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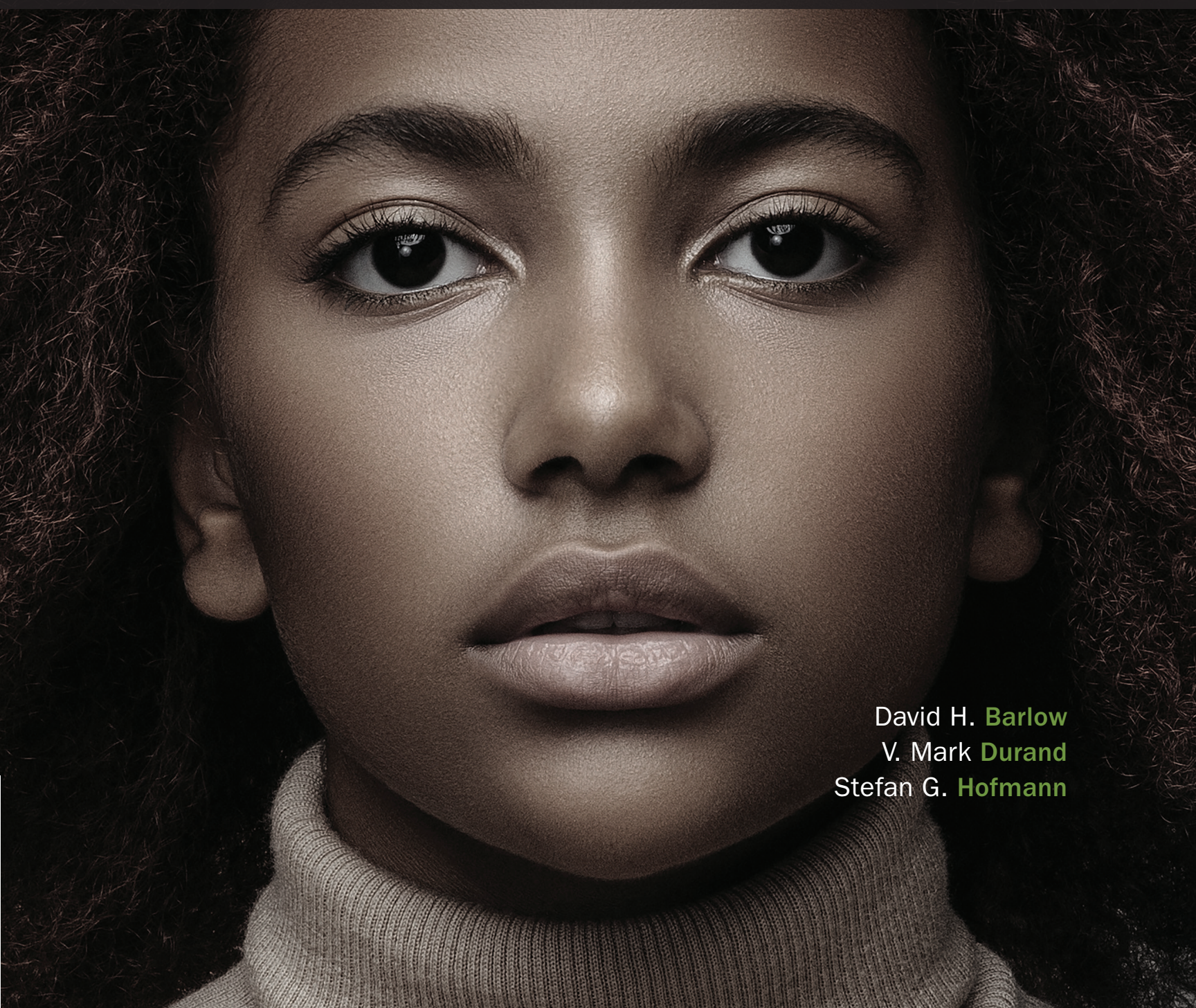
Ninth Edition

PSYCHOPATHOLOGY

An Integrative Approach to Mental Disorders



David H. **Barlow**
V. Mark **Durand**
Stefan G. **Hofmann**

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Psychopathology: An Integrative Approach to Mental Disorders, **Ninth Edition**
David H. Barlow, V. Mark Durand, Stefan G. Hofmann

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To my mother, Doris Elinor Barlow-Lanigan, for her multidimensional influence across my life span.

D. H. B.

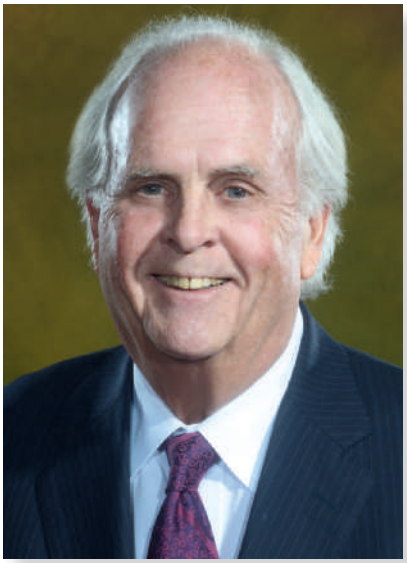
To Wendy and Jonathan, whose patience, understanding, and love provided me the opportunity to complete such an ambitious project.

V. M. D.

To all of those living and coping with psychopathology.

S. G. H.

About the Authors



David H. Barlow is an internationally recognized pioneer and leader in clinical psychology. Currently professor emeritus of psychology and psychiatry at Boston University, Dr. Barlow is founder and director emeritus of the Center for Anxiety and Related Disorders, one of the largest research clinics of its kind in the world. From 1996 to 2004, he directed the clinical psychology programs at Boston University. From 1979 to 1996, he was distinguished professor at the University at Albany–State University of New York. From 1975 to 1979, he was professor of psychiatry and psychology at Brown University, where he also founded the clinical psychology internship program. From 1969 to 1975, he was professor of psychiatry at the University of Mississippi Medical Center, where he founded the psychology residency program.

Growing up in sports-obsessed Boston, he reached what turned out to be the peak of his athletic career at age 12 when his team went to the Little League Baseball World Series. When it became clear that his athletic career was going no further, he hit the books, receiving his B.A. from the University of Notre Dame, his M.A. from Boston College, and his Ph.D. from the University of Vermont.

A fellow of every major psychological association, Dr. Barlow has received many awards in honor of his excellence in scholarship, including the National Institute of Mental Health Merit Award for his long-term contributions to the clinical research effort. He has also received the two highest awards in psychology—the Distinguished Scientist Award from the American Psychological Association, which is given for applications of psychology, and the James McKeen Cattell Fellow Award from the Association for Psychological Science, which honors individuals for a lifetime of significant intellectual achievements in applied psychological research. Other awards include the Distinguished Scientist Award from the Society of Clinical Psychology of the American Psychological Association and a certificate of appreciation from the APA section on the clinical psychology of women for "outstanding commitment to the advancement of women in psychology." He was awarded an honorary doctorate of science from the University of Vermont, an honorary doctorate of humane letters from William James College, as well as the C. Charles Burlingame Award from the Institute of Living in Hartford Connecticut "for his outstanding leadership in research, education, and clinical care." In 2014, he was awarded a presidential citation from the American Psychological Association "for his lifelong dedication and passion for advancing psychology through science, education, training, and practice." In 2018, he received a second presidential citation for his "far-reaching impact on many psychologists of color and shaping the future of the discipline in valuing and supporting the potential of all students."

He also has received career or lifetime contribution awards from the California, Connecticut, and Massachusetts Psychological Associations, as well as the University of Mississippi Medical Center and the Association for Behavioral and Cognitive Therapies. In 2000, he was named honorary visiting professor at the Chinese People's Liberation Army General Hospital and Postgraduate Medical School in Beijing, China, and in 2015, he was named honorary president of the Canadian Psychological Association. In addition, the annual Grand Rounds in Clinical Psychology at Brown University was named in his honor. During the 1997–1998 academic year, he was Fritz Redlich Fellow at the Center for Advanced Study in the Behavioral Sciences in Palo Alto, California. His research has been continually funded by the National Institutes of Health for over 50 years.

Dr. Barlow has edited several journals, including *Clinical Psychology: Science and Practice* and *Behavior Therapy,* has served on the editorial boards of more than 20 different journals, and is currently editor in chief of the "Treatments That Work" series for Oxford University Press. He has published more than 650 scholarly articles and chapters and written or edited more than 90 books and clinical manuals, including *Anxiety and Its Disorders,* second edition (Guilford Press); *Clinical Handbook of Psychological Disorders: A Step-by-Step Treatment Manual,* fifth edition (Guilford Press); *Single-Case Experimental Designs: Strategies for Studying Behavior Change,* third edition (Allyn & Bacon) (with Matthew Nock and Michael Hersen); *The Scientist–Practitioner: Research and Accountability in the Age of Managed Care,* second edition (Allyn & Bacon) (with Steve Hayes and Rosemary Nelson-Gray); *Mastery of Your Anxiety and Panic* (Oxford University Press) (with Michelle Craske); and, more recently, *The Unified Protocol for Transdiagnostic Treatment of Emotional Disorders,* second edition (Oxford University Press) (with the Unified Protocol team at Boston University). The books and manuals have been translated into more than 20 languages, including Arabic, Chinese, Hindi, and Russian. His research has been cited over 130,000 times with a Google scholar h-index of 160.

Dr. Barlow was one of three psychologists on the task force that was responsible for reviewing the work of more than 1,000 mental health professionals who participated in the creation of DSM-IV, and he continued on as an adviser to the DSM-5 task force. He also chaired the APA task force on Psychological Intervention Guidelines, which created a template for the creation of

clinical practice guidelines. His current research program focuses on the nature and treatment of anxiety and related emotional disorders.

At leisure, he plays golf, skis, and retreats to his home on Nantucket Island, where he loves to write, walk on the beach, and visit with his island friends.

V. Mark Durand is known worldwide as an authority in the area of autism spectrum disorder. He is a Distinguished University Professor of psychology at the University of South Florida–St. Petersburg, where he was the founding dean of Arts and Sciences and vice chancellor for academic affairs. Dr. Durand is a fellow of the American Psychological Association. He has received more than $4 million in federal funding since the beginning of his career to study the nature, assessment, and treatment of behavior problems in children with disabilities. Before moving to Florida, he served in a variety of leadership positions at the University at Albany, including associate director for clinical training for the doctoral psychology program from 1987 to 1990, chair of the clinical department from 1995 to 1998, and interim dean of Arts and Sciences from 2001 to 2002. There he established the Center for Autism and Related Disabilities at the University at Albany–SUNY. He received his B.A., M.A., and Ph.D.—all in psychology—at the State University of New York–Stony Brook.

