavior at differing levels of generality. This position was never more clearly articulated than in Murray and Kluckhohn's statement "Every man is in certain respects like all other men, like some other men, [and] like no other man." Rather than engage in reductionism, this approach maintains that each level of analysis is legitimate and informative in its own right, and investigators are free to work at the level that best suits their purposes. We can identify two different versions of the multiple-levels approach. First, many theorists describe hierarchies of constructs. Thus, Cattell describes surface and source traits; a person's specific attitudes (surface traits) can be understood in terms of general ergs and sentiments (source traits). Eysenck describes a progression from specific responses to habitual responses to traits to types. Murray described general needs as well as more specific need integrates and aims. He stated that a person could be described in terms of his or her specific set of cathexed objects, which in turn must be understood in terms of more general constructs. Freud described general instincts and common mechanisms, but he also emphasized more specific instinct derivatives and object choices. Freud's metapsychology was an attempt to formulate the general principles that seemed inherent in his observations of the concrete behavior of specific individuals. This same mixture is found in the theories of Adler, Erikson, Rogers, and Skinner. It is as though these theorists were loathe to lose the specific behavior of an individual while formulating laws about people in general. Mischel provides a contemporary example with his description of five stable cognitive-affective mediating units that interact with the perceived situation to generate specific "if . . . then . . . ." situation-behavior profiles. Even Allport, the advocate of an idiographic approach to personality, recognized the importance of establishing general principles that account for the origins of individual characteristics. Indeed, any attempt to label a particular personality theorist as either idiographic or nomothetic is largely doomed to failure. Second, especially in more recent years, personality theorists have described integrated systems relating observed behavior to underlying processes. Eyse-
nck, for example, builds a model in which underlying neurological characteristics such as cortical arousal give rise to differences in sensitivity to stimulation; these in turn affect psychological characteristics such as conditioning, sociability, and impulsiveness, which themselves are ultimately manifested in the personality types of introversion–extraversion. Similarly, Zuckerman (1994, 1995) outlines a psychopharmacological model linking neurochemical mechanisms (neurotransmitters, enzymes, and hormones) to behavioral mechanisms (approach, inhibition, and arousal), which are then linked to basic personality traits (sociability, impulsive unsocialized sensation seeking, and anxiety). We encourage such multiple-level approaches as stimuli for further progress in personality theorizing (see also Briggs, 1989; Dahlstrom, 1995; Revelle, 1995; Wakefield, 1989).

Recent years have witnessed a growing preference for theorists to proceed in more modest steps than those implied by a single general theory that embraces all or most of human adaptive behavior. These more limited or minitheories have sometimes been concerned only with a particular domain or area of behavior, such as decision making or motor skills, or they may have dealt with a particular complex of behavior such as schizophrenia or sexual development. Some theorists have directed their attention toward mathematical models of cognition or learning. Others have been more concerned with the neurophysiological substrate of behavior, but in all cases the theorists have focused upon a particular dimension or mode of representation of behavior to the relative exclusion of many other aspects of behavior. These modest or circumscribed theoretical approaches must ultimately be considered by and contribute to inclusive or general personality theories.

As we have already noted, recent years have been accompanied by extensive and significant developments in the broad area of psychobiology. The systematic investigation of genetic determinants of behavior has been promoted both by the development of new methods and findings and also by some evidence of a lessening of the traditional American focus upon environment to the relative exclusion of biology. Much the same can be said concerning hormones and behavior, brain behavior associations, and psychophysiology (e.g., Zuckerman, 1995). All in all, there has been a broadening and deepening of our knowledge of the manner in which biological factors influence and are influenced by behavior, and this information is only now beginning to enter significantly into the attempt to account for the complex behavior of humans. The tremendous vitality of the neurosciences and the well-publicized concern with extending evolutionary theory to areas of complex human behavior such as aggression, altruism, cooperation, competition, and mating patterns (Barash 1977; D. Buss, 1990, 1991, 1994; Wilson, 1975) all point to the increasing likelihood that biology will have much more to say about the future of personality theories than it has had to do with past theories.
The reader should be careful not to construe what has been said as indicating a sense of discouragement with the present state of personality theory. It is true that there is much that can be presented in the way of criticism of current theories, particularly when they are compared with absolute or ideal standards. More significant, however, is the fact that the signs of progress are unmistakable. It was primarily during the past fifty years that the bulk of relevant empirical research appeared, and it was likewise during this period that sophistication concerning the contribution of neighboring disciplines developed. At the same time, the theories have tended to become more explicit in their statement, and much more attention is paid to the problem of providing adequate empirical definitions. Further, the range of ideas or conceptions concerning behavior has broadened immensely. In general, we believe that whatever the formal shortcomings of these theories may be, the ideas contained within them have had a remarkably broad and generative influence upon psychology. Nor does there seem to be any reason to expect that this influence will diminish in the future.

**THEORETICAL SYNTHESIS VERSUS THEORETICAL MULTIPLICITY**

We have seen that, although there are similarities and convergences among theories of personality, the diversities and disagreements remain striking. In spite of clustering about certain modal theoretical positions, there has been as yet little progress in the direction of developing a single widely accepted theoretical position. One may indeed wonder at the apparently endless ingenuity of psychologists in devising new ways of viewing or ordering the phenomena of behavior. In an early survey of the personality literature, Sears was moved by this state of affairs to remark:

*Any theory is valid only to the extent that it proves useful in predicting or providing for control of behavior; there is no right or wrong in the matter, but only convenience. Since no theory yet has proved brilliantly efficacious in ordering the data of molar behavior for these purposes, it is perhaps not surprising that so many psychologists find themselves goaded into new attempts to construct a systematic set of personality variables.* (1950, p. 116)

Granted that this theoretical multiplicity exists and granted also that the factors leading to this state are evident, is it not undesirable to have so many conflicting viewpoints in a single empirical area? Would it not be better to provide a single viewpoint that incorporates all that is good and effective from each of these theories so that we could then embrace a single theory that would be accepted by all investigators working in this area? Surely many of the theories we have discussed contain strengths that are not present in other
theories. Can we not combine these individual strengths so as to create a uniquely powerful theory that will give us added insight into human behavior and generate predictions concerning behavior that are more comprehensive and verifiable than those presently generated by any single theory of personality?

Although this line of reasoning is intriguing and finds much support among contemporary psychologists, there are, nevertheless, a number of serious objections that can be raised to it. First, this point of view assumes that the existing personality theories possess a sufficient degree of form clarity so that their exact nature can be established and the synthesizer can then readily identify common components and disparate elements. As we have seen, this is anything but the case. Many of the theories are stated so imprecisely that it would be extremely difficult to make any direct comparison of their elements with the elements of another theory. This suggests that synthesis of necessity must be a somewhat haphazard process as the elements involved in the synthesis are only dimly outlined. Second, the argument assumes that there are no unresolvable conflicts between the content of the various theoretical positions or, if such conflicts exist, that they can readily be settled through an examination of the "facts of the matter." It is evident that there are many points where the theories are in flat disagreement. Further, these points of disagreement are frequently related to empirical phenomena that are far from being adequately studied. In fact, many of these theoretical differences are concerned with empirical issues of the most elusive variety, so that the "facts of the matter" are by no means clear. Third, it assumes that all or most of these theories have a unique and positive contribution to make to a powerful theory of behavior. The truth of the matter is that some of these theories are a long way from possessing demonstrated empirical utility. The amount of empirical testing of the derivable consequences of psychological theory is minute compared to the range of problems with which the theories purport to deal. Fourth, this point of view assumes that a state of theoretical harmony and agreement is healthiest at present. At a stage where no single position seems to have a convincing superiority over all others, one may argue quite reasonably that, rather than investing all of our time and talent in a single theory, it would be wiser to explore actively the area through the simultaneous use of a variety of theoretical positions. When so little is known with certainty, why place all of the future's hopes in one theoretical basket? Is it not better to let theoretical development follow a natural and unfettered course with the reasonable expectation that as stable empirical findings multiply, and the individual theories become more formalized, an integration may be arrived at naturally and upon a firm empirical base, rather than as an artificially contrived process with personal taste and belief as the primary determinants of the process? Fifth, one must recognize that several of the theories we have discussed are highly eclectic. For example, Gordon Allport's final position is one that incorporates much from many other
theories we have discussed. Likewise, Bandura’s social learning theory has gradually come to display much in common with cognitive approaches to understanding behavior, once considered the very antithesis of the S-R tradition from which his theory emerged. Thus, over time there has appeared a natural merging and intermixing of theoretical formulation even though it has not resulted in any single position of consensus.

What of the didactic value of presenting to the student a single organized view of personality rather than the welter of contradictory ideas that we have seen presented in this volume? Presumably it is good mental hygiene to give the student a single clearly outlined theoretical position, but it is certainly poor preparation for serious work in the field. If students believe that there is only one useful theory, it is easy for them to feel that they have reality firmly in their grasp and consequently to overlook the importance of empirical study and the possibility of theoretical changes imposed by the outcome of such study. Why should students be given a false sense of harmony? Let them see the field as it really exists—different theorists making different assumptions about behavior, focusing upon different empirical problems, using different techniques for research. Let them understand also that these individuals are united in their common interest in human behavior and their ultimate willingness to permit empirical data to make the final decision concerning theoretical right and wrong.

Related to the above argument is the compelling consideration that theories are useful chiefly to the person who embraces them and attempts in a sympathetic and sensitive manner to extract their consequences. The notion of a general synthesis or integration usually communicates to the student the need to be cautious, take all points of view into consideration, and avoid emotional involvement with a particular, one-sided position. Before embracing any particular theory let us compare it with others, see that it is just as good in all respects, and read what the critics have had to say about it. Contrary to this conception, we recommend strongly that students should, once they have surveyed the available theories of personality, adopt a vigorous and affectionate acceptance of a particular theoretical position without reservation. Let the individual be enthusiastic and imbued with the theory before beginning to examine it critically. A theory of personality is not going to say or do much for the individual who approaches it aloofly, with criticisms and reservation. It will dictate problems to the devotee and stimulate him or her to do research, but it will not do the same for the cool and detached observer. Let the students reserve their critical capacity and their detailed scholarly apparatus to make certain that the research they carry out is so well executed that the findings “fall where they may.” If the individual does extract consequences from the theory and engage in relevant research, he or she will have ample opportunity for discouragement and despair concerning the adequacy of the theory and
may well end up convinced of its lack of utility. At least he or she will have had the opportunity of discovering just what the theory can do.