Dr. Durand was awarded the University Award for Excellence in Teaching at SUNY–Albany in 1991 and was given the Chancellor's Award for Excellence in Research and Creative Scholarship at the University of South Florida–St. Petersburg in 2007. He was named a 2014 Princeton Lecture Series Fellow and received the 2015 Jacobson Award for Critical Thinking from the American Psychological Association for his body of work in the field of autism spectrum disorder. Dr. Durand was elected to serve as president of the American Psychological Association's Division 33 (Intellectual and Developmental Disabilities / Autism Spectrum Disorders) for 2019.

Dr. Durand is currently a member of the Professional Advisory Board for the Autism Society of America and was on the board of directors of the International Association of Positive Behavioral Support. He was coeditor of the *Journal of Positive Behavior Interventions*, serves on a number of editorial boards, and has more than 145 publications on functional communication training, educational programming, and behavior therapy. His books include *Severe Behavior Problems: A Functional Communication Training Approach* (Guilford Press); *Sleep Better! A Guide to Improving Sleep for Children with Special Needs* (Brookes); *Helping Parents with Challenging Children: Positive Family Intervention* (Oxford University Press) (with Meme Hieneman); the multiple national award-winning *Optimistic Parenting: Hope and Help for You and Your Challenging Child* (Brookes); and most recently *Autism Spectrum Disorder: A Clinical Guide for General Practitioners* (American Psychological Association).

Dr. Durand developed a unique treatment for severe behavior problems that is currently mandated by states across the country and is used worldwide. He also developed an assessment tool that is used internationally and has been translated into more than 15 languages. Most recently, he developed an innovative approach to help families work with their challenging child (Optimistic Parenting), which was validated in a 5-year clinical trial and is being used all over the world. He has been consulted by the departments of education in numerous states and by the U.S. Departments of Justice and Education. His current research program includes the study of prevention models and treatments for such serious problems as self-injurious behavior.

In his leisure time, he enjoys long-distance running and has completed three marathons.

Stefan G. Hofmann is an international expert on psychotherapy for emotional disorders. He is the Alexander von Humboldt Professor of Translational Clinical Psychology at the Philipps University of Marburg and professor of psychology at Boston University. He was born in a little town near Stuttgart in Germany, which may explain his German accent. He studied psychology at the Philipps University of Marburg, Germany, where he received his B.A., M.S., and Ph.D. A brief dissertation fellowship to spend some time at Stanford University turned into a longer research career in the United States. He eventually moved to the United States in 1994 to join Dr. Barlow's team at the University at Albany–State University of New York. He has been a professor at Boston University since 1996 and received an Alexander von Humboldt Professorship for the Philipps University of Marburg, Germany, in 2021. He now lives in Frankfurt, Germany, Boston, and Cape Cod.

Dr. Hofmann has an actively funded research program studying various aspects of emotional disorders with a particular emphasis on anxiety disorders, cognitive behavioral therapy, and neuroscience. More recently, he has been interested in mindfulness approaches, such as yoga and meditation practices, as treatment strategies of emotional disorders. Furthermore, he has been one of the leaders in translational research methods to enhance the efficacy of psychotherapy and to predict treatment outcome using neuroscience methods. He is codeveloper (with Steven Hayes) of process-based therapy.

He has won many prestigious professional awards, including the Aaron T. Beck Award for Significant and Enduring Contributions to the Field of Cognitive Therapy by the Academy of Cognitive Therapy. He is a fellow of the American Psychological Association and the Association for Psychological Science and was president of various national and international professional societies, including the Association for Behavioral and Cognitive Therapies and the International Association for Cognitive Psychotherapy. He was an adviser to the DSM-5 Development Process and a member of the DSM-5 Anxiety Disorder Sub-Work Group. As part of this, he participated in the discussions about the revisions of the DSM-5 criteria for various anxiety disorders, especially social anxiety disorder, panic disorder, and agoraphobia. Dr. Hofmann is a Thomson Reuters' Highly Cited Researcher.

Dr. Hofmann has been the editor in chief of *Cognitive Therapy and Research,* and he has published more than 400 peer-reviewed journal articles and 20 books, including *An Introduction of Modern CBT* (Wiley-Blackwell) and *Emotion in Therapy* (Guilford Press).

At leisure, he enjoys playing with his sons. He likes traveling to immerse himself into new cultures, make new friends, and reconnect with old ones. When time permits, he occasionally gets out his flute.

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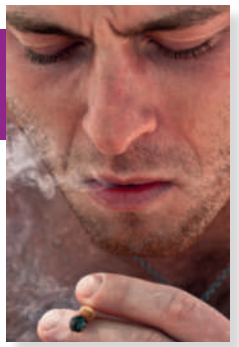

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Preface

Science is a constantly evolving field, but every now and then something groundbreaking occurs that alters our way of thinking. For example, evolutionary biologists, who long assumed that the process of evolution was gradual, suddenly had to adjust to evidence that says evolution happens in fits and starts in response to such cataclysmic environmental events as meteor impacts. Similarly, geology has been revolutionized by the discovery of plate tectonics.

Until recently, the science of psychopathology had been compartmentalized, with psychopathologists examining the separate effects of psychological, biological, and social influences. This approach is still reflected in popular media accounts that describe, for example, a newly discovered gene, a biological dysfunction (chemical imbalance), or early childhood experiences as a "cause" of a psychological disorder. This way of thinking still dominates discussions of causality and treatment in some psychology textbooks: "The psychoanalytic views of this disorder are . . . ," "the biological views are . . . ," and, often in a separate chapter, "psychoanalytic treatment approaches for this disorder are . . . ," "cognitive behavioral treatment approaches are . . . ," or "biological treatment approaches are . . ."

In the first edition of this text, we tried to do something very different. We thought the field had advanced to the point that it was ready for an integrative approach in which the intricate interactions of biological, psychological, and social factors are explicated in as clear and convincing a manner as possible. Recent explosive advances in knowledge confirm this approach as the only viable way of understanding psychopathology. To take just two examples, Chapter 2 contains a description of a study demonstrating that stressful life events can lead to depression but that not everyone shows this response. Rather, stress is more likely to cause depression in individuals who already carry a particular gene that influences serotonin at the brain synapses. Similarly, Chapter 9 describes how the pain of social rejection activates the same neural mechanisms in the brain as physical pain. In addition, the entire section on genetics has been rewritten to highlight the new emphasis on gene–environment interaction, along with recent thinking from leading behavioral geneticists that the goal of basing the classification of psychological disorders on the firm foundation of genetics is fundamentally flawed. Descriptions of the emerging field of *epigenetics*, or the influence of the environment on gene expression, is also woven into the chapter, along with new studies on the seeming ability of extreme environments to largely override the effects of genetic contributions. Studies elucidating the mechanisms of epigenetics or specifically how environmental events influence gene expression are described.

These results confirm the integrative approach in this book: Psychopathology cannot be explained by genetic or environmental factors alone but rather arise from their interaction. We now understand that psychological and social factors directly affect neurotransmitter function and even genetic expression. Similarly, we cannot study behavioral, cognitive, or emotional processes without appreciating the contribution of biological and social factors to psychological and psychopathological expression. Instead of compartmentalizing psychopathology, we use a more accessible approach that accurately reflects the current state of our clinical science.

As colleagues, you are aware that we understand some disorders better than others. But we hope you will share our excitement in conveying to students both what we currently know about the causes and treatments of psychopathology and how far we have yet to go in understanding these complex interactions.

Integrative Approach

As noted earlier, the first edition of this book pioneered a new generation of such textbooks, which offer an integrative and multidimensional perspective. (We acknowledge such one-dimensional approaches as biological, psychosocial, and supernatural as historic perspectives on our field.) We include substantial current evidence of the reciprocal influences of biology and behavior and of psychological and social influences on biology. Our examples are designed to hold students' attention. For example, we discuss genetic contributions to divorce, the effects of early social and behavioral experience on later brain function and structure, new information on the relation of social networks to the common cold, and new data on psychosocial treatments for cancer. We note that in the phenomenon of implicit memory and blind sight, which may have parallels in dissociative experiences, psychological science verifies the existence of the unconscious (although it does not much resemble the seething caldron of conflicts envisioned by Freud). We present new evidence confirming the effects of psychological treatments on neurotransmitter flow and brain function. We acknowledge the often neglected area of emotion theory for its rich contributions to psychopathology (such as the effects of anger on cardiovascular disease). We weave scientific findings from the study of emotions together with behavioral, biological, cognitive, and social discoveries to create an integrated tapestry of psychopathology.

Life-Span Developmental Influences

No modern view of psychology can ignore the importance of life-span developmental factors in the manifestation and treatment of psychopathology. Studies highlighting developmental windows for the influence of the environment on gene expression are explained. Accordingly, although we include a chapter on neurodevelopmental disorders (Chapter 14), we consider the importance of development throughout the text. We discuss childhood and geriatric anxiety, for example, in the context of the

anxiety, trauma- and stressor-related, and obsessive-compulsive and related disorders chapter (Chapter 5). This system of organization, which is for the most part consistent with DSM-5-TR, helps students appreciate the need to study each disorder from childhood through adulthood and old age. We note findings on developmental considerations in separate sections of each disorder chapter and, as appropriate, discuss how specific developmental factors affect causation and treatment.

Scientist–Practitioner Approach

We go to some lengths to explain why the scientist–practitioner approach to psychopathology is both practical and ideal. Like most of our colleagues, we view this as something more than simple awareness of how scientific findings apply to psychopathology. We show how every clinician contributes to general scientific knowledge through astute and systematic clinical observations, functional analyses of individual case studies, and systematic observations of series of cases in clinical settings. For example, we explain how information on dissociative phenomena provided by early psychoanalytic theorists remains relevant today. We also describe the formal methods used by scientist–practitioners, showing how abstract research designs are actually implemented in research programs.

Clinical Cases of Real People

We have enriched the book with authentic clinical histories to illustrate scientific findings on the causes and treatment of psychopathology. We have run active clinics for years, so 95% of the cases are from our own files, and they provide a fascinating frame of reference for the findings we describe. The beginnings of most chapters include a case description, and most of the discussion of the latest theory and research is related to these very human cases.