It remains our strong conviction that this is not the appropriate time or circumstance for an attempted synthesis or integration of personality theories. In simplest terms we feel that it is unwise to attempt a synthesis of theories whose empirical utility remains largely undemonstrated. Why make a conceptual arrangement in terms of aesthetic reaction and internal consistency when the important issue is how these elements fare in the face of empirical data? Far more fruitful, we believe, than any attempt at a master theory is the careful development and specification of a single existing theory with simultaneous attention to relevant empirical data. The ultimate answer to any theoretical issue lies in well-controlled empirical data, and the nature of such data will be adequately defined only as the theories themselves are better developed. It is one thing to change a theory in the light of empirical data that force upon the theorist some essential change, and quite another to change a theory because of some conflicting rational or evaluative issue. Our faith is that almost any theory, if it is systematically extended and coupled with extensive empirical research, offers greater hope for advance than an amalgamation of existing theories some of which are poorly stated and precariously related to empirical data.


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**Photo Credits**

Name Index

Abraham, K., 32, 146
Abrams, L. Y., 580, 584, 585
Adams, G. R., 215
Adams, N. E., 609, 611
Adelson, M., 338
Adler, A., 28, 29, 32, 34, 35, 91, 104, 120, 124-140, 147, 170, 171, 174, 200, 413, 450, 606, 631
Adler, G., 118, 121
Adler, J. M., 69
Albert, M., 614
Alexander, F., 147, 224
Alexander, I. E., 262
Allen, A., 299, 300, 303, 316, 620, 622, 645
Alloy, L. B., 585
Alport, F., 268, 271
Allsopp, J. F., 373
Altman, K. E., 138
Amacher, P., 32
Amelard, M., 364
Anastasi, A., 119, 299
Anderson, E. E., 282
Anderson, J. W., 223, 226, 228
Anderson, K. J., 389
Anscombe, H. L., 124, 125, 127, 128, 129, 133, 136
Anscombe, R. R., 124, 125, 127, 128, 129, 133, 136
Aquinas, St. Thomas, 2
Aristotle, 2, 435
Arlow, J. B., 50
Aronoff, J., 228
Aronson, E., 483
Auld, F., 541
Ayllon, T., 498, 525
Azrin, N., 498, 525
Bachorowski, J. A., 387
Baer, D. M., 498
Bakan, P., 375
Bulay, J., 70
Baldwin, A. C., 430
Baldwin, A. L., 297-298, 305
Ball, E. D., 119
Baltes, P. B., 314
Bandura, A., 38, 48, 178, 190, 260, 281, 333, 427, 430, 490, 491, 530, 588, 591-616, 618, 626, 627, 632, 650
Bannister, D., 429
Banuaziziz, A., 569
Barash, D., 647
Barchas, J. D., 615
Barclay, A. M., 228
Barker, B., 10
Barnhardt, T. M., 72
Barratt, P., 364
Barnett, L. C., 585
Bash, K. W., 121
Bates, M., 115
Baum, M., 522
Beagley, G., 581
Beauvoir, S. de, 74
Bechtel, W., 10
Beck, A. T., 583
Becker, W. C., 356
Bell, J. E., 119
Bellak, L., 184
Beloff, J. R., 335
Benton, J. A., 375
Bem, D., 299, 300, 303, 316, 620, 622, 645
Bennett, E. A., 81
Bentham, J., 2
Berberich, J. P., 526
Bergin, A. E., 480
Bergman, A., 181
Bernard, C., 435
Bernieri, F., 300
Bertocci, P. A., 283, 306
Beyer, J., 609
Bierl, J., 429
Bijou, S., 498
Bjork, D. W., 496
Blanchard, E. B., 607
Blanck, G., 179
Blanck, R., 179
Blass, J., 260
Blatt, S. J., 181
Blewett, D. B., 335
Biltiken, S., 157
Block, J., 347, 481
Block, J. H., 481
Blum, G. S., 67
Blustein, D. L., 215
Boozer, R. R., 525
Boren, J. J., 498
Boring, E. G., 2, 119, 224, 495
Borrello, G. M., 116
Botome, P., 125
Bottom, T. B., 140
Boutard, T. J., Jr., 350, 351
Bowdlear, C., 476
Bower, G., 47
Bowers, K. S., 260, 299
Bowby, J., 181
Boyatzis, R. E., 258
Brenner, C., 50
Brett, 120
Breuer, J., 32, 61
Bridgeman, P., 495
Briggs, S. R., 119, 303, 647
Brill, A. A., 32
Brody, N., 373, 376, 386, 390
Brouillard, M. E., 615
Brown, J. S., 539, 544, 593
Brown, N. O., 213
Brown, R., 64
Brücke, E., 32
Bruhn, A. R., 138, 139
Bruner, J. S., 71, 72, 305
Buehler, H. A., 115
Bugelski, K., 571
Bull, W., 211
Bullock, W. A., 364
Burgess, E. W., 156, 583
Burt, C. L., 313, 366
Buss, A. H., 303, 352
Buss, D. M., 3, 5, 352, 353, 354, 355, 647
<table>
<thead>
<tr>
<th>Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butcher, H. J.,</td>
<td>326</td>
</tr>
<tr>
<td>Butler, J. M.,</td>
<td>475, 478</td>
</tr>
<tr>
<td>Cado, S.</td>
<td>429</td>
</tr>
<tr>
<td>Campbell, J. B.,</td>
<td>370, 381, 640</td>
</tr>
<tr>
<td>Cann, D. R.,</td>
<td>118</td>
</tr>
<tr>
<td>Cantor, N.</td>
<td>139, 230, 303, 304, 305, 621</td>
</tr>
<tr>
<td>Cantril, H.</td>
<td>290, 295, 296, 305</td>
</tr>
<tr>
<td>Caplan, P. J.,</td>
<td>207</td>
</tr>
<tr>
<td>Carlson, J. G.,</td>
<td>116</td>
</tr>
<tr>
<td>Carlson, L. A.,</td>
<td>262</td>
</tr>
<tr>
<td>Carlson, R.</td>
<td>7, 114, 261, 347</td>
</tr>
<tr>
<td>Carlyn, M.</td>
<td>116</td>
</tr>
<tr>
<td>Carr, A. C.,</td>
<td>480</td>
</tr>
<tr>
<td>Carroll, J. B.,</td>
<td>314</td>
</tr>
<tr>
<td>Carson, R. C.,</td>
<td>3</td>
</tr>
<tr>
<td>Cartwright, D. S.,</td>
<td>473, 638</td>
</tr>
<tr>
<td>Cartwright, R. D.,</td>
<td>471</td>
</tr>
<tr>
<td>Cashdan, S.,</td>
<td>180</td>
</tr>
<tr>
<td>Catania, A. C.,</td>
<td>493</td>
</tr>
<tr>
<td>Cella, D. F.,</td>
<td>215</td>
</tr>
<tr>
<td>Cervone, D.,</td>
<td>611</td>
</tr>
<tr>
<td>Chaplin, W.,</td>
<td>300</td>
</tr>
<tr>
<td>Chapman, A. H.,</td>
<td>157</td>
</tr>
<tr>
<td>Charcot, J.,</td>
<td>2, 3, 32, 81</td>
</tr>
<tr>
<td>Child, D.,</td>
<td>316, 327</td>
</tr>
<tr>
<td>Chipuer, H. M.,</td>
<td>352</td>
</tr>
<tr>
<td>Chodorkoff, B.,</td>
<td>479</td>
</tr>
<tr>
<td>Chomsky, N.,</td>
<td>531</td>
</tr>
<tr>
<td>Christal, R. E.,</td>
<td>345</td>
</tr>
<tr>
<td>Ciaccione, D.,</td>
<td>580–581</td>
</tr>
<tr>
<td>Cioff, D.,</td>
<td>615</td>
</tr>
<tr>
<td>Clarridge, G. S.,</td>
<td>372, 375</td>
</tr>
<tr>
<td>Coghill, G. E.,</td>
<td>435</td>
</tr>
<tr>
<td>Cohen, E. D.,</td>
<td>118</td>
</tr>
<tr>
<td>Colby, K. M.,</td>
<td>125</td>
</tr>
<tr>
<td>Cole, C. W.,</td>
<td>479</td>
</tr>
<tr>
<td>Coles, R.,</td>
<td>176, 193</td>
</tr>
<tr>
<td>Comrey, A. L.,</td>
<td>314</td>
</tr>
<tr>
<td>Comte, A.</td>
<td>2</td>
</tr>
<tr>
<td>Conley, J. J.,</td>
<td>364</td>
</tr>
<tr>
<td>Constantinople, A.,</td>
<td>215</td>
</tr>
<tr>
<td>Cooper, J.,</td>
<td>482</td>
</tr>
<tr>
<td>Cosmides, L.,</td>
<td>352, 354</td>
</tr>
<tr>
<td>Costa, P. T., Jr.,</td>
<td>346, 347, 348, 362</td>
</tr>
<tr>
<td>Cote, J. E.,</td>
<td>215</td>
</tr>
<tr>
<td>Coutu, W.,</td>
<td>306, 308</td>
</tr>
<tr>
<td>Cozzarelli, C.,</td>
<td>615, 616</td>
</tr>
<tr>
<td>Cramer, D.,</td>
<td>480</td>
</tr>
<tr>
<td>Cramer, P.,</td>
<td>207</td>
</tr>
<tr>
<td>Crandall, J. E.,</td>
<td>139</td>
</tr>
<tr>
<td>Crews, F.,</td>
<td>73, 74</td>
</tr>
<tr>
<td>Crittend, J. W.,</td>
<td>430, 614</td>
</tr>
<tr>
<td>Cronbach, L. J.,</td>
<td>4</td>
</tr>
<tr>
<td>Crooks, L.,</td>
<td>429</td>
</tr>
<tr>
<td>Cross, K. P.,</td>
<td>341</td>
</tr>
<tr>
<td>Grozler, W. J.,</td>
<td>495</td>
</tr>
<tr>
<td>Csikszentmihalyi, M.,</td>
<td>215</td>
</tr>
<tr>
<td>Curtis, F. J.,</td>
<td>473</td>
</tr>
<tr>
<td>Dahlstrom, W. G.,</td>
<td>647</td>
</tr>
<tr>
<td>Dallett, J. O.,</td>
<td>121</td>
</tr>
<tr>
<td>Dalton, P.,</td>
<td>429</td>
</tr>
<tr>
<td>Daniels, D.,</td>
<td>138, 351</td>
</tr>
<tr>
<td>Darwin, C.,</td>
<td>3, 12, 60, 73</td>
</tr>
<tr>
<td>Davison, R.,</td>
<td>364</td>
</tr>
<tr>
<td>Davis, A.,</td>
<td>541</td>
</tr>
<tr>
<td>Davison, A.,</td>
<td>429</td>
</tr>
<tr>
<td>DeKay, W. T.,</td>
<td>353</td>
</tr>
<tr>
<td>DeRivera, J.,</td>
<td>396</td>
</tr>
<tr>
<td>Descartes, R.,</td>
<td>435</td>
</tr>
<tr>
<td>de St. Aubin, E.,</td>
<td>215</td>
</tr>
<tr>
<td>Dewald, L.,</td>
<td>580</td>
</tr>
<tr>
<td>Dewey, J.,</td>
<td>435, 458</td>
</tr>
<tr>
<td>DeWolfe, A. S.,</td>
<td>215</td>
</tr>
<tr>
<td>Diaz, A.,</td>
<td>387</td>
</tr>
<tr>
<td>Dickman, S.,</td>
<td>71</td>
</tr>
<tr>
<td>Digman, J. M.,</td>
<td>3, 345</td>
</tr>
<tr>
<td>Dingman, H. F.,</td>
<td>479</td>
</tr>
<tr>
<td>Dixon, N. F.,</td>
<td>71</td>
</tr>
<tr>
<td>Dobson, W. R.,</td>
<td>215</td>
</tr>
<tr>
<td>Dollard, J.,</td>
<td>490, 491, 538, 539–589, 594, 631, 632, 633</td>
</tr>
<tr>
<td>Domhoff, G. W.,</td>
<td>213</td>
</tr>
<tr>
<td>Domjan, N.,</td>
<td>527</td>
</tr>
<tr>
<td>Donahoe, J. W.,</td>
<td>527</td>
</tr>
<tr>
<td>Donderi, D. C.,</td>
<td>118</td>
</tr>
<tr>
<td>Doob, L. W.,</td>
<td>543</td>
</tr>
<tr>
<td>Dostoevsky, F.,</td>
<td>66, 211</td>
</tr>
<tr>
<td>Douglas, C.,</td>
<td>224</td>
</tr>
<tr>
<td>Downs, A.,</td>
<td>429</td>
</tr>
<tr>
<td>Dry, A. M.,</td>
<td>81, 83, 84, 119</td>
</tr>
<tr>
<td>Dubois, C.,</td>
<td>226</td>
</tr>
<tr>
<td>Dunbar, H. F.,</td>
<td>435</td>
</tr>
<tr>
<td>Dweck, C. S.,</td>
<td>582</td>
</tr>
<tr>
<td>Dworkin, B. R.,</td>
<td>569</td>
</tr>
<tr>
<td>Dyer, D. A.,</td>
<td>346, 348</td>
</tr>
<tr>
<td>Dyer, R.,</td>
<td>176</td>
</tr>
<tr>
<td>Dyk, W.,</td>
<td>226</td>
</tr>
<tr>
<td>Dymond, R. F.,</td>
<td>459, 471, 472, 480</td>
</tr>
<tr>
<td>D'Zurilla, T.,</td>
<td>71</td>
</tr>
<tr>
<td>Eagle, M. N.,</td>
<td>10, 179, 180</td>
</tr>
<tr>
<td>Earman, J.,</td>
<td>10</td>
</tr>
<tr>
<td>Easting, G.,</td>
<td>373</td>
</tr>
<tr>
<td>Eastman, C.,</td>
<td>614</td>
</tr>
<tr>
<td>Eaves, L.,</td>
<td>364</td>
</tr>
<tr>
<td>Ebbesen, E. B.,</td>
<td>619</td>
</tr>
<tr>
<td>Ebbinghaus, H.,</td>
<td>5</td>
</tr>
<tr>
<td>Eber, H. W.,</td>
<td>316</td>
</tr>
<tr>
<td>Edwards, A. L.,</td>
<td>254</td>
</tr>
<tr>
<td>Einstein, A.,</td>
<td>395</td>
</tr>
<tr>
<td>Ellenberger, H.,</td>
<td>32, 104, 125</td>
</tr>
<tr>
<td>Elliot, L. B.,</td>
<td>216</td>
</tr>
<tr>
<td>Elms, A. C.,</td>
<td>261</td>
</tr>
<tr>
<td>Emmons, R. A.,</td>
<td>228</td>
</tr>
<tr>
<td>Empedocles,</td>
<td>367</td>
</tr>
<tr>
<td>Endler, N. S.,</td>
<td>260, 303, 645</td>
</tr>
<tr>
<td>England, R.,</td>
<td>614</td>
</tr>
<tr>
<td>Epstein, S.,</td>
<td>71, 298, 299, 645</td>
</tr>
<tr>
<td>Epting, F. R.,</td>
<td>429</td>
</tr>
<tr>
<td>Erdelyi, M. H.,</td>
<td>71, 72</td>
</tr>
<tr>
<td>Erikson, K. T.,</td>
<td>218</td>
</tr>
<tr>
<td>Eron, L. D.,</td>
<td>254</td>
</tr>
<tr>
<td>Evans, G. T.,</td>
<td>614</td>
</tr>
<tr>
<td>Evans, J. D.,</td>
<td>639</td>
</tr>
<tr>
<td>Evans, R. B.,</td>
<td>120</td>
</tr>
<tr>
<td>Evans, R. I.,</td>
<td>140</td>
</tr>
<tr>
<td>Ewan, C.,</td>
<td>429</td>
</tr>
<tr>
<td>Eysenck, M. W.,</td>
<td>373</td>
</tr>
<tr>
<td>Fairbairn, W. R. D.,</td>
<td>180</td>
</tr>
<tr>
<td>Fancher, R. E.,</td>
<td>496</td>
</tr>
<tr>
<td>Faraday, M.,</td>
<td>395</td>
</tr>
<tr>
<td>Fechner, G. T.,</td>
<td>42, 57</td>
</tr>
<tr>
<td>Feldman, S. S.,</td>
<td>118</td>
</tr>
<tr>
<td>Felker, D. W.,</td>
<td>138</td>
</tr>
<tr>
<td>Fink, R. E. C.,</td>
<td>581</td>
</tr>
<tr>
<td>Fenichel, O.,</td>
<td>35</td>
</tr>
<tr>
<td>Ferenczi, S.,</td>
<td>32, 155</td>
</tr>
<tr>
<td>Fersner, C. B.,</td>
<td>513</td>
</tr>
<tr>
<td>Festinger, L.,</td>
<td>480, 481, 482</td>
</tr>
<tr>
<td>Fisher, S.,</td>
<td>67</td>
</tr>
<tr>
<td>Fiske, D.,</td>
<td>345</td>
</tr>
<tr>
<td>Fitch, S. A.,</td>
<td>215</td>
</tr>
<tr>
<td>Fitzgibbon, M.,</td>
<td>215</td>
</tr>
<tr>
<td>Fliss, W.,</td>
<td>60, 73</td>
</tr>
<tr>
<td>Flourny, T.,</td>
<td>110</td>
</tr>
<tr>
<td>Folkard, S.,</td>
<td>373</td>
</tr>
<tr>
<td>Fordham, F.,</td>
<td>81</td>
</tr>
</tbody>
</table>
Fordham, M. S. M., 118, 121
Forer, L. K., 138
Frank, I., 172
Frank, S., 228
Frankie, G., 597
Frankl, I., 102
Franks, C. M., 375, 376
Fransella, F., 429
Franz, C., 262
Frazer, E. F., 169
Frenkel-Brunswik, E., 184
Freud, A., 32, 50, 137, 176–178, 191, 194, 205
Freud, M. B., 32
Friedan, B., 74
Friedman, I., 478, 479
Frisbie, L. V., 479
Fromm, E., 124, 140–146, 147, 171
Frost, R., 495
Funder, D. C., 299, 305, 432, 618, 645
Furtmüller, C., 125
Gäbe, A., 364
Galen, 367
Gallilie, K., 373
Galton, F., 119, 345
Gandhi, M., 207, 211, 212, 213
Gardner, M., 65
Gardner, R. W., 186
Gavelli, M., 136
Gay, P., 34, 58
Geary, P. S., 215
Geen, R. G., 364, 381, 383, 384
Geisler, C., 69
Gelb, A., 439
Gendlin, 474
Getzels, J. W., 215
Gholson, B., 10
Gibson, H. B., 365
Gill, M. M., 50, 179, 186, 187
Gilliland, K., 364
Girou, J. S., 585
Glass, D. C., 581
Glover, E., 119
Goble, F. G., 444
Goethe, J. W. von, 435
Goldberg, L. R., 300, 345, 346, 347, 356
Goldstein, G., 120
Goldstein, K., 393, 436, 437–444, 450, 486–487
Gordon, T., 473
Gorky, M., 211
Gorlov, L., 119
Gorsuch, R. L., 338
Gould, D., 614
Gray, H., 119, 121
Greenberg, R. P., 67
Greenwald, A. C., 72
Greer, G., 74
Groves, D., 582
Grumman, D. L., 480
Grunbaum, A., 67
Grusec, J. E., 605, 607
Gudjonsson, H. G., 367
Guntrip, H., 181
Guthrie, E. R., 537, 549
Halgh, G. V., 475, 478
Haimowitz, M. L., 480
Haimowitz, N. R., 480
Hall, C. S., 35, 49, 93, 103, 120, 183, 245, 365
Hall, G. S., 32
Hannah, B., 81
Harackiewicz, J. M., 138, 139
Hardaway, R. A., 71
Hardin, T. S., 585
Harding, M. E., 118
Hardy, A. B., 611
Harlow, H. F., 282, 532, 560
Harlow, M. K., 532
Harman, H. H., 314
Harms, E., 118
Harrington, D. M., 481
Hartmann, E. von, 83
Hartmann, H., 178, 186, 205
Hartshorne, H., 298, 645
Hartup, W. W., 599
Hausdorff, D., 140
Havener, P. H., 479
Hawkey, M. L., 121
Hawkins, R. M., 614
Hawley, C. W., 381
Healy, C. C., 116
Healy, W., 156
Hector, M., 140
Heider, 480
Helmholtz, H. L. F. von, 3. 5
Helper, M. F., 479
Helson, R., 114
Henderson, L. J., 227
Hendrick, 187
Herrnstein, R. J., 528
Hertz, H., 395
Hesse, H., 118
Hetherington, E. M., 597
Hicks, L. E., 116
Higgins, E. T., 483, 484, 485
Hilgard, E. R., 47, 67, 539
Hinkle, J. E., 479
Hippocrates, 2, 367
Hiroto, S., 581, 582
Hitler, A., 88, 135, 211, 365, 396
Hobbes, T., 2
Hoffman, E., 125
Hoffman, L. W., 138
Hogan, K., 207
Holender, D., 70
Holland, J. G., 493, 496
Hollingworth, L., 458
Holt, R. R., 67, 179, 187, 290, 301
Holtzman, P. S., 186
Hong, W. K., 523
Hook, S., 75
Hopkins, J. R., 194
Horn, J., 316, 329
Horney, K., 28, 29, 124, 135, 137, 142, 146–153, 169, 171, 450, 484, 633
Horwitz, L., 67
Houlihan, M., 364
Hovland, C., 539
Howells, G. N., 611
Hughes, H. H., 614
Hull, C. L., 193, 187, 375, 493, 537, 538, 539, 543, 549
Humphreys, M. S., 373
Hundleby, J. D., 324
Izard, C. E., 479
Jackson, A., 614
Jackson, D. N., 254, 302
Jackson, H., 435
Jacobi, J., 118
Jacobs, A., 544
Jaffe, A., 81, 103, 104, 118
McGuire, W., 79, 81, 174
McKeel, H. S., 226
McLaughlin, R. J., 380, 381, 382
Mead, G. H., 156
Medinnus, G. R., 473
Meehl, P., 76
Mefford, I. N., 615
Meichenbaum, D., 579
Meier, C. A., 121
Melhado, J. J., 121
Mellon, P., 118
Melville, H., 224, 227, 255–256
Menlove, F. L., 605, 607, 610
Merriam, C. E., 156
Metalsky, G. L., 585
Meyer, A., 156, 435
Miley, C. H., 138
Milgram, N. A., 479
Millich, R., 67
Miller, N. E., 183, 490, 491, 538, 539–569, 594, 631, 632, 633
Miller, R. J., 140
Miller, W. R., 581, 583
Millet, K., 74
Mischel, W., 3, 259, 260, 298, 299, 303, 613, 616–628, 646, 646
Mitchell, J., 74
Monte, C. F., 3, 374, 588
Morgan, C. D., 224, 227, 228, 257
Morris, E. K., 496, 498
Moscovitz, H., 138, 480
Moskos, K. (prophet), 211
Moskowitz, D., 299
Mowrer, O. H., 184, 539, 543, 549, 573
Mozdzierz, G. J., 140
Mučen, G. A., 472, 480
Mullahy, P., 157
Mumford, L., 118
Munroe, R., 124
Munsterberg, H., 223
Murphy, G., 121, 435
Murray, E. J., 573
Murray, J. B., 116
Munstein, B. L., 254
Musgrave, A., 10
Myers, I. B., 115, 117, 119
Myers, P. B., 115
Nacht, S., 179
Napoleon Bonaparte (e. of France), 85, 135
Neimeyer, G. J., 429
Neimeyer, R. A., 429
Nesselroade, J. R., 314, 316
Neumann, E., 118
Newman, J. P., 387
Newton, H., 218
Nichols, R. C., 359
Nietzsche, F., 2, 83, 102
Nisbett, R. J., 72
Nolten-Hoeksema, S., 585
Nordby, V. J., 93, 103, 120
Norman, W. T., 345, 346
Nunnally, J. C., 475
Nurius, 485
Nye, R. D., 496
O’Brien, E. J., 298, 645
Ochse, R., 216
O’Connor, K., 367
Odber, 279, 320, 345
Oetting, E. R., 479
Olson, W. C., 282
Orgler, H., 125
Orlofsky, J. L., 215
Oxenier, J. B., 580
Ozer, D. J., 260, 299
Padilla, A. M., 580–581
Padilla, C., 580–581
Palmer, D. C., 527
Paris, T., 60–61
Park, R. E., 156
Paunonen, S. V., 302
Pavlov, I. P., 3, 374, 377, 378, 495, 508, 536, 544
Pawlik, K., 324
Peake, P., 299, 621, 622
Pearce, J. M., 527
Pearson, P. R., 373
Pelham, B. W., 302
Perloff, B. F., 526
Perry, H. S., 156, 157
Perry, N. W., 140
Pervin, L. A., 3, 298, 299
Peterfreund, 67
Peters, 120
Peterson, C., 3, 584, 585
Petigrew, T., 305
Phillips, E. L., 473
Phillips, S. D., 215
Piaget, J., 178, 193
Pickering, A., 387
Pilsuk, M., 480
Pincus, A. L., 3
Pine, F., 181
Plato, 2
Plomin, R., 138, 348, 351, 352
Plug, C., 216
Poloncarz, H., 495
Poole, M. E., 614
Popper, K., 10
Porter, E. H., Jr., 472
Pratt, C., 495
Prince, M., 224
Prohoff, L. I., 118
Pumplin-Mindlin, E., 184
Quinn, S., 147
Rabin, A. I., 228
Rachlin, H., 527
Rachman, S., 367, 575
Radcliffe, J. A., 326
Radin, P., 118
Kaimy, V. C., 471, 472
Rank, O., 34, 174, 459
Rapaport, D., 179, 183, 184
Raskin, N. J., 471
Read, D., 215
Read, H. E., 118
Reese, L., 611
Reich, W., 174
Rennie, T. A. C., 435
Reppucci, N. D., 582
Rievele, W., 3, 370, 373, 387, 389, 389, 647
Reyna, L., 574
Reynolds, J. H., 370
Richards, I. A., 114
Richelle, M., 496
Ritter, B., 607
Roaen, P., 176, 191, 193
Robbins, S. J., 527
Robertson, T., 429
Robinson, F. G., 223, 224, 228
Robinson, P., 60, 67, 73, 74
Rocklin, T., 370
Rockwell-Tischer, S., 364
Rodin, J., 614
Rohles, F. H., 498
Roosevelt, T., 131
Rorer, L. G., 3, 10
Subject Index