Disorders in Detail

We cover the major psychological disorders in 11 chapters (Chapters 5–15), focusing on three broad categories: clinical description, causal factors, and treatment and outcomes. We pay considerable attention to case studies and DSM-5-TR criteria, and we include statistical data, such as prevalence and incidence rates, sex ratio, age of onset, and the general course or pattern for the disorder as a whole. Since several of us were appointed advisers to the DSM-5-TR task force, we are able to include the reasons for changes as well as the changes themselves. Throughout, we explore how biological, psychological, and social dimensions may interact to cause a particular disorder. Finally, by covering treatment and outcomes within the context of specific disorders, we provide a realistic sense of clinical practice.

Treatment

One of the best received innovations in the first eight editions was our strategy of discussing treatments in the same chapter as the disorders themselves instead of in a separate chapter, an approach that is supported by the development of specific psychosocial and pharmacological treatment procedures for specific disorders. We have retained this integrative format and have improved upon it, and we include treatment procedures in the key terms and glossary.

Legal and Ethical Issues

In our closing chapter, we integrate many of the approaches and themes that have been discussed throughout the text. We include case studies of people who have been involved directly with many legal and ethical issues and with the delivery of mental health services. We also provide a historical context for current perspectives so students will understand the effects of social and cultural influences on legal and ethical issues.

Diversity

Issues of culture and gender are integral to the study of psychopathology. Throughout the text, we describe current thinking about which aspects of the disorders are culturally specific and which are universal and about the strong and sometimes puzzling effects of gender roles. For instance, we discuss the current information on such topics as the gender imbalance in depression, the ways panic disorders are expressed differently in various Asian cultures, the ethnic differences in eating disorders, treatment of schizophrenia across cultures, and the diagnostic differences of attention deficit/hyperactivity disorder (ADHD) in boys and girls. We also include a discussion on the influence of social and contextual factors, such as racial/ethnic discrimination, on the prevalence of panic disorder in the different ethnic groups in the United States. Clearly, our field will grow in depth and detail as these subjects and others become standard research topics. For example, why do some disorders overwhelmingly affect females and others appear predominantly in males? And why does this apportionment sometimes change from one culture to another? In answering questions like these, we adhere closely to science, emphasizing that gender and culture are each one dimension among several that constitute psychopathology.

New to This Edition

A Thorough Update

This exciting field moves at a rapid pace, and we take particular pride in how our book reflects the most recent developments. Of course, the most important recent development is the publication of the text revision of DSM-5 (DSM-5 TR). In this revision many of the diagnostic criteria have been updated and there is one brand new disorder described below. All of these revisions have been fully integrated throughout the book. Also, once again, every chapter has been carefully revised to reflect the latest research studies on psychological disorders. Hundreds of new references from 2020 to 2021 (and some still "in press") appear for the first time in this edition, and some of the information they contain stuns the imagination. Nonessential material has been eliminated, some new headings have been added, and DSM-5-TR criteria are included in their entirety as tables in the appropriate disorder chapters.

Several chapters—Chapter 5, Anxiety, Trauma- and Stressor-Related, and Obsessive-Compulsive and Related Disorders; Chapter 7, Mood Disorders and Suicide; Chapter 8, Eating and Sleep–Wake Disorders; Chapter 9, Physical Disorders and Health Psychology; Chapter 11, Substance-Related, Addictive, and Impulse-Control Disorders; Chapter 13, Schizophrenia Spectrum

and Other Psychotic Disorders; and Chapter 14, Neurodevelopmental Disorders—have been heavily revised to reflect new research, but all chapters have been significantly updated and freshened.

Chapter 1, Psychopathology in Historical Context, features updated nomenclature to reflect new titles in DSM-5-TR, updated descriptions of research on defense mechanisms, and fuller and deeper descriptions of the historical development of psychodynamic and psychoanalytic approaches. We added a discussion of the definition of the term *mental disorder*, which includes a critique of Jerome Wakefield's influential definition by Richard McNally and examines the historical changes of this term throughout history, including today's struggle with the COVID-19 pandemic. We added a section on causality and discuss the term *etiology* as it relates to psychopathology. Freud's influential psychosexual theory of psychoanalysis is discussed in the context of issues related to LGBTQ2+ and gender identity. His theory was replaced by cognitive behavioral therapy (CBT), which we discuss in more detail.

Chapter 2, An Integrative Approach to Psychopathology, includes an updated discussion of developments in the study of genes and behavior with a focus on gene–environment interaction; new data illustrating the gene–environment correlation model; and new studies illustrating the psychosocial influence on the development of brain structure and function in general and on neurotransmitter systems specifically. We updated, revised, and refreshed sections on behavioral and cognitive science and added discussions of new evidence on the brain-gut connection and of COVID-19 as an example of the importance of social influence on psychopathology. This chapter also includes a major update on genetics, DNA, the definition of a gene based on the DNA structure, coding versus noncoding DNA, transcription of DNA, RNA, the definition of *allele*, the difference between a genotype and phenotype, polymorphism, and the definition of *single nucleotide polymorphism (SNP)*. We also updated the section on epigenetics and added new references, including new research on telomere length and other epigenetic mechanisms. We believe this update is necessary for students to gain a better understanding on the etiology of mental disorders. Finally, we added a discussion on the exploding research field on psychedelics, hallucinogens, and other drugs such as St. John's wort as new pharmacological agents for mental disorders.

Chapter 3, Clinical Assessment and Diagnosis, now presents references to "intellectual disability" instead of "mental retardation" to be consistent with DSM-5-TR and changes within the field; a new discussion about information from the MMPI-2 (noting that it is informative but does not necessarily change how clients are treated and may not improve their outcomes); a description of the organization and structure of DSM-5-TR along with major changes from DSM-IV and DSM-5-TR; a description of methods to coordinate the development of DSM-5 with the ICD-11; a description of likely directions of research as we begin to head toward DSM-6; a discussion and description of the new Rorschach Performance Assessment System (RPAS) that goes beyond U.S. reference values and uses a set of international normative reference values; and a discussion and description of a new version of the MMPI—MMPI-2-Restructured Form (MMPI-2-RF)—that attempts to change the information from the assessment that results in a yes/no outcome about whether a person has a disorder to a continuum of impairment.

In Chapter 4, Research Methods, we note that the study of COVID-19 is a contemporary example of the work of epidemiologists—including identifying the most vulnerable groups (such as people over 65 years of age and those with certain pre-existing conditions). In the discussion of prevalence, we note recent research on binge drinking, including findings that the prevalence of binge drinking (having five or more drinks in a row) among U.S. college students is about 40% and that in states that legalized recreational marijuana use, marijuana use increased but binge drinking decreased.

Chapter 5, Anxiety, Trauma- and Stressor-Related, and Obsessive-Compulsive and Related Disorders, is organized according to the three major groups of disorders: anxiety disorders, trauma- and stressor-related disorders, and obsessive-compulsive and related disorders. Obsessive-compulsive and related disorders include obsessive-compulsive disorder and also body dysmorphic disorder, hoarding disorder, trichotillomania (hair pulling disorder), and excoriation (skin picking disorder). Some of the revisions to Chapter 5 include, most importantly, the addition of an entirely new disorder in the DSM-5-TR, Prolonged Grief Disorder, which appears among the trauma and stressor related disorders. We also added a discussion on the limitations of animal research for studying anxiety disorders in humans, as well as, studies examining biomarkers of anxiety and studies on the inhalation of CO2-enriched air to induce panic and review new treatments, such as Dr. Barlow's Unified Protocol. We also updated the relationship between anxiety disorders and suicide, and we revised and updated the discussion of benzodiazepine and anxiety disorders in youth to reflect the new black box warning. The section on generalized anxiety disorders (GAD) was revised to reflect the new conceptualization of the role of worry in addition to new clinical trial data supporting the efficacy of cognitive-behavioral therapy (CBT) as compared to other treatments, including yoga. We revised the discussion on the relationship between panic and agoraphobia to reflect the most current view as reflected in the DSM-5-TR, and we updated the prevalence estimates of panic disorder in different age groups. We reviewed and updated the contemporary literature on cultural influences and their associated cultural and social factors, as well as research on internet-supported and smartphone app-delivered treatment options. Finally, we included the newest evidence of the limitations of treatment protocols for posttraumatic stress disorder (PTSD).

The grouping of disorders in Chapter 6, Somatic Symptom and Related Disorders and Dissociative Disorders, reflects a major overarching change, specifically for somatic symptom disorder, illness anxiety disorder (formerly known as hypochondriasis), and psychological factors affecting medical conditions. The chapter discusses the differences between these overlapping disorders and provides a summary of the causes and treatment approaches of these problems. In addition, Chapter 6 now includes a discussion on the perceptual dysregulation model of somatic symptom disorder and an update on the false memory debate related to trauma in individuals with dissociative identity

disorder (DID). We now clarify the use of the terms *hypochondriasis* and *hypochondriac* and revised the cultural expression of illness anxiety disorder. The chapter includes an updated review of treatment options for health anxiety, somatic symptom disorder, and other medically unexplained symptoms. We introduce the concept of secondary gain and elaborate on the distinction between organic and functional blindness. We provide more details on the Munchausen syndrome and discuss blind sight and unconscious vision. The chapter now also includes a discussion on the difference between epileptic seizure and functional seizure and the results of a recently published large study examining the clinical correlates of functional seizure. We updated our review on dissociation, derealization, and depersonalization, and we provide a review of the recent data on malingering as it relates to DID. We discuss the contemporary views of these disorders and contrast them with Freudian beliefs on memory as they relate to psychopathology. Finally, we elaborate on the controversies around assessing childhood abuse.

Chapter 7, Mood Disorders and Suicide, provides an updated discussion on the psychopathology and treatment of the DSM-5 mood disorders, including persistent depressive disorder, seasonal affective disorder, disruptive mood dysregulation disorder, bipolar disorder, and suicide. The chapter discusses new data on the genetic and environmental risk factors, such as dysfunctional reward processing, and protective factors, such as optimism. Also included is an update on the pharmacological and psychological treatments, an update on the section on mixed features and predominant polarity, a discussion on paternal peripartum depression, an update on the influence of seasonal change and daylight exposure on depression, and an update on prolonged grief disorder and risk factors for suicide. We also revised and updated the information on the prevalence of mood disorders and added a comparison between bipolar and major depressive disorder in suicidality. We also updated the information on mortality of elderly patients with depression, review elderly depression between different racial and ethnic groups, add updated the information on the genetics of depression and bipolar disorder, discuss the influence of the gut microbiota on depression, expand the influence of social and cultural factors contributing to depression by including racism in this discussion, clarify the relative importance of genetics for depression, add ketamine as a novel treatment strategy for depression, update the section on depression in children and adolescents, update the comparative efficacy of CBT and Interpersonal Psychotherapy update the statistics on suicide, and update and elaborate on suicide contagion by discussing the Werther effect and the competing Papageno effect. We were mindful of the terminology we used, avoiding terms such as "committing suicide" and "successful suicide" and replacing them with more appropriate and generally agreed upon contemporary terminology (such as "to die by suicide" and "fatal versus nonfatal suicide attempts").

Thoroughly rewritten and updated, Chapter 8, Eating and Sleep–Wake Disorders, contains new information on mortality and suicide rates in anorexia nervosa; new epidemiological information on the prevalence of eating disorders in adolescents; new information on the increasing globalization of eating disorders and obesity; updated information on typical patterns of comorbidity accompanying eating disorders; and new and updated research on changes in the incidence of eating disorders among males, racial and ethnic differences on the thin-ideal body image associated with eating disorders, the substantial contribution of emotion dysregulation to etiology and maintenance of anorexia, the role of friendship cliques in the etiology of eating disorders, mothers with eating disorders who also restrict their children's food intake, the contribution of parents and family factors in the etiology of eating disorders, biological and genetic contributions to causes of eating disorders (including the role of ovarian hormones), transdiagnostic treatment applicable to all eating disorders, results from a large multinational trial comparing CBT to psychoanalysis in the treatment of bulimia, the effects of combining Prozac with CBT in the treatment of eating disorders, racial and ethnic differences in people with binge-eating disorder seeking treatment, the phenomenon of night eating syndrome and its role in the development of obesity, and new public health policy developments directed at the obesity epidemic.

Also in Chapter 8, we have realigned coverage of sleep–wake disorders with new information on sleep in women (including risk and protective factors), updated a section on narcolepsy to describe new research on the causes of this disorder, and added new research on the nature and treatment of nightmares. We updated our review of the changes in prevalence rates in eating disorders over time across the world, updated our review of obesity and compare obesity rates internationally and between different age and ethnic groups, updated the clinical description of bulimia, and discuss the role of physical exercise and the individual's distorted sense of self. We also added a discussion on purging disorder, features that distinguish it from binge-eating disorder and bulimia nervosa, predictors of eating disorders, and the relationship between eating disorders, ethnicity, sexual orientation and sexual identity. Finally, we updated the findings on sex difference in body image perception.

In Chapter 9, Physical Disorders and Health Psychology, we updated data on the leading causes of death in the United States; provided new statistics about sexually transmitted diseases, including HIV/AIDS; reviewed psychosocial factors on brain structures and function; summarized the influential Framingham Heart Study and provided new data on the effects of stress on cardiovascular disease, including a discussion on allostatic load; and updated a review into the causes and treatments of chronic pain. We also provided an updated review of psychological and behavioral procedures for preventing injuries; added information on lower back pain, sex differences in pain perception, the effect of cigarette smoking and small airway dysfunction, in particular as it relates to China; and discuss studies on the effect of psychotherapy on cancer survival. Finally, we include a discussion of COVID-19 as an example of the impact of a global pandemic on deaths.

In Chapter 10, Sexual Dysfunctions, Paraphilic Disorders, and Gender Dysphoria, we review sexual practices and preferences based on international surveys, review the biological and genetic contribution of same-sex orientation, added a section on vulvodynia, added an update on the general trend in research on sexual dysfunctions, and updated the section on erectile dysfunction and its treatment with the popular PDE-5 inhibitors (such as Viagra). In general, we were mindful of the preferred terminologies for the various sexual orientations and preferences. As much as possible,

we rephrased wordings from the original reports we reviewed about sex differences and differences in sexual orientation to be inclusive and to avoid feelings of discomfort in some of our readers.

A thoroughly revised Chapter 11, Substance-Related, Addictive, and Impulse-Control Disorders, features a new discussion of how the trend to mix caffeinated energy drinks with alcohol may increase the likelihood of later abuse of alcohol; new research on how chronic use of MDMA ("Ecstasy") leads to lasting memory problems; and new research on several factors predicting early alcohol use, including when best friends have started drinking, whether family members are at high risk for alcohol dependence, and the presence of behavior problems in these children.

Chapter 12, Personality Disorders, describes the efforts to begin to address the personality dimensions. The DSM-5 Alternative Model of Personality Disorders (AMPD) was created in a different section of DSM (Section III: Emerging Measures and Models). A similar decision was made for the international version of the DSM—the WHO International Classification of Diseases, 11th version (ICD-11). The DSM-5 and the ICD-11 classifications of personality disorders (PD) are largely commensurate, and, when combined, they delineate six trait domains: negative affectivity, detachment, antagonism/dissociality, disinhibition, anankastia, and psychoticism. More work on the usefulness of these alternatives is necessary to evaluate these alternatives.

Chapter 13, Schizophrenia Spectrum and Other Psychotic Disorders, presents updated information on the economic impact of schizophrenia. The annual cost of schizophrenia in the United States is estimated to exceed $150 billion when factors such as family caregiving, lost wages, and treatment are considered. We updated the prevalence of hallucinations and delusions. Between 60% and 80% of people with schizophrenia experience hallucinations, and approximately 70% experience delusions. We added an interesting study of brief psychotic disorder. Brief psychotic disorder is often precipitated by extremely stressful situations. In one case study in Italy, researchers found an increase in hospitalizations for brief psychotic disorders during the COVID-19 pandemic. Of the six individuals admitted (none of whom had a previous psychiatric disorder), three presented the somatic delusion of being infected with COVID, and all six cases had religious/spiritual delusions and hallucinatory content.

Chapter 14, Neurodevelopmental Disorders, now includes updated prevalence data about attention-deficit/hyperactivity disorder (ADHD) in children. An important analysis of prevalence of ADHD suggests that the disorder is found in about 4% of the U.S. population of children and in 5.2% of the child populations across all regions of the world. We added a new study looking at early detection of ADHD. In this study, much younger children at risk for ADHD were identified as having early signs of ADHD. Infants with an older sibling or parent diagnosed with ADHD were distinguishable from infants with no family history of ADHD as early as 12 months of age based on directly observed and examiner reports of behavior, particularly with respect to hyperactive-impulsive behavior. Parents of infants at familial risk for ADHD also reported significantly more behavior/temperament concerns as early as 12 months of age compared to parents of infants at low risk for ADHD. We expanded the description of savant skills in some persons with autism spectrum disorder (ASD). These special skills typically occur in five areas—music, art, calendar calculating, mathematics, or mechanical/visual-spatial skills—and are usually associated with outstanding memory that is restricted to the area of expertise.

Chapter 15, Neurocognitive Disorders, features a study of the effects of confinement during COVID-19 on the side effects of dementia due to Alzheimer's disease. Perhaps partly because people suffering from neurocognitive disorder are aware that they are deteriorating mentally, emotional changes often occur as well. Common side effects are delusions (irrational beliefs), depression, agitation, aggression, and apathy. One study found that confinement during COVID-19 increased the side effects among some patients. We updated the criteria used to diagnose dementia due to Alzheimer's disease. To make a diagnosis without direct examination of the brain, the course and presence of the following symptoms should be observed—slow, progressive decline, typically in this order: memory, language, visuospatial function (that is, skills needed for movement, depth and distance perception, and spatial navigation), and executive function (that is, a set of mental skills that include working memory, flexible thinking, and self-control).

And Chapter 16, Mental Health Services: Legal and Ethical Issues, presents a brief discussion of a trend to provide individuals needing emergency treatment with court-ordered assisted outpatient treatment (AOT) to avoid commitment in a mental health facility; a new discussion of a major meta-analysis showing that current risk assessment tools are best at identifying persons at low risk of being violent but only marginally successful at accurately detecting who will be violent at a later point; and an updated section on legal rulings on involuntary medication.

Additional Features

In addition to the changes highlighted earlier, *this text* offers other distinct features:

- New, program-specific *learning objectives* at the start of each chapter alert students to what they will achieve. Various instructor resources including the testing program map to these objectives to support assessment. In addition, student learning outcomes mapped to core American Psychological Association goals may be found in the *Instructor Manual*.
- In each disorder chapter, a feature called DSM *Controversies* discusses some of the contentious and thorny decisions made in the process of creating DSM-5. Examples include the creation of new and sometimes controversial disorders appearing for the first time in DSM-5, such as premenstrual dysphoric disorder, binge-eating disorder, and disruptive mood dysregulation disorder. Another example is removing the "grief" exclusion criteria for diagnosing major depressive disorder so that someone can be diagnosed with major depression even if the trigger was the death of a loved one. Finally, changing the title of the paraphilia chapter to "paraphilic disorders" implies that paraphilic sexual arousal patterns such as pedophilia are not disorders in themselves but become disorders only if they cause impairment or harm to others.

DSM-IV, DSM-IV-TR, and DSM-5

Much has been said about the mix of political and scientific considerations that resulted in DSM-5, and naturally we have our own opinions. (DHB had the interesting experience of sitting on the task force for DSM-IV and was an adviser to the DSM-5 task force.) Psychologists are often concerned about "turf issues" in what has become, for better or worse, the nosological standard in our field, and with good reason: In previous DSM editions, scientific findings sometimes gave way to personal opinions. For DSM-IV and DSM-5, however, most professional biases were left at the door while the task force almost endlessly debated the data. This process produced enough new information to fill every psychopathology journal for a year with integrative reviews, reanalysis of existing databases, and new data from field trials. From a scholarly point of view, the process was both stimulating and exhausting. This book contains highlights of various debates that created the nomenclature, as well as recent updates. For example, in addition to the controversies described above, we summarize and update the data and discussion of premenstrual dysphoric disorder, which was designated a new disorder in DSM-5, and mixed anxiety depression, a disorder that did not make it into the final criteria. Students can thus see the process of making diagnoses, as well as the combination of data and inferences that are part of it.

We also discuss the intense continuing debate on categorical and dimensional approaches to classification. We describe some of the compromises the task force made to accommodate data, such as why dimensional approaches to personality disorders did not make it into DSM-5 and why the proposal to do so was rejected at the last minute and included in Section III under "Conditions for Further Study," even though almost everyone agrees that these disorders should not be categorical but rather dimensional.