Abilities, personology, 231
Ability traits, factor-analytic trait theory, 319–323
Abnormal behavior
operant conditioning, 519–523
personality theories compared, 638
Abortion, 615–616
Abstraction, personality theory, 24
Achievements, personology, 231
Adaptation, ego psychology, 179
Adjustment
Allport, G., 288
factor-analytic trait theory, 330–331
personality theory, 7, 25
Adler, A., biography of, 124–128
Adlerian theory, 124–140. See also Social psychological theory
biographical material, 124–128
creative self, 135–136
current status, 169–172
fictional finalism, 128–129
inferiority feelings and compensation, 130–131
research methods, 136–140
birth order, 137–138
childhood experience, 139
contemporary, 139–140
eye memory, 138–139
neurosis, 136–137
social interest, 131–132
striving for superiority, 129–130
style of life, 132–135
Adolescence. See also Developmental factors
Eriksonian theory, 195, 201–203
Jungian analytic theory, 104
Sullivanian theory, 165–166
Adulthood. See also Developmental factors
Allport, G., 287–289
Eriksonian theory, 203–205
factor-analytic trait theory, 337
Aggression
Allport, G., 282
object relations theory, 180
oral, personology, 247–248
psychoanalytic theory, 42
social learning theory, 598–600, 613, 620
Aging, Eriksonian theory, 204–205
Alienation
Fromm, E., 145–147
Horney, K., 152–153
Allport, G.
bioy, 266–273
current status, 305–309
overview, 267–268
personality development, 285–289
adultilhood, 287–289
infancy, 265–287
personality structure and dynamics, 273–285
character and temperament, 274–275
functional autonomy, 281–285
generally, 273–274
intentions, 279–280
proprium, 280–281
trait, 275–279
unity, 285
research methods, 289–305
contemporary, 298–305
expressive behavior studies, 292–296
generally, 289
idiographic versus nomothetic, 289–291
letter analysis, 297–298
measures, direct and indirect, 291–292
Anal complexes, personology, 248
Anal stage, psychoanalytic theory, 54
Anima and animus, Jungian analytic theory, 89, 96
Animal studies, stimulus-response theory, 538, 569, 576–577, 580–581
Anthropology, Eriksonian theory, 211, 216–217
Anticathexes, psychoanalytic theory, 44–46
Anxiety
basic, Horney, K., 149–150
Freud’s second theory of, 174
personal construct theory, 426
projection, 51
psychoanalytic theory, 46–47
stimulus-response theory, 577–578
Sullivanian theory, 162
Archetypes, Jungian analytic theory, 86–88
Arousal, biological trait theory, 381–385. See also Biological trait theory
Ascending reticular activating system (ARAS), biological trait theory, 376–379
Associative linkage, stimulus-response theory, 537
Assumptions, personality theory, 10–11
Attention, selective, Sullivanian theory, 159
Attentional processes, social learning theory, 597
Attitudes
factor-analytic trait theory, 326–327
Jungian analytic theory, 91, 94
Authoritarianism, Fromm, E., 142
Automaton conformity, Fromm, E., 142
Autonomy
functional, Allport, G., 281–285
shame and doubt versus, Eriksonian theory, 198–199
Bandura, A., biography of, 591–594.
See also Social learning theory
Basic anxiety, Horney, K., 149–150
Basic trust versus basic mistrust, Eriksonian theory, 196–198
Behavior, lawfulness of, operant conditioning, 498–500
Behavioral activation system (BAS), biological trait theory, 385
Behavioral inhibition system (BIS), biological trait theory, 385
Behavior genetics, factor-analytic trait theory, 348–352
Behaviorism, stimulus-response theory, 536. See also Stimulus-response theory
Behavior patterns, Jungian analytic theory, 87
Big Five factors Eysenck and, 362
factor-analytic trait theory, 345–348
Biography
personology, 261–262
psychohistory, Eriksonian theory, 211–213
Biological trait theory, 360–390. See also Factor-analytic trait theory
biographical material, 365–367
causal models, 373–379
current status, 389–390
overview, 380, 362–365
research methods, 380–389
temporary, 385–389
described, 380–385
temperament, 367–373
extraversion and neuroticism, 367–371
psychoticism, 371–373
Biography
Adlerian theory, 127
Allport, G., 286–287
Eriksonian theory, 208–210
factor-analytic trait theory, 335
Jungian analytic theory, 97, 103
personality theory, 22–23
personology, 251
psychoanalytic theory, 60
stimulus-response theory, 569
Sullivanian theory, 155
Biophysical definition of personality, 7
Biosocial definition of personality, 7
Birth order, Adlerian theory, 137–138
Birth trauma, psychoanalytic theory, 47
Bisexuality
Jungian analytic theory, 89
psychoanalytic theory, 56, 65–66
Body language, expressive behavior studies, 292–296
Bollingen Foundation, 118
Brain, personality and, 229
Capitalism, Fromm, E., 144–146
Cardinal disposition, Allport, G., 278–279
Case studies
Eriksonian theory, 207, 211–212
Jungian analytic theory, 110
psychoanalytic theory, 63–66
Castration complex
teleology versus, Jungian analytic theory, 101–102
Personology, 248
psychoanalytic theory, 55
Cattell, R. B., biography of, 314–316. See also Factor-analytic trait theory
Causality
Adlerian theory, 129
bioanalytic trait theory, 373–379
teleology versus, Jungian analytic theory, 101–102
Central disposition, Allport, G., 278–279
Central nervous system, biological trait theory, 373–379
Change constructs, personal construct theory, 426–427
Character, Allport, G., 274–275
Childhood
Adlerian theory, 131, 139
Allport, G., 281
Eriksonian theory, 196–201
Horney, K., 149–150
Jungian analytic theory, 103
object relations theory, 181
personality theory, 21–22
person-centered theory, 469–470
play behavior, White, R., 188–189
psychoanalytic theory, 52–57
social learning theory, 597, 613, 619
stimulus-response theory, 558–561
Sullivanian theory, 163–166
Choice corollary, personal construct theory, 423–424
Clark University lectures (Freud & Jung), 79
Classical conditioning
operant conditioning, 508–509
stimulus-response theory, 336, 544–545. See also Stimulus-response theory
Classical psychoanalytic theory. See Psychoanalytic theory
Claustrophobic complexes, personology, 247
Client-centered therapy. See Person-centered therapy
Clinical observation, personality theory, 2
Cognition
developmental factors, stimulus-response theory, 555–557
social learning theory, 608
Cognitive-affective system, social learning theory, 622–626
Cognitive awareness continuum, personal construct theory, 425–426
Cognitive deficit, stimulus-response theory, 579
Cognitive dissonance theory, described, 481–483
Cognitive person variables, social learning theory, 619–620
Cognitive processes, Sullivanian theory, 160–161
Cognitive prototypes, consistency paradox and, social learning theory, 620–622
Cognitive strategy, personology, 231
Cognitive style, Klein, G., 186
Cognitive theory, stimulus-response theory, 537
Collective unconscious, Jungian analytic theory, 85–90, 103
Commonality corollary, personal construct theory, 424
Comparative method, Jungian analytic theory, 110–112
Compensation
Adlerian theory, 130–131
Jungian analytic theory, 94–95
Competence
personality theories compared, 635–636
personality theory, 24–25
White, R., 187–188
Complexes
infantile, personology, 246–248
Jungian analytic theory, 85, 97–99, 109
Comprehensiveness, personality theory, 12
Concreteness, personality theory, 24
Conditioned stimulus, stimulus-response theory, 544–550. See also Stimulus-response theory
Conflict
case-analytic trait theory, 330–331
personology, 232
Conflict (Continued)
psychodynamic theory, 27
stimulus-response theory, 563–566
Conformity, Fromm, E. 142
Conscience. psychoanalytic theory, 37–38
Consciousness. See also Unconscious
organismic theory, 442
personal construct theory, 425–426
personality theory, 21
stimulus-response theory, 563
Conservation, psychoanalytic theory, 40
Consistency paradox, cognitive
prototypes and, social learning
theory, 620–622
Construction corollary, personal
construct theory, 421
Constructive alternativism, personal
construct theory, 413–414
Consternation, personal construct
theory, 415–416
Content analysis, person-centered
theory, 472–473
Continuity, personality theory, 22
Correlatives, personal construct theory,
420–425
Counterconditioning, stimulus-
response theory, 554
Creative self, Adlerian theory,
135–136
Creativity
person-centered theory, 481
personology, 233
Cross-cultural studies, Eriksonian
theory, 216–217
Cue, stimulus-response theory,
552–553. See also Stimulus-
response theory
Culture
cross-cultural studies, Eriksonian
theory, 216–217
personality theory, 25
personology, 231, 233, 249–250
stimulus-response theory, 559
Death instinct, psychoanalytic theory,
41–42
Defense mechanisms:
ego psychology, 178–179
psychoanalytic theory, 47, 50–52
Depression
hopelessness theory, 585–586
stimulus-response theory, 579,
580–584
Despair, integrity versus, Eriksonian
theory, 204–205
Destructiveness, Fromm, E., 142
Developmental factors
Allport, G., 285–289
adulthood, 287–289
infancy, 285–287
Eriksonian theory, 190–218. See also
Eriksonian theory
factor-analytic trait theory, 334–339
generally, 334–335
heredity-environment analysis, 335
learning, 335–337
maturation, 337
social context, 337–339
Jungian analytic theory, 101–108
causality versus teleology,
101–102
generally, 101
genetics, 103
individuation, 106
progression and regression,
105–106
stages, 103–105
sublimation and repression, 107
symbolization, 107–108
transcendent function, 106–107
object relations theory, 180–181
operant conditioning, 508–523,
509–512
abnormal behavior, 519–523
classical conditioning, 508–509
schedules of reinforcement,
512–513
secondary reinforcement, 515–516
social behavior, 517–519
stimulus generalization and
discrimination, 516–517
superstitious behavior, 513–515
organismic theory, 443–444
personal construct theory, 410
personality theories compared, 634
personality theory, 21–22
person-centered theory, 466–471
personology, 244–251
generally, 244–246
 genetics, 249
infantile complexes, 246–248
learning, 249
socialization process, 251
sociocultural factors, 249–250
unconscious, 250–251
uniqueness, 250
psychoanalytic theory, 47–57
defense mechanisms, 50–52
displacement, 48–50
generally, 47
identification, 47–48
stages, 52–57
stimulus-response theory,
551–561
higher mental processes,
555–557
innate qualities, 552
learning process, 552–554
learning process and secondary
drive, 554–555
social context, 557–558
stages, 558–561
Sullivanian theory, 163–166
White, R., 188–189
Diagnostic council, personology;
research methods, 253
Dialectic humanism, Fromm, E., 140
Diathesis-stress model, stimulus-
response theory, 585
Differences. See Individual differences
Differentiation, personal construct
theory, 399–400
Dimensional research. See Nomothetic
research
Discontinuity, personality theory, 22
Displacement
psychoanalytic theory, 40–41,
48–50
stimulus-response theory, 571
Disposition, Allport, G., 278–279
Dollard, J., biography of, 539–544.
See also Stimulus-response theory
Dominants, Jungian analytic theory,
86–87
Dora case (Freud), 63
Double-blind method, psychoanalytic
theory, 70
Doubt and shame, autonomy versus,
Eriksonian theory, 198–199
Dreams
Jungian analytic theory, 112–113
psychoanalytic theory, 36, 61–63
Drives, stimulus-response theory, 545,
549, 551, 554–555, 559. See also
Stimulus-response theory
Drive theory. See Instinct
Dynamic lattice, factor-analytic trait
theory, 328–329
Dynamic self-concept, 485
Dynamic traits, factor-analytic trait theory, 326–332

Early memory, Adlerian theory, 138–139. See also Memory

Economic factors
Fromm, E., 144–146
psychological theory/psychoanalytic theory, 184

Eductors, Sullivanian theory, 158

Ego
Allport, G., 280–281
Eriksonian theory, 205–206
Jungian analytic theory, 84
object relations theory, 180
personology, 231–232
psychic energy distribution, 43–46
psychoanalytic theory, 36–37

Ego-ideal, personology, 232

Ego psychology, psychoanalytic theory, 175–179

Empiricism
personality theory, 11–12, 19–20
person-centered theory, 473–480
psychodynamic theory, 28

Energy. See Psychic energy

Entropy principle
Jungian analytic theory, 100–101, 107
personal construct theory, 405

Environment
factor-analytic trait theory, 335
organismic theory, 442–443
personal construct theory, 398–399.
See also Personal construct theory

personality theories compared, 635
personology, 24
social learning theory, 602

Epigenetic principle, Eriksonian theory, 195

Equalization, organismic theory, 440–441

Equivalence principle, Jungian analytic theory, 99

Ergs, factor-analytic trait theory, 327
Erikson, E. H., biography, 193–194

Eriksonian theory, 190–218
current status, 217–218
developmental stages, 195–205
autonomy versus shame and doubt, 198–199
basic trust versus basic mistrust, 196–198
genetically. 195–196

generativity versus stagnation, 203–204
identity versus identity confusion, 201–203
industry versus inferiority, 200–201
initiative versus guilt, 199–200
integrity versus despair, 204–205
intimacy versus isolation, 203
summary tables, 196, 197
ego in, 205–206
overview, 190–194
research methods, 207–217
anthropology, 211
case histories, 207
contemporary, 213–217
play situations, 207–210
psychology, 211–213