Prevention

Looking into the future of clinical psychology as a field, it seems our ability to prevent psychological disorders may help the most. Although this has long been a goal of many, we now appear to be at the cusp of a new age in prevention research. Scientists from all over the globe are developing the methodologies and techniques that may at long last provide us with the means to interrupt the debilitating toll of emotional distress caused by the disorders chronicled in this book. We therefore highlight these cutting-edge prevention efforts—such as preventing eating disorders, suicide, and health problems, including HIV and injuries—in appropriate chapters as a means to celebrate these important advancements, as well as to spur on the field to continue this important work.

Retained Features

Visual Summaries

At the end of each disorder chapter is a colorful, two-page visual overview that succinctly summarizes the causes, development, symptoms, and treatment of each disorder covered in the chapter. Our integrative approach is instantly evident in these diagrams, which show the interaction of biological, psychological, and social factors in the etiology and treatment of disorders. The visual summaries will help instructors wrap up discussions, and students will appreciate them as study aids.

Pedagogy

Each chapter contains several Concept Checks that let students verify their comprehension at regular intervals. Answers are listed at the end of each chapter along with a more detailed summary. The key terms are listed in the order they appear in the text and thus form a sort of outline that students can study.

MindTap for Barlow, Durand, and Hofmann's *Psychopathology*

MindTap is a platform that propels students from memorization to proficiency. It also allows instructors to provide engaging content, challenge every learner, and build student confidence. Instructors can customize interactive syllabi to emphasize priority topics and then add material or notes to the ebook as desired. This outcomes-driven application gives you the tools needed to empower students and boost both understanding and performance:

- Guide students: A unique learning path of relevant readings, media, and activities moves students up the learning taxonomy from basic knowledge and comprehension to analysis and application.
- Personalize teaching: A Learning Path built on key student objectives allows you to control what students see and when they see it. Use it as-is, or match to your syllabus exactly: Hide, rearrange, add, and create your own content.
- Promote better outcomes: Empower instructors and motivate students with analytics and reports that provide a snapshot of class progress, time in course, engagement, and completion rates.

In addition to the benefits of the platform, MindTap for Barlow, Durand, and Hofmann's *Psychopathology* includes the following:

- Profiles in Psychopathology guide users through the symptoms, causes, and treatments of individuals who live with mental disorders. Profiles present real-life examples of both celebrities and ordinary people to humanize psychological disorders and tie chapter content to the real world.
- Video polling activities provide real-life video portraits of individuals with psychopathologies in the context of their daily lives. These activities encourage learners to make observations and reflect on what they have observed.
- Concept Clip Videos visually elaborate on specific disorders and psychopathology in a vibrant, engaging manner. Detailed animations teach core concepts with interactive elements, narrated audio, and nongraded concept checks. These videos provide visual examples and delve deeper into chapter content.

- Case studies present real-life examples of people with disorders to humanize psychological disorders and connect learners to authentic cases they may encounter in the field.
- Chapter quizzes are formative assessments that check student comprehension of chapter content.
- Master Training, powered by Cerego, for student personalized learning plans to help them understand and retain key topics and discussions.

Supplements for the Instructor

Additional instructor resources for this product are available online. Instructor assets include an Instructor's Manual, Educator's Guide, PowerPoint® slides, and a test bank powered by Cognero®. Sign up or sign in at www.cengage.com to search for and access this product and its online resources.

Titles of Interest

- DSM-5 *Supplement* by H. Boettcher, J. Q. Wu, D. H. Barlow, and V. M. Durand is a thorough comparison of the changes made in DSM-5 with the previous criteria and language in DSM-IV-TR. It also includes discussion of major controversies resulting from the proposed and realized modifications to the latest diagnostic manual. ISBN: 9781285848181
- *Looking into Abnormal Psychology: Contemporary Readings* by Scott O. Lilienfeld is a fascinating 234-page reader consisting of 40 articles from popular magazines and journals. Each article explores ongoing controversies regarding mental illness and its treatment. ISBN: 0-534-35416-5
- *Casebook in Abnormal Psychology,* fifth edition, by Timothy A. Brown and David H. Barlow, is a comprehensive casebook fully updated to be consistent with DSM-5. *It* reflects the integrative approach, which considers the multiple influences of genetic, biological, familial, and environmental factors in a unified model of causality as well as maintenance and treatment of the disorder. The casebook discusses treatment methods that are the most effective interventions developed for a particular disorder. It also presents three undiagnosed cases in order to give students an appreciation for the complexity of disorders. The cases are strictly teaching/learning exercises, similar to what many instructors use on their examinations. ISBN: 9781305971714

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Reviewers

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PSYCHOPATHOLOGY

An Integrative Approach to Mental Disorders

1 Psychopathology in Historical Context

Historic Images/Alamy Stock Photo

Learning Objectives

LO1.1 Define psychological disorders according to the three basic criteria of psychopathology.

LO1.2 Describe each of the three basic categories of research in psychopathology.

LO1.3 Compare the three prominent historical approaches to psychopathology in terms of how they explain and treat psychological disorders.

LO1.4 Differentiate Freudian psychoanalysis from the humanistic and behavioral approaches according to their research and therapeutic emphases.

LO1.5 List the main influences on the development of psychopathology according to the integrative approach.

Understanding Psychopathology

Today you may have gotten out of bed, had breakfast, gone to class, studied, and, at the end of the day, enjoyed the company of your friends before dropping off to sleep. For some people going through this routine, it might not occur to them that many physically capable people are not able to do some or any of these activities. What they have in common is a **psychological disorder**, a psychological dysfunction within an individual associated with distress or impairment in functioning and a response that is not typical or culturally expected. Before examining exactly what this means, let's look at one individual's situation.

Janelle... The Girl Who Fainted at the Sight of Blood

Janelle, a 16-year-old, was referred to our anxiety disorders clinic after increasing episodes of fainting. About 2 years earlier, in Janelle's first biology class, the teacher had shown a movie of a frog dissection to illustrate various points about anatomy.

This was a particularly graphic film, with vivid images of blood, tissue, and muscle. About halfway through, Janelle felt a bit lightheaded and left the room. But the images did not leave her. She continued to be bothered by them and occasionally felt slightly queasy. She began to avoid situations in which she might see blood or injury. She stopped looking at magazines that might have gory pictures. She found it difficult to look at raw meat or even Band-Aids because they brought the feared images to mind. Eventually, anything her friends or parents said that evoked an image of blood or injury caused Janelle to feel lightheaded. It got so bad that if one of her friends exclaimed, "Cut it out!" she felt faint.

Beginning about 6 months before her visit to the clinic, Janelle actually fainted when she unavoidably encountered something bloody. Her family physician could find nothing wrong with her, nor could several other physicians. By the time she was referred to our clinic, she was fainting 5 to 10 times a week, often in class. Clearly, this was problematic for her and disruptive in school; each time Janelle fainted, the other students flocked around her, trying to help, and class was interrupted. Because no one could find anything wrong with her, the principal finally concluded that she was being manipulative and suspended her from school, even though she was an honor student.

Janelle was suffering from what we now call *blood–injection–injury phobia*. Her reaction was quite severe, thereby meeting the criteria for phobia, a psychological disorder characterized by marked and persistent fear of an object or situation. But many people have similar reactions that are not as severe when they receive an injection or see someone who is injured, whether blood is visible or not. For people who react as severely as Janelle, this phobia can be disabling. They may avoid certain careers, such as medicine or nursing, and, if they are so afraid of needles and injections that they avoid them even when they need them, they put their health at risk.

What Is a Psychological Disorder?

Keeping in mind the real-life problems faced by Janelle, let's look more closely at the definition of psychological disorder or problematic **abnormal behavior**: It is a psychological dysfunction within an individual that is associated with distress or impairment in functioning and a response that is not typical or culturally expected (see ■ Figure 1.1). On the surface, these three criteria may seem obvious, but they were not easily arrived at and it is worth a moment to explore what they mean. You will learn importantly that no one criterion has yet been developed that fully defines a psychological disorder.

Psychological Dysfunction *Psychological dysfunction* refers to a breakdown in cognitive, emotional, or behavioral functioning. For example, if you are out on a date, it should be fun. But if you

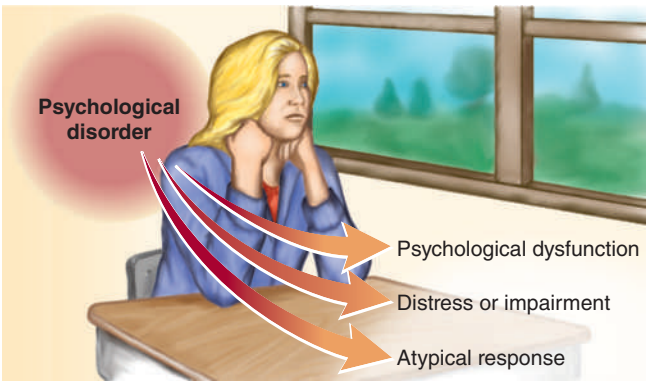

Figure 1.1
The criteria defining a psychological disorder.

experience severe fear all evening and just want to go home, even though there is nothing to be afraid of, and the severe fear happens on every date, your emotions are not functioning properly. However, if all your friends agree that the person who asked you out is unpredictable and dangerous in some way, then it would not be dysfunctional for you to be fearful and avoid the date.

A dysfunction was present for Janelle: She fainted at the sight of blood. But many people experience a mild version of this reaction (feeling queasy at the sight of blood) without meeting the criteria for the disorder, so knowing where to draw the line between normal and abnormal dysfunction is often difficult. For this reason, some of these problems are often considered to be on a continuum or a dimension rather than to be categories that are either present or absent (McNally, 2011; Stein, Phillips, Bolton, Fulford, Sadler, & Kendler, 2010; Widiger & Crego, 2013). This, too, is a reason that just having a dysfunction is not enough to meet the criteria for a psychological disorder.

Distress or Impairment That the behavior must be associated with distress to be classified as a disorder adds an important component and seems clear: The criterion is satisfied if the individual is extremely upset. We can certainly say that Janelle was distressed and even suffered with her **phobia**. But remember, by itself this criterion does not define problematic abnormal behavior. It is often quite normal to be distressed—for example, when someone close to you dies. The human condition is such that suffering and distress are very much part of life. This is not likely to change. Furthermore, for some disorders, by definition, suffering and distress are absent. Consider the person who feels extremely elated and may act impulsively as part of a manic episode. As you will see in Chapter 7, one of the major difficulties with this problem is that some people enjoy the manic state so much they are reluctant to begin treatment or stay long in treatment. Thus, defining psychological disorder by distress alone doesn't work, although the concept of distress contributes to a good definition.