Erogenous zones
Eriksonian theory, 208–210
psychoanalytic theory, 41
Evolutionary theory, factor-analytic trait theory, 352–356
Excitation, Fromm, E., 143
Experience corollary, personal construct theory, 422–423
Experiential theory, personality theory, 18

Experimental extinction, stimulus-response theory, 547
Experimental psychology, personality theory, 2, 3, 6
Experimental self-concept studies, person-centered theory, 480
Explanatory style, stimulus-response theory, 584–585
Expressive behavior studies, Allport, G., 292–296
Extinction, stimulus-response theory, 547, 578

Extraversion and introversion: biological trait theory, 362, 364, 367–371. See also Biological trait theory
Jungian analytic theory, 91, 93, 104, 114–118, 119
personal construct theory, 416
See also Biological trait theory

Factor-analytic trait theory, 310–359. See also Biological trait theory

biographical material, Cattell, 314–316
current status, 356–359
factor analysis concept, 311, 313–314
overview, 310–311
personality development, 334–339
generally, 334–335
heredity-environment analysis, 335
learning, 335–337
maturation, 337
social context, 337–339

personality structure, 317–334
ability and temperament traits, 319–323
dynamic traits, 326–332
Freud and, 332–333
generally, 317
specification equation, 323–326
traits, 318–319
research methods, 339–356
contemporary, 345–356
generally, 339–340
single individual, 340–343
VIDAS system model, 343–344

Feeling, Jungian analytic theory, 92
Feminism, psychoanalytic theory, 74
Fictional finalism, Adlerian theory, 128–129
Field emphasis, personality theory, 23
Fixation, psychoanalytic theory, 51–52
Force. See Vector
Foreclosure, Eriksonian theory, 213–215
Fragmentary corollary, personal construct theory, 422
Free association, psychoanalytic theory, 61–63
Freud, S. See also Psychoanalytic theory
Adler and, 127, 128
biography of, 31–35
Horney, K. and, 147, 149
psychoanalysis and, 35–77
Fromm, E.
biography, 140–142
correlations of, 142–146, 169–172
Functional analysis, operant conditioning, 500–504
Functional autonomy, Allport, G., 281–285

Generalization, stimulus-response theory, 548, 555
Generativity, stagnation versus, Eriksonian theory, 203-204
Genetics
Adlerian theory, 135
Allport, G., 286-287
biological trait theory, 371-372
factor-analytic trait theory, 335, 348-352
Jungian analytic theory, 89, 103
personality theories compared, 633
personality theory, 2, 21
personology, 249
stimulus-response theory, 552
Sullivanian theory, 155, 166
Genitality, Eriksonian theory, 203,
208-210
Genital stage, psychoanalytic theory, 57
Gestalt psychology. See also Personal
construct theory
Allport, G., 268
described, 395-396
organismic theory, 435-436
personality theory, 2
Goldstein, K., biography of, 437-439.
See also Organismic theory
Group membership, personality theory, 25, 637
Guilt
initiative versus, Eriksonian theory, 199-200
personal construct theory, 426-427
psychoanalytic theory, 46-47
social learning theory, 596
Hate, psychoanalytic theory, 42
Heredity. See Genetics
Heuristics, personality theory, 12
Hierarchy of needs, Maslow, A., 448-452
Holism
organismic theory, 435
personality theories compared, 634-635
personality theory, 22-23
Homosexuality
Jungian analytic theory, 89
personal construct theory, 429
psychoanalytic theory, 65-66
Sullivanian theory, 165
Hopelessness theory, stimulus-
response theory, 585-586
Horney, K.
countertransference, 152-153
basic anxiety, 149-150
biography, 146-147
Freud, S. and, 147, 149
neurotic needs, 150-152
solutions to neurotic needs, 152
Hostility, personal construct theory, 426
Human nature
Maslow on, 446-448
Rogers on, 461
Hysteria, psychoanalytic theory, 32
Icarus complex, personology, 248
Id
ego psychology, 176, 178
personology, 231
psychic energy distribution, 43-46
psychoanalytic theory, 35-36
Ideal behavior, personality theory, 25
Identification, psychoanalytic theory, 49-51, 47-48
Identity
Eriksonian theory, 195, 214-215
Fromm, E., 143
identity confusion versus, Eriksonian
theory, 201-203
Idiographics and idiothetics, Allport,
G., 289-291, 300-302
Imagoes, Jungian analytic theory, 86-87
Imitation, psychoanalytic theory, 48
Individual differences
Allport, G., 267-309. See also
Allport, G.
Factor-analytic trait theory, 340-343, 352-356
personality theory, 23
personology, 250, 261
Individuality corollary, personal
construct theory, 424
Individuation, Jungian analytic theory, 106
Industry, inferiority versus, Eriksonian
theory, 200-201
Infancy. See also Developmental
factors
Allport, G., 285-287
Eriksonian theory, 195-198
object relations theory, 181
person-centered theory, 469-470
personology, 246-248
Infantile complexes, personology,
246-248
Infantile sexuality, psychoanalytic
theory, 64, 73
Inferiority, industry versus, Eriksonian
theory, 200-201
Inferiority feelings, Adlerian theory, 130-131
Initiative, guilt versus, Eriksonian
theory, 199-200
Innate qualities. See Genetics
Instinct
defined, 39
ego psychology, 178
object relations theory, 180, 183
psychoanalytic theory, 39-42
White, R., 187-188
Institute of Human Relations (Yale
University), 538-539, 541
Integrative function, of personality, 7
Integrity, despair versus, Eriksonian
theory, 204-205
Intentions, Allport, G., 279-280
Interactionism
Allport, G., 298-300
personology, 259-260
Interdisciplinary anchoring, personality
theory, 26, 637
International Psychoanalytic
Association, 34, 79
Interview, Sullivanian theory, 167-168
Intimacy, isolation versus, Eriksonian
theory, 203
Introjection, psychoanalytic theory, 38
Introversion. See Extraversion and
Introversion
Intuition, Jungian analytic theory, 92
Isolation, intimacy versus, Eriksonian
theory, 203
Judgmental process, social learning
theory, 604
Jung, C. G.
biography of, 80-84
Freud and, 79-80
Jungian analytic theory, 78-121
current status, 118-121
historical perspective, 79-84
personality development, 101-108
causality versus teleology, 101-102
generally, 101
genetics, 103
individuation, 106
progression and regression, 105-106
stages, 103-105
sublimation and repression, 107
symbolization, 107–108
synchronicity, 102–103
transcendent function, 106–107
personality dynamics, 96–101
energy use, 101
entropy principle, 100–101
equivalence principle, 99
generally, 96–97
psychic energy, 97–99
personality structure, 84–96
attitudes, 91
collective unconscious, 85–90
ego, 84
functions, 91–94
generally, 84
interactions within, 94–96
personal unconscious, 84–85
self, 90–91
research methods, 109–118
case studies, 110
comparative method, 110–112
contemporary, 113–118
dreams, 112–113
experimental studies of complexes, 109
generally, 109
Kelly, G., biography of, 410–413. See also Personal construct theory
Lamarkian genetics, Jungian analytic theory, 103
Language
developmental factors, stimulus-response theory, 555–557
operant conditioning, 531
personal construct theory, 415–416, 425
stimulus-response theory, 537
Lawfulness of behavior, operant conditioning, 498–500
Learned helplessness, stimulus-response theory, 580–584
Learning
biological trait theory, 375
factor-analytic trait theory, 335–337
of neuroses, stimulus-response theory, 566–569
personality theories compared, 632
personality theory, 21
personology, 249
secondary drive and, developmental factors, stimulus-response theory, 554–555
stimulus-response theory, 537, 548, 550, 552–554. See also Stimulus-response theory
Learning theory
Allport, G., 286–287
operant conditioning, 492–534. See also Operant conditioning overview, 490–491
personality theory, 2, 18–19
social learning theory, 590–628. See also Social learning theory
stimulus-response theory, 535–589. See also Stimulus-response theory
Letter analysis, Allport, G., 297–298
Lewin, K., biography of, 396–397. See also Personal construct theory
Libido
psychoanalytic theory, 41
White, R., 190
Life instinct, psychoanalytic theory, 41: 42
Life space, personal construct theory, 398–399
Life style. See Style of life
Life tasks, personology, 230
Little Hans case (Freud), 63, 64, 177
Locomotion, personal construct theory, 408–409
Love
Eriksonian theory, 203
psychoanalytic theory, 42
Mandala, Jungian analytic theory, 90, 106–107
Man-the-scientist metaphor, personal construct theory, 414–415
Maslow, A. See also Organismic theory; Person-centered theory biography of, 444
hierarchy of needs, 448–452
human nature, 446–448
self-actualizers, 453–454
syndromes, 452–453
Mastery, personality theory, 24–25
Mate selection, factor-analytic trait theory, 354–355
Maturation
factor-analytic trait theory, 337
personology, 249
Measurement instruments
Allport, G., 290, 291–292
personology, research methods, 253–254
Mechanistic theory, personality theory, 20
Medical profession, personality theory, 4, 28
Medication, Skinner, B. F. and, 524
Memory
Adlerian theory, 138–139
collective unconscious, 85–90, 103
Mental processes, developmental factors, stimulus-response theory, 555–557
Metapsychology, psychoanalytic theory, 68, 174, 186
Middle age, Jungian analytic theory, 104–105
Miller, N., biography of, 539–544. See also Stimulus-response theory
Mischel, W., biography of, 616–619. See also Social learning theory
Mistrust, basic trust versus basic mistrust, Eriksonian theory, 196–198
Molar approach, personality theory, 24
Molecular approach, personality theory, 24
Moral anxiety
projection, 51
psychoanalytic theory, 46–47
Morphogenic research. See Idiographics
Mother complex, Jungian analytic theory, 85
Motivation
Adlerian theory, 125, 127
Allport, G., 281–285
hierarchy of needs, Maslow, A., 448–452
personal construct theory, 405–406, 416–417
personality theories compared, 637–638
personality theory, 5–6, 25
personology, 222–223, 232–233, 234, 257–259
psychodynamic theory, 27
stimulus-response theory, 545, 579
White, R., 187–188
Yerkes-Dodson law, 381
Motivational processes, social learning theory, 598–600
Motoric action, personal construct theory, 406
Motor processes, stimulus-response theory, 537
Multiplicity, synthesis versus, personality theory, 648–651
Murray, H., biography of, 223–228.
See also Personology
Myers-Briggs Type Indicator (MBTI): factor-analytic trait theory, 347–348
Jungian analytic theory, 114, 115–118
Mythology, Jungian analytic theory, 87, 110–112