MediaNews Group/Boston Herald via Getty Images/Getty Images

Distress and suffering are a natural part of life and do not in themselves constitute a psychological disorder.

The concept of *impairment* is useful, although not entirely satisfactory. For example, many people consider themselves shy or lazy. This doesn't mean that they're abnormal. But if you are so shy that you find it impossible to date or even interact with people and you make every attempt to avoid interactions even though you would like to have friends, then your social functioning is impaired.

Janelle was clearly impaired by her phobia, but many people with similar, less severe reactions are not impaired. This difference again illustrates the important point that most psychological disorders are simply extreme expressions of otherwise normal emotions, behaviors, and cognitive processes.

Atypical or Not Culturally Expected Finally, the criterion that the response be *atypical* or *not culturally expected* is important but also insufficient to determine if a disorder is present by itself. At times, something is considered abnormal because it occurs infrequently; it deviates from the average. The greater the deviation, the more abnormal it is. You might say that someone is abnormally short or abnormally tall, meaning that the person's height deviates substantially from average, but this obviously isn't a definition of disorder. Many people are far from the average in their behavior, but few would be considered disordered. We might call them *talented* or *eccentric*. Many artists, movie stars, and athletes fall in this category. For example, it's not normal to wear a dress made entirely out of meat, but when Lady Gaga wore this to an awards show, it only enhanced her celebrity. The late novelist J. D. Salinger, who wrote *The Catcher in the Rye*, retreated to a small town in New Hampshire and refused to see any outsiders for years, but he continued to write. In most cases, the more productive you are in the eyes of society, the more eccentricities society will tolerate. Therefore, "deviating from the average" doesn't work well as a definition for problematic abnormal behavior.

Another view is that your behavior is disordered if you are violating social norms, even if a number of people are sympathetic to your point of view. This definition is useful in considering important cultural differences in psychological disorders. For example, to enter a trance state and believe you are possessed reflects a psychological disorder in most Western cultures but not in many other societies, where the behavior is accepted and expected (see Chapter 6). (A cultural perspective is an important point of reference throughout this book.)

A social standard of *normal* has been misused, however. Consider, for example, the practice of committing political dissidents to mental institutions because they protest the policies of their government. Although such dissident behavior clearly violated social norms, it should not alone be cause for commitment.

Steve Granitz/Getty Images

We accept extreme behaviors by entertainers, such as Lady Gaga, that would not be tolerated in other members of our society.

Jerome Wakefield (1999, 2009), in a thoughtful analysis of the matter, uses the shorthand definition of *harmful dysfunction*. However, this definition assumes that we know what the evolutionary function of a behavior is, which is often not the case (McNally, 2001). Another possibility is to determine whether the behavior is out of the individual's control (something the person doesn't want to do) (Widiger & Crego, 2013; Widiger & Sankis, 2000). Variants of these approaches are most often used in current diagnostic practice, as outlined in the fifth edition of the *Diagnostic and Statistical Manual* (American Psychiatric Association, 2013), which contains the current listing of criteria for psychological disorders (Stein et al., 2010). These approaches guide our thinking in this book.

An Accepted Definition In conclusion, it is difficult to define what constitutes a psychological disorder (Lilienfeld & Marino, 1995, 1999)—and the debate continues (Blashfield, Keeley, Flanagan, & Miles, 2014; McNally, 2011; Spitzer, 1999; Stein et al., 2010; Wakefield, 2003, 2009; Zachar & Kendler, 2014). The most widely accepted definition used in the *Diagnostic and Statistical Manual of Mental Disorders, fifth edition* (DSM-5) (American Psychiatric Association, 2013) describes behavioral, psychological, or biological dysfunctions that are unexpected in their cultural context and associated with present distress and impairment in functioning, or increased risk of suffering, death, pain, or impairment. This definition can be useful across cultures and subcultures if we pay careful attention to what is functional or dysfunctional (or out of control) in a given society. But, again, it is never easy to decide what represents a dysfunction, and some scholars have argued persuasively that the health professions will never be able to satisfactorily define *disease* or *disorder* (see, for example, Lilienfeld & Marino, 1995, 1999; McNally, 2011; Stein et al., 2010; Zachar & Kendler, 2014). The best we may be able to do is to consider how the apparent disease or disorder matches a "typical" profile of a disorder—for example, major depression or schizophrenia—when most or all symptoms that experts would agree are part of the disorder are present. We call this typical profile a *prototype*, and as described in Chapter 3, the diagnostic criteria from DSM-5 found throughout this book are all prototypes. This means that patients may have only some features or symptoms of the disorder (a minimum number) and still meet criteria for the disorder because their set of symptoms is close to the prototype. But one of the differences between DSM-5 and its predecessor, DSM-IV, is the addition of dimensional estimates of the severity of specific disorders in DSM-5 (American Psychiatric Association, 2013; Helzer, Wittchen, Krueger, & Kraemer, 2008; Regier, Narrow, Kuhl, & Kupfer, 2009). Thus, for the anxiety disorders, for example, the intensity and frequency of anxiety within a given disorder such as panic disorder is rated on a 0 to 4 scale, where a rating of 1 would indicate mild or occasional symptoms and a rating of 4 would indicate continual and severe symptoms (Beesdo-Baum, et al., 2012; LeBeau, Bogels, Moller, & Craske, 2015; LeBeau et al., 2012). These concepts are described more fully in Chapter 3, where the diagnosis of psychological disorders is discussed.

For a final challenge, take the problem of defining a psychological disorder a step further and consider this: What if Janelle passed out so often that after a while neither her classmates nor her teachers even noticed because she regained consciousness quickly? Furthermore, what if Janelle continued to get good grades? Would frequent fainting at the mere thought of blood be a disorder? Would it be impairing? Dysfunctional? Distressing? What do you think?

Giulio Ercolani/Alamy Stock Photo

Some religious behaviors may seem unusual to us but are culturally or individually appropriate.

The Science of Psychopathology

Psychopathology is the scientific study of psychological disorders. Within this field are specially trained professionals, including clinical and counseling psychologists, psychiatrists, psychiatric social workers, and psychiatric nurses, as well as marriage and family therapists and mental health counselors. *Clinical psychologists* and *counseling psychologists* receive the Ph.D., doctor of philosophy, degree (or sometimes an Ed.D., doctor of education, or Psy.D., doctor of psychology) and follow a course of graduate-level study lasting approximately 5 years, which prepares them to conduct research into the causes and treatment of psychological disorders and to diagnose, assess, and treat these disorders. Although there is a great deal of overlap, counseling psychologists tend to study and treat adjustment and vocational issues encountered by relatively healthy individuals, and clinical psychologists usually concentrate on more severe psychological disorders. Also, programs in professional schools of psychology, where the degree is often a Psy.D., focus on clinical training and deemphasize or eliminate research training. In contrast, Ph.D. programs in universities integrate clinical and research training. Psychologists with other specialty training, such as experimental and social psychologists, concentrate on investigating the basic determinants of behavior but do not assess or treat psychological disorders.

Psychiatrists first earn an M.D. degree in medical school and then specialize in psychiatry during residency training that lasts 3 to 4 years. Psychiatrists also investigate the nature and causes of psychological disorders, often from a biological point of view; make diagnoses; and offer treatments. Many psychiatrists emphasize drugs or other biological treatments, although most use psychosocial treatments as well.

Psychiatric social workers typically earn a master's degree in social work as they develop expertise in collecting information relevant to the social and family situation of the individual with a psychological disorder. Social workers also treat disorders, often concentrating on family problems associated with them. *Psychiatric nurses* have advanced degrees, such as a master's or even a Ph.D., and specialize in the care and treatment of patients with psychological disorders, usually in hospitals as part of a treatment team.

Finally, *marriage and family therapists* and *mental health counselors* typically spend 1 to 2 years earning a master's degree and are employed to provide clinical services by hospitals or clinics, usually under the supervision of a doctoral-level clinician.

The Scientist-Practitioner

The most important development in the recent history of psychopathology is the adoption of scientific methods to learn more about the nature of psychological disorders, their causes, and their treatment. Many mental health professionals take a scientific approach to their clinical work and therefore are called **scientist-practitioners** (Barlow, Hayes, & Nelson, 1984; Hayes, Barlow, & Nelson-Gray, 1999). Mental health practitioners may function as scientist-practitioners in one or more of three ways (see ■ Figure 1.2). First, they may keep up with the latest scientific developments in their field and therefore use the most current diagnostic and treatment procedures. In this sense, they are consumers of the science of psychopathology to the advantage of their patients. Second, scientist-practitioners evaluate their own assessments or treatment procedures to see whether they work. They are accountable not only to their patients but also to the government agencies and insurance companies that pay for the treatments, so they must demonstrate clearly whether their treatments are effective or not. Third, scientist-practitioners might conduct research, often in clinics or hospitals, that produces new information about disorders or their treatment, thus becoming immune to the fads that plague our field, often at the expense of patients and their families. For example, new "miracle cures" for psychological disorders that are reported several times a year in popular media would not be used by a scientist-practitioner if there were no sound scientific data showing that they work. Such data flow from research that attempts three basic things: to describe psychological disorders, to determine their causes, and to treat them (see ■ Figure 1.3). These three categories compose an organizational structure that recurs throughout this book and that is formally evident in the discussions of specific disorders beginning in Chapter 5. A general overview of them now will give you a clearer perspective on our efforts to understand abnormality.

Clinical Description

In hospitals and clinics, we often say that a patient "presents" with a specific problem or set of problems or we discuss the **presenting problem**. *Presents* is a traditional shorthand way of indicating why the person came to the clinic. Describing Janelle's presenting problem is the first step

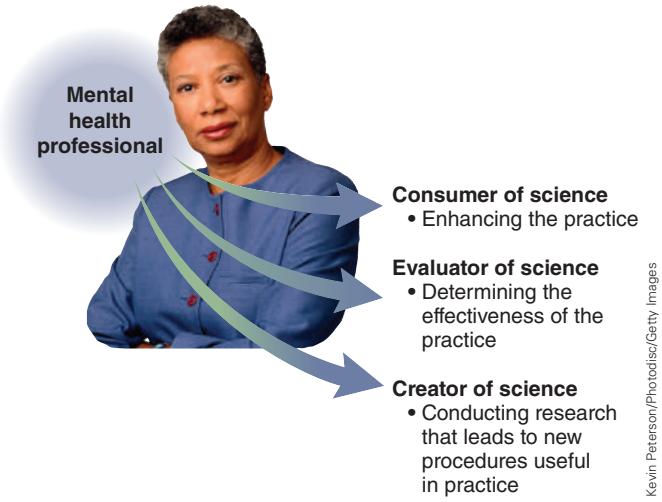

Figure 1.2

Functioning as a scientist-practitioner.