Nazism
Fromm, E., 142
Jung, C. G., 118
Need integrate concept, personology, 242

Needs
Fromm, E., 143
hierarchy of needs, Maslow, A., 448–452
neurotic, Horney, K., 150–152
personal construct theory, 405–406
personology, 231, 234–239
psychosocial theory, 39

Neuroses
Adlerian theory, 136–137
Horney, K., 150–152
learning of, stimulus-response theory, 566–569
Neurotic anxiety
projection, 51
psychoanalytic theory, 46–47
Neuroticism, biological trait theory, 367–371

Nomothetic research, idiosyncratic versus, Allport, G., 289–291
Norms, personality theory, 25–26

Object, psychoanalytic theory, 40
Object-choice, psychoanalytic theory, 43
Object relations theory, 179–183
described, 179–181
Kohut, H., 181–183
psychoanalytic theory, 179–183
Object-subject interactions, personology, 229–230
Observation. See Clinical observation
Observational learning principles, social learning theory, 596–600.
See also Social learning theory

Occult sciences, Jungian analytic theory, 110–112
Oedipus complex, psychoanalytic theory, 54–57
Omnibus definition, of personality, 7
Operant conditioning, 492–534
assumptions, 498–504
functional analysis, 500–504
lawfulness of behavior, 498–500
biographical material, Skinner, B. F., 493–498
current status, 528–534
overview, 492–493

Personality development, 508–523
abnormal behavior, 519–523
classical conditioning, 508–509
operant conditioning, 509–512
schedules of reinforcement, 512–513
secondary reinforcement, 515–516
social behavior, 517–519
stimulus generalization and discrimination, 516–517
supersitious behavior, 513–515
personality dynamics, 506–508
personality structure, 504–506
research methods, 523–528
contemporary, 527–528
described, 523–527

Opposition, Jungian analytic theory, 95
Oral aggression, personology, 247–248
Oral complexes, personology, 247
Oral stage, psychoanalytic theory, 53
Organismic position
personalities, 634–635
personality theory, 22–23
person-centered theory, 461–464

Organismic theory. See also Maslow, A.: Person-centered theory
biographical material, Goldstein, K., 437–444
development, 443–444
dynamics, 440–443
environment, 442–443
equalization, 440–441
self-actualization, 441–442
overview, 435–437
structure, 439–440
Organization corollary, personal construct theory, 421–422
Orientation frame, Fromm, E., 143
Paradigm, personality theory, 14
Paradox, consistency paradox, cognitive prototypes and, social learning theory, 620–622

Parsimony, personality theory, 13
Penis envy
Horney, K., 149
psychoanalytic theory, 55–56, 74
Perceived reality, 391–393
personal construct theory, 394–433.
See also Personal construct theory
person-centered theory, 434–489.
See also Person-centered theory

Perception
Klein, G., 185–186
personal construct theory, 399–400.
See also Personal construct theory
personality theory, 18, 24
reality and, 391–393
Performance accomplishments, social learning theory, 609
Persona, Jungian analytic theory, 88–89
Personal construct theory, 394–433
assumptions, 413–418
constructive alternativism, 413–414
constuer focus, 415–416
man-the-scientist metaphor, 414–415
motivation, 416–417
self-concept, 417–418
biographical material
Kelly, G., 410–413
Lewin, K., 396–397
change constructs, 426–427
cognitive awareness continuum, 425–426
constructs, 418–420
current status, 430–433
overview, 395–396
personality development, 410
personality dynamics, 404–409
energy, 405
force or vector, 407–408
generally, 404–405
locomotion, 408–409
needs, 405–406
tension, 405
tension and motor action, 406
valence, 406–407
personality structure, 397–404
differentiation, 399–400
generally, 397–398
life space, 398–399
person/environment relationship, 403–404
regional connections, 400–403
region numbers, 403
postulate and corollaries, 420–425
research methods, 427–430
contemporary, 429–430
described, 427–429
Personality, defined, 7–9, 228–229,
274, 317
Personality tests. See Psychological testing
Personality theory, 1–29, 630–651.
See also Eriksonian theory;
Jungian analytic theory;
Psychoanalytic theory; Social
psychological theory
Allport, G., 287–309. See also
Allport, G. comparisons of,
18–26, 631–642
cluster analysis, 639–641
family groupings, 18–19
formal attributes, 19–20
research and, 641–642
substantive attributes, 20–26
described, 14–16
dissident role of, 4
functional orientation of, 4–5
historical perspective, 2–7
learning theories, 490–491. See also
Learning theory
overview, 1–2
perception, 18, 24. See also
Perceived reality
personality definition, 7–9,
228–229, 274, 317
personality structure, emphasis on,
219–220
personology, 221–266. See also
Personology
psychodynamic theory, 27–29
psychological theory and, 7, 16–18
reflections on, 642–648
social psychological theory,
122–172
structural theory, 18, 219–220. See also
Structural theory
synthesis versus multiplicity,
648–651
theory definition, 9–14
Personal unconscious, Jungian analytic
theory, 84–95
Person-centered theory, 434–469,
454–461. See also Maslow, A.;
Organismic theory
biographical material, Rogers, C.,
454–461
current status, 485–489
organismic theory and, 435–444
personality development, 466–471
personality dynamics, 464–466
personality structure, 461–464
research methods, 471–485
contemporary, 480–485
content analysis, 472–473
empirical approaches, 480
experimental self-concept studies, 480
generally, 471–472
Q-technique studies, 475–480
quantitative studies, 472
rating scales, 473–475
Personifications, Sullivanian theory,
159–160
Personology, 221–266
biographical material, 223–228
current status, 263–266
overview, 222–223
personality development, 244–251
generally, 244–246
generics, 249
infantile complexes, 246–248
learning, 249
socialization process, 251
sociocultural factors, 249–250
unconscious, 250–251
uniqueness, 250
personality dynamics, 233–244
generally, 233–234
need, 234–239
need integrate concept, 242
press concept, 239–241
regnant processes, 243
tension reduction, 241
thema concept, 241–242
unity-thema concept, 242–243
vector-value scheme, 243–244
personality structure, 228–233
abilities and achievements, 231
personality definition, 228–229
proceedings and serials, 229–230
serial programs and schedules,
230–231
stabilities and structures, 231–233
research methods, 251–262
contemporary, 257–262
diagnostic council, 253
generally, 251–252
measurement instruments,
253–254
representative studies, 254–257
scale and sample, 252–253
Person-situation debate, Allport, G.,
298–300
Phallic stage, psychoanalytic theory,
54–57
Pharmacology, Skinner, B. F. and, 524
Phobias, social learning theory,
609–610
Physiology, personality theory, 2
Play behavior
Eriksonian theory, 200, 207–210
White, R., 188–189
Pleasure principle, psychoanalytic
theory, 36–37
Politics
Eriksonian theory, 218
Eysenck, H. J., 366
Postulate and corollaries, personal
construct theory, 420–425
Power, personality, 258–259
Prediction, personality theory, 10–11
Press concept, personality, 239–241
Primal scene, psychoanalytic
theory, 65
Primary process, psychoanalytic
theory, 36
Primordial images, Jungian analytic
theory, 86–87
Proceedings, personalityology, 229–230
Production processes, social learning
theory, 598
Progression, Jungian analytic theory,
105–106, 107
Projection, psychoanalytic theory, 51
Proprium, Allport, G., 280–281
Prototypes, cognitive, consistency
paradox and, social learning
theory, 620–622
Psychic energy
Jungian analytic theory, 87, 97–99,
100–101, 107
personal construct theory, 405
personology, 231
psychoanalytic theory and, 38–39,
43–46
Sullivanian theory, 162–163
Psychoanalytic theory, 30–77. See also
Personality theory
current status, 73–77
ego psychology, 173–179
Eriksonian theory, 190–218. See also
Eriksonian theory
evolution of, 174–175
historical perspective, 30–31
object relations theory, 179–183
Psychoanalytic theory (Continued)
personality development, 47–57
defense mechanisms, 50–52
displacement, 48–50
identification, 47–48
stages in, 52–57
personality dynamics, 38–47
anxiety, 46–47
instinct, 39–42
psychic energy, 43–46
personality structure, 35–38
ego, 36–37
id, 35–36
superego, 37–38
psychological theory and, 183–190
research methods, 57–73
case studies, 63–66
contemporary, 67–73
free association and dream analysis, 61–63
scientific method, 59–61
self-analysis (of Freud), 66
Psychobiography, personology, 261–262

Psychodynamic theory, personality theory, 18, 27–29. See also Eriksonian theory; Jungian analytic theory; Psychodynamic theory; Social psychological theory

Psychobiography, Eriksonian theory, 211–213

Psychological environment. See Environment

Psychological testing
Allport, G., 290, 291–292
Eysenck, 370
factor-analytic trait theory, 319–323. See also Factor-analytic trait theory
Jungian analytic theory, 98, 109, 119
personal construct theory, 429–430
person-centered theory, 473–480
personology, research methods, 253–254
psychological theory and, 17

Psychological theory
personality theory and, 7, 16–18
psychoanalytic theory and, 183–190
Psychometrics, personality theory. 2

Psychopharmacology, Skinner, B. F. and, 524

Psychotherapy, stimulus-response theory, 569–571. See also Therapy
Psychoticism, biological trait theory, 371–373
P-technique, factor-analytic trait theory, 340

Purposeful quality
personality theory, 20
psychodynamic theory, 28, 29

Q-technique
factor-analytic trait theory, 340
person-centered theory, 475–480

Quantitative studies, person-centered theory, 472

Racial memory, collective unconscious, 85–86

Rating scales, person-centered theory, 473–475

Recovery formation, 51
Reality, perception and, 391–393. See also Perception

Reality anxiety
projection, 51
psychoanalytic theory, 46–47
Reality principle, psychoanalytic theory, 36–37

Reality testing, psychoanalytic theory, 37

Reciprocal determinism, social learning theory, 600–602

Reflexes
psychoanalytic theory, 36
stimulus-response theory, 552

Regan, personology, 223
Regnant processes, personology, 243
Regression
Jungian analytic theory, 105–106, 107
psychoanalytic theory, 40, 51–52

Reinforcement
schedules of, operant conditioning, 512–513
secondary, operant conditioning, 515–516
social learning theory, 594–596

Relatedness. Fromm, E., 143, 145
Religion, Jungian analytic theory, 90–91, 106–107, 110–112, 118, 120

Repetition compulsion, psychoanalytic theory, 40

Repression
Freud’s second theory of anxiety, 174
Jungian analytic theory, 96, 107
psychoanalytic theory, 50–51
stimulus-response theory, 562–563, 570

Rep Test, 427–429

Retention processes, social learning theory, 598

Ritualisms, Eriksonian theory, 195
Rogers, C., biography of, 454–461. See also Person-centered theory

Role Construct Repertory Test, 427–429

Roles, factor-analytic trait theory, 331–332

R-technique, factor-analytic trait theory, 340–342

Sadomasochism
Fromm, E., 142
Horney, K., 149

Sample size, personology, research methods, 252–253

Scales
personal construct theory, 419–420
rating scales, person-centered theory, 473–475

Schedules, personology, 230–231
Schedules of reinforcement, operant conditioning, 512–513

Schemas, personology, 230–231

Schizophrenia, Sullivanian theory, 168–169

Schreber case (Freud), 63, 65

Scientific method
psychoanalytic theory, 38–39, 59–61, 75
Skinner, B. F., 496–497
stimulus-response theory, 535–536. See also Stimulus-response theory

Sullivanian theory, 155

Secondary disposition, Allport, G., 278–279

Secondary drive, 554–555

Secondary process, psychoanalytic theory, 36–37

Secondary reinforcement, operant conditioning, 515–516

Self
Allport, G., 280–281
factor-analytic trait theory, 329–330
Jungian analytic theory, 90–91
person-centered theory, 463–464
personology, 231
Self-actualization
characteristics of, 453–454
hierarchy of needs, 450
organismic theory, 441–442
personology, 249
Self-analysis, psychoanalytic theory, 66
Self-concept
experimental, person-centered
theory, 480
personal construct theory, 417–418
personality theories compared, 635
personality theory, 24–25
Self-discrepancy theory, described, 483–485
Self-efficacy, social learning theory, 607–612, 613–614
Self-observation, social learning theory, 604
Self psychology
Allport, G., 280
Kohut, H., 181–183
Self-reaction, social learning theory, 604–606
Self-realization, Jungian analytic theory, 101
Self-reinforcement, social learning theory, 596
Self-system
social learning theory, 603–606. See also Social learning theory
Sullivanian theory, 158–159
Sellman, M., biography of, 579–580.
See also Stimulus-response theory
Sensation, Jungian analytic theory, 92
Sensory processes, stimulus-response theory, 537
Sentiments, factor-analytic trait theory, 327–328
Serial programs and schedules, personology, 229–231
Sets, factor-analytic trait theory, 331–332
Sex differences
Adlerian theory, 131
cognitive dissonance theory, 481–482
Eriksonian theory, 208–210
Horney, K., 149
Jungian analytic theory, 89, 96
personal construct theory, 419, 430
power, personology, 259
psychoanalytic theory, 54–57, 74
Sexuality
Adlerian theory, 128
Eriksonian theory, 203
factor-analytic trait theory, 354–355
Jungian analytic theory, 79, 80, 104
psychoanalytic theory, 32, 41, 53, 62, 64
Sullivanian theory, 165–166
White, R., 189–190
Shadow, Jungian analytic theory, 89–90
Shame
doubt and, autonomy versus, Eriksonian theory, 198–199
social learning theory, 596
Siblings, birth order, Adlerian theory, 137–138
See also Operant conditioning
Social behavior, operant conditioning, 517–519
Social context
factor-analytic trait theory, 337–339
stimulus-response theory, 557–558
Social interest, Adlerian theory, 131–132
Sociality corollary, personal construct theory, 424–425
Social learning theory, 590–628. See also Learning theory
biographical data
Bandura, A., 591–594
Mischel, W., 616–619
cognitive-affective system, 622–626
cognitive person variables, 619–620
consistency paradox and cognitive prototypes, 620–622
current status, 626–628
observational learning principles, 596–600
attentional processes, 597
motivational processes, 598–600
production processes, 598
retention processes, 598
reciprocal determinism, 600–602
reinforcement, 594–596
research methods, 612–616
self-efficacy, 607–612
self-system, 603–606
therapy applications, 606–607
Social psychological theory, 122–172.
See also Adlerian theory
Fromm, E.; Horney, K.; Sullivanian theory
Adlerian, 124–140
current status, 169–172
Fromm, E., 140–146
historical perspective, 123–124
Horney, K., 146–153
Sullivanian, 153–169
Sociocultural factors, personology, 249–250
Source traits, factor-analytic trait theory, 318–319
Specification equation, factor-analytic trait theory, 323–326
Stage theory. See Developmental factors
Stagnation, generativity versus, Eriksonian theory, 203–204
States, factor-analytic trait theory, 331–332
Statistics, factor analysis concept, 311, 313–314
Stereotypes, Sullivanian theory, 160
Stimulation, Fromm, E., 143
Stimulus generalization and discrimination, operant conditioning, 516–517
Stimulus-response theory, 535–589, 650
applications, 561–571
biographical materials, Dollard and Miller, 539–544
current status, 586–589
experimentation, 544–550
overview, 535–539
personality development, 551–561
learning process, 552–555
social context, 557–558
stages, 558–561
personality structure, 550
research methods, 571–586
Skinner and, 493
Striving, for superiority, Adlerian theory, 129–130
Structural theory, 18, 219–220
Allport, G., 267–309. See also Allport, G.
biological trait theory, 360–390. See also Biological trait theory
factor-analytic trait theory, 310–359. See also Factor-analytic trait theory
personology, 221–266. See also Personology
Style of life. Adlerian theory, 132–135
Subjection, person-centered theory, 462
Subjectivity. personality theory, 24
Subject-object interactions, personalityology, 229–230
Subject-subject interactions, personalityology, 229–230
Sublimation
Jungian analytic theory, 107
psychoanalytic theory, 49
Sullivanian theory, 164–165
Subliminal effects, psychoanalytic theory, 67–71
Subsidiation, factor-analytic trait theory, 328
Suicide, psychoanalytic theory, 66
Sullivan, H. S., biography of, 153–157
Sullivanian theory, 153–169. See also Social psychological theory biographical material, 153–157
current status, 169–172
personality development, 163–166
personality dynamics, 161–163
personality structure, 157–158
research methods, 167–169
Superego
personology, 232
psychic energy distribution, 43–45
psychoanalytic theory, 37–38
social learning theory, 605
Superiority, striving for, Adlerian theory, 129–130
Superstitious behavior, operant conditioning, 513–515
Surface traits, factor-analytic trait theory, 318–319
Symbolization, Jungian analytic theory, 107–108
Synchronicity, Jungian analytic theory, 102–103
Syndromes, Maslow, A., 452–453
Synthesis, multiplicity versus, personality theory, 648–651
Teology
causality versus, Jungian analytic theory, 101–102
personality theory, 20
Temperament
Allport, G., 274–275
biological trait theory, 367–373. See also Biological trait theory factor-analytic trait theory, 319–323
Tension
personal construct theory, 405, 406
personology, 241
Sullivanian theory, 161–162
Tests. See Psychological testing
Thema concept, personology, 241–242
Thematic Apperception Test (TAT), 254, 257–259, 479
Theory, defined, 9–14
Therapy
depression, stimulus-response theory, 583–584
personality theory and, 4
psychoanalytic theory, 61–67
social learning theory, 606–607
stimulus-response theory, 569–571
Thinking, Jungian analytic theory, 91–92
Threat, personal construct theory, 426
Toilet training
psychoanalytic theory, 54
psychology and psychoanalysis, 189
Trait. See also Allport, G.; Biological trait theory; Factor-analytic trait theory
Allport, G., 275–279
type contrasted, 362
Transcendent function, Jungian analytic theory, 95, 106–107
Transmarginal Inhibition, biological trait theory, 378, 379
Transpersonal unconscious. See Collective unconscious
Trauma, psychoanalytic theory, 47
Trust, basic trust versus basic mistrust, Eriksonian theory, 196–198
Twin studies, factor-analytic trait theory, 348–352
Unconditioned stimulus, stimulus-response theory, 544–550. See also Stimulus-response theory
Unconscious. See also Consciousness collective, Jungian analytic theory, 85–90, 103
factor-analytic trait theory, 326–327
organismic theory, 442
personal, Jungian analytic theory, 84–85
personal construct theory, 425–426
personality theories compared, 631–632
personality theory, 21
personology, 250–251
psychoanalytic theory, 31
psychodynamic theory, 27, 28, 29
stimulus-response theory, 561–565
Uniqueness. See Individual differences
Unity, of personality, Allport, G., 285
Unity-thema concept, personology, 242–243
Utility, personality theory, 10, 12
Valence, personal construct theory, 406–407
Vector, personal construct theory, 407–408
Vector psychology, personal construct theory, 404. See also Personal construct theory
Vector-value scheme, personology, 243–244
Verification, personality theory, 12
Vicarious reinforcement, social learning theory, 596, 599–600, 610
VIDAS systems model, factor-analytic trait theory, 343–344
Wish, psychoanalytic theory, 39
Wish-fulfillment, 36
Wolf Man case (Freud), 63, 65
Wolpe, J., biography of, 574. See also Stimulus-response theory
Word association tests, Jungian analytic theory, 98, 109, 119
Yerkes-Dodson law, biological trait theory, 380–381
Zeigarnik effect, 282
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