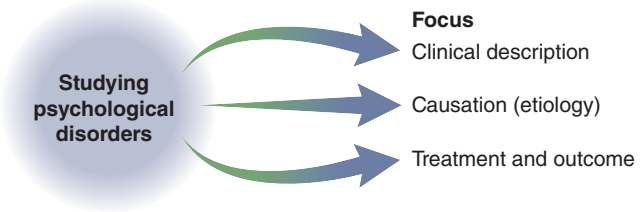

Figure 1.3

Three major categories make up the study and discussion of psychological disorders.

in determining her **clinical description**, which represents the unique combination of behaviors, thoughts, and feelings that make up a specific disorder. The word *clinical* refers both to the types of problems or disorders that you would find in a clinic or hospital and to the activities connected with assessment and treatment. Throughout this text are excerpts from many more individual cases, most of them from our personal files.

One important function of the clinical description is to specify what makes the disorder different from normal behavior or from other disorders. Statistical data may also be relevant.

For example, how many people in the population as a whole have the disorder? This figure is called the **prevalence** of the disorder. Statistics on how many new cases occur during a given period, such as a year, represent the **incidence** of the disorder. You may have become familiar with these terms during the COVID-19 pandemic. Other statistics include the *sex ratio*—that is, what percentage of women and men have the disorder (unfortunately, this traditional term does not consider nonbinary gender identity)—and the typical age of onset, which often differs from one disorder to another.

In addition to having different symptoms, age of onset, and possibly a different sex ratio and prevalence, most disorders follow a somewhat individual pattern, or **course**. For example, some disorders, such as schizophrenia (see Chapter 13), follow a *chronic course*, meaning that they tend to last a long time, sometimes a lifetime. Other disorders, like mood disorders (see Chapter 7), follow an *episodic course*, in that the individual is likely to recover within a few months, only to suffer a recurrence of the disorder at a later time. This pattern may repeat throughout a person's life. Still other disorders may have a *time-limited course*, meaning the disorder will improve without treatment in a relatively short period with little or no risk of recurrence.

Closely related to differences in course of disorders are differences in onset. Some disorders have an *acute onset*, meaning that they begin suddenly; others develop gradually over an extended period, which is sometimes called an *insidious onset*. It is important to know the typical course of a disorder so that we can know what to expect in the future and how best to deal with the problem. This is an important part of the clinical description. For example, if someone is suffering from a mild disorder with acute onset that we know is time limited, we might advise the individual not to bother with expensive treatment because the problem will be over soon enough, like a common cold. If the disorder is likely to last a long time (become chronic), however, the individual might want to seek treatment and take other appropriate steps. The anticipated course of a disorder is called the **prognosis**. So we might say, "the prognosis is good," meaning the individual will probably recover, or "the prognosis is guarded," meaning the probable outcome doesn't look good.

The patient's age may be an important part of the clinical description. A specific psychological disorder occurring in childhood may present differently from the same disorder in adulthood or old age. Children experiencing severe anxiety and panic often assume that they are physically ill because they have difficulty understanding that there is nothing physically wrong. Because their thoughts and feelings are different from those experienced by adults with anxiety and panic, children are often misdiagnosed and treated for a medical disorder.

We call the study of changes in behavior over time *developmental psychology*, and we refer to the study of changes in abnormal behavior as *developmental psychopathology*. When you think of developmental psychology, you probably picture researchers studying the behavior of children. We change throughout our lives, however, and so researchers also study development in adolescents, adults, and older adults. Study of abnormal behavior across the entire age span is referred to as *life-span developmental psychopathology*. The field is relatively new but expanding rapidly.

Causation, Treatment, and Etiology Outcomes

Etiology, or the study of origins, has to do with why a disorder begins (what causes it) and includes biological, psychological, and social dimensions. The question of causality is deeply philosophical. Just because two events co-occur does not mean that they are in any way causally related: Correlation does not imply causality. Statisticians often use the term *Granger causality* to describe when a series of events temporally predict another series of events. But even if events are related, it is often difficult if not impossible to pinpoint a single cause of something, especially if many factors contribute to it. For example, could we really say that a flap of the wings of a butterfly in the Amazon jungle caused a tornado in Nebraska, even if these events were, in fact, somehow related? As is true for the weather, many factors also "cause" a psychological

Hung Chung Chih /Shutterstock.com

Children experience panic and anxiety differently from adults, so their reactions may be mistaken for symptoms of physical illness.

disorder, and some are more important than others. Because the etiology of psychological disorders is so important to this field, we devote an entire chapter (Chapter 2) to it.

Treatment, also, is often important to the study of psychological disorders. If a new drug or psychosocial treatment is successful in treating a disorder, it may give us some hints about the nature of the disorder and its causes. For example, if a drug with a specific known effect within the nervous system alleviates a certain psychological disorder, we know that something in that part of the nervous system might either be causing the disorder or helping maintain it. Similarly, if a psychological treatment designed to help clients regain a sense of control over their lives is effective with a certain disorder, a diminished sense of control may be an important psychological component of the disorder itself.

As you will see in the next chapter, psychopathology is rarely simple. This is because the *effect* does not necessarily imply the *cause*. To use a common example, you might take an aspirin to relieve a tension headache you developed during a grueling day of taking exams. If you then feel better, that does not mean that the headache was caused by a lack of aspirin. Nevertheless, many people seek treatment for psychological disorders, and treatment can provide interesting hints about the nature of the disorder.

In the past, textbooks emphasized treatment approaches in a general sense, with little attention to the disorder being treated. For example, a mental health professional might be thoroughly trained in a single theoretical approach, such as psychoanalysis or behavior therapy (both described later in the chapter), and then use that approach on every disorder. More recently, as our science has advanced, we have developed specific effective treatments that do not always adhere neatly to one theoretical approach or another but that have grown out of a deeper understanding of the disorder in question. For this reason, there are no separate chapters in this book on such types of treatment approaches as psychodynamic, cognitive behavioral, or humanistic. Rather, the latest and most effective drug and psychosocial treatments (nonmedical treatments that focus on psychological, social, and cultural factors) are described in the context of specific disorders in keeping with our integrative multidimensional perspective.

We now survey many early attempts to describe and treat abnormal behavior and to comprehend its causes, which will give you a better perspective on current approaches. In Chapter 2, we examine exciting contemporary views of causation and treatment. In Chapter 3, we discuss efforts to describe, or classify, abnormal behavior. In Chapter 4, we review research methods—our systematic efforts to discover the truths underlying description, cause, and treatment that allow us to function as scientist-practitioners. In Chapters 5 through 15, we examine specific disorders; our discussion is organized in each case in the now familiar triad of description, cause, and treatment. Finally, in Chapter 16 we examine legal, professional, and ethical issues relevant to psychological disorders and their treatment today. With that overview in mind, let us turn to the past.

Historical Conceptions of Abnormal Behavior

For thousands of years, humans have tried to explain and control problematic behavior. But our efforts always derive from the theories or models of behavior popular at the time. The purpose of these models is to explain why someone is "acting like that." Three major models that have guided us date back to the beginnings of civilization.

Humans have always supposed that agents outside our bodies and environment influence our behavior, thinking, and emotions. These agents—which might be divinities, demons, spirits, or other phenomena such as magnetic fields or the moon or the stars—are the driving forces behind the *supernatural model*. In addition, since the era of ancient Greece, the mind has often been called the *soul* or the *psyche* and considered separate from the body. Although many have thought that the mind can influence the body and, in turn, the body can influence the mind, most philosophers looked for causes of abnormal behavior in one or the other. This split gave rise to two traditions of thought about abnormal behavior, summarized as the *biological model* and the *psychological model*. These three models—the supernatural, the biological, and the psychological—are very old but continue to be used today.

The Supernatural Tradition

For much of our recorded history, deviant behavior has been considered a reflection of the battle between good and evil. When confronted with unexplainable, irrational behavior and by suffering and upheaval, people have perceived evil. In fact, in the great Persian empire from 900 to 600 B.C., all physical and mental disorders were considered the work of the devil (Millon, 2004). Barbara Tuchman, a noted historian, chronicled the second half of the 14th century, a particularly difficult time for humanity, in *A Distant Mirror* (1978). She ably captures the conflicting tides of opinion on the origins and treatment of insanity during that bleak and tumultuous period.

Demons and Witches

One strong current of opinion put the causes and treatment of psychological disorders squarely in the realm of the supernatural. During the last quarter of the 14th century, religious and lay authorities supported these popular superstitions, and society as a whole began to believe more strongly in the existence and power of demons and witches. The Catholic Church had split, and a second center, complete with a pope, emerged in the south of France to compete with Rome. In reaction to this schism, the Roman Church fought back against the evil in the world that it believed must have been behind this heresy.

People increasingly turned to magic and sorcery to solve their problems. During these turbulent times, the bizarre behavior of people afflicted with psychological disorders was seen as the work of the devil and witches. It followed that individuals possessed by evil spirits were probably responsible for any misfortune experienced by people in the local community, which inspired drastic action against the possessed. Treatments included **exorcism**, in which various religious rituals were performed in an effort to rid the victim of evil spirits. Other approaches included shaving the pattern of a cross in the hair of the victim's head and securing sufferers to a wall near the front of a church so that they might benefit from hearing Mass.

Concept Check 1.1

Part A

Write the letter for any or all of the following definitions of abnormality in the blanks: (a) societal norm violation, (b) impairment in functioning, (c) dysfunction, and (d) distress.

1. Miguel recently began feeling sad and lonely. Although still able to function at work and fulfill other responsibilities, he finds himself feeling down much of the time, and he worries about what is happening to him. Which of the definitions of abnormality apply to Miguel's situation? _____
2. Three weeks ago, Makayla, a 35-year-old business executive, stopped showering, refused to leave her apartment, and started watching television talk shows. Threats of being fired have failed to bring Jane back to reality, and she continues to spend her days staring blankly at the television screen. Which of the definitions seems to describe Jane's behavior? _____

Part B

Match the following words that are used in clinical descriptions with their corresponding examples: (a) presenting problem, (b) prevalence, (c) incidence, (d) prognosis, (e) course, and (f) etiology.

3. Maria should recover quickly with no intervention necessary. Without treatment, Kofi will deteriorate rapidly. _____
4. Three new cases of bulimia have been reported in this county during the past month and only one in the next county. _____
5. Kaliah visited the campus mental health center because of her increasing feelings of guilt and anxiety. _____
6. Biological, psychological, and social influences all contribute to a variety of disorders. _____
7. The pattern a disorder follows can be chronic, time-limited, or episodic. _____
8. How many people in the population as a whole suffer from obsessive-compulsive disorder? _____

The conviction that sorcery and witches are causes of madness and other evils continued into the 15th century, and evil continued to be blamed for unexplainable behavior, even after the founding of the United States, as evidenced by the Salem, Massachusetts, witch trials in the late 17th century, which resulted in the hanging deaths of 20 innocent people.

Stress and Melancholy

An equally strong opinion, even during this period, reflected the enlightened view that insanity was a natural phenomenon, caused by mental or emotional stress, and that it was curable (Alexander & Selesnick, 1966; Maher & Maher, 1985a). Mental depression and anxiety were recognized as illnesses (Kemp, 1990; Schoeneman, 1977), although symptoms such as despair and lethargy were often identified by the church with the sin of *acedia*, or sloth (Tuchman, 1978). Common treatments were rest, sleep, and a healthy and happy environment. Other treatments included baths, ointments, and various potions. Indeed, during the 14th and 15th centuries, people with insanity, along with those with physical deformities or disabilities, were often moved from house to house in medieval villages as neighbors took turns caring for them. We now know that this medieval practice of keeping people who have psychological disturbances in their own community is beneficial (see Chapter 13). We return to this subject when we discuss biological and psychological models later in this chapter.

In the 14th century, one of the chief advisers to the king of France, a bishop and philosopher named Nicholas Oresme, also suggested that the disease of melancholy (depression) was the

DEA PICTURE LIBRARY/Getty Images

During the Middle Ages, individuals with psychological disorders were sometimes thought to be possessed by evil spirits and exorcisms were attempted through rituals.

source of some bizarre behavior, rather than demons. Oresme pointed out that much of the evidence for the existence of sorcery and witchcraft, particularly among those considered insane, was obtained from people who were tortured and who, quite understandably, confessed to anything.

These conflicting crosscurrents of natural and supernatural explanations for mental disorders are represented more or less strongly in various historical works, depending on the sources consulted by historians. Some assumed that demonic influences were the predominant explanations of abnormal behavior during the Middle Ages (for example, Zilboorg & Henry, 1941); others believed that the supernatural had little or no influence. As in the handling of the severe psychological disorder experienced by late-14th-century King Charles VI of France, both influences were strong, sometimes alternating in the treatment of the same case.

Charles VI... The Mad King

In the summer of 1392, King Charles VI of France was under a great deal of stress, partly because of the division of the Catholic Church. As he rode with his army to the province of Brittany, a nearby aide dropped his lance with a loud clatter, and the king, thinking he was under attack, turned on his own army, killing several prominent knights before being subdued from behind. The army immediately marched back to Paris. The king's lieutenants and advisers concluded that he was mad.

During the following years, at his worst the king hid in a corner of his castle believing he was made of glass or roamed the corridors howling like a wolf. At other times, he couldn't remember who or what he was. He became fearful and enraged whenever he saw his own royal coat of arms and would try to destroy it if it was brought near him.

The people of Paris were devastated by their leader's apparent madness. Some thought it reflected God's anger because the king failed to take up arms to end the schism in the Catholic Church; others thought it was God's warning against taking up arms; and still others thought it was divine punishment for heavy taxes (a conclusion some people might make today). But most thought the king's madness was caused by sorcery, a belief strengthened by a great drought that dried up the ponds and rivers, causing cattle to die of thirst. Merchants claimed their worst losses in 20 years.

Naturally, the king was given the best care available at the time. The most famous healer in the land was a 92-year-old physician whose treatment program included moving the king to one of his residences in the country where the air was thought to be the cleanest in the land. The physician prescribed rest, relaxation, and recreation. After some time, the king seemed to recover. The physician recommended that the king not be burdened with the responsibilities of running the kingdom, claiming that if he had few worries or irritations, his mind would gradually strengthen and further improve.

Unfortunately, the physician died, and the insanity of King Charles VI returned more seriously than before. This time, however, he came under the influence of the conflicting crosscurrent of supernatural causation. "An unkempt evil-eyed charlatan and pseudo-mystic named Arnaut Guilhem was allowed to treat Charles on his claim of possessing a book given by God to Adam by means of which man could overcome all affliction resulting from original sin" (Tuchman, 1978, p. 514). Guilhem insisted that the king's malady was caused by sorcery, but his treatments failed to bring about a cure.

A variety of remedies and rituals of all kinds were tried, but none worked. High-ranking officials and doctors of the university called for the "sorcerers" to be discovered and punished. "On one occasion, two Augustinian friars, after getting no results from magic incantations and a liquid made from powdered pearls, proposed to cut incisions in the King's head. When this was not allowed by the King's council, the friars accused those who opposed their recommendation of sorcery" (Tuchman, 1978, p. 514). Even the king himself, during his lucid moments, came to believe that the source of madness was evil and sorcery. "In the name of Jesus Christ," he cried, weeping in his agony, "if there is any one of you who is an accomplice to this evil I suffer, I beg him to torture me no longer but let me die!" (Tuchman, 1978, p. 515).

Treatments for Possession

With a perceived connection between evil deeds and sin on the one hand and psychological disorders on the other, it is logical to conclude that the sufferer is largely responsible for the disorder, which might well be a punishment for evil deeds. Does this sound familiar? The acquired immune deficiency syndrome (AIDS) epidemic was associated with a similar belief among some people, particularly in the late 1980s and early 1990s. Because the human immunodeficiency virus (HIV) is, in Western societies, still quite prevalent among the gay community, many people believed it was a divine punishment for what they considered immoral behavior. This view became less common as the AIDS virus spread to other segments of the population, yet some people still hold on to this belief.

Possession, however, is not always connected with sin but may be seen as involuntary and the possessed individual as blameless. Furthermore, exorcisms at least have the virtue of being relatively painless. They sometimes work, as do other forms of faith healing, for reasons we explore in subsequent chapters. But what if they did not? In the Middle Ages, if exorcism failed, some authorities thought that steps were necessary to make the body uninhabitable by evil spirits, and many people were subjected to confinement, beatings, and other forms of torture (Kemp, 1990).

Somewhere along the way, a creative "therapist" decided that hanging people over a pit full of poisonous snakes might

scare the evil spirits right out of their bodies (to say nothing of terrifying the people themselves). This approach sometimes worked; that is, the most disturbed, oddly behaving individuals would suddenly come to their senses and experience relief from their symptoms, if only temporarily. Naturally, this was reinforcing to the therapist, so snake pits were built in many institutions. Although these torture procedures seemed temporarily effective, these "treatments" are not the kinds of approaches we want to use because there is no good theoretical (or ethical) reason for using them.

Mass Hysteria

Another fascinating phenomenon is characterized by large-scale outbreaks of bizarre behavior. To this day, these episodes puzzle historians and mental health practitioners. During the Middle Ages, they lent support to the notion of possession by the devil. In Europe, whole groups of people were simultaneously compelled to run out in the streets, dance, shout, rave, and jump around in patterns as if they were at a particularly wild party late at night (still called a *rave* today, but with music). This behavior was known by several names, including Saint Vitus's Dance and tarantism. It is most interesting that many people behaved in this strange way at once. In an attempt to explain the inexplicable, several reasons were offered in addition to possession. One reasonable guess was reaction to insect bites. Another possibility was what we now call *mass hysteria* (Veith, 1965). Consider the following example.

Modern Mass Hysteria

One Friday afternoon, an alarm sounded over the public address system of a community hospital, calling all physicians to the emergency room immediately. Arriving from a local school in a fleet of ambulances were 17 students and 4 teachers who reported dizziness, headache, nausea, and stomach pains. Some were vomiting; most were hyperventilating.

Source: U.S. National Library of Medicine

In hydrotherapy, patients were shocked back to their senses by applications of ice-cold water.

All the students and teachers had been in four classrooms, two on each side of the hallway. The incident began when a 14-year-old young woman reported a funny smell that seemed to be coming from a vent. She fell to the floor, crying and complaining that her stomach hurt and her eyes stung. Soon, many of the students and most of the teachers in the four adjoining classrooms, who could see and hear what was happening, experienced similar symptoms. Of 86 susceptible people (82 students and 4 teachers in the four classrooms), 21 patients (17 students and 4 teachers) experienced symptoms severe enough to be evaluated at the hospital. Inspection of the school building by public health authorities revealed no apparent cause for the reactions, and physical examinations by teams of physicians revealed no physical abnormalities. All the patients were sent home and quickly recovered (Rockney & Lemke, 1992).

Mass hysteria may simply demonstrate the phenomenon of *emotion contagion*, in which the experience of an emotion seems to spread to those around us (Hatfield, Cacioppo, & Rapson, 1994; Ntika, Sakellariou, Kefalas, & Stamatpoulou, 2014; Wang, 2006). If someone nearby becomes frightened or sad, chances are that, for the moment, you also will feel fear or sadness. When this kind of experience escalates into full-blown panic, whole communities are affected (Barlow, 2002). People are also suggestible when they are in states of high emotion. Therefore, if one person identifies a "cause" of the problem, others will probably assume that their own reactions have the same source. In popular language, this shared response is sometimes referred to as *mob psychology*. Until recently, it was assumed that victims had to be in contact with each other for the contagion to occur, as were the young women described above in the adjacent classrooms. But lately there are documented cases of emotion contagion occurring across social networks, raising the possibility that episodes of mass hysteria may increase (Bartholomew, Wessely, & Rubin, 2012; Dimon, 2013)

The Moon and the Stars

Paracelsus, a Swiss physician who lived from 1493 to 1541, rejected notions of possession by the devil, suggesting instead that the movements of the moon and stars had profound effects on people's psychological functioning. Echoing similar thinking in ancient Greece, Paracelsus speculated that the gravitational effects of the moon on bodily fluids might be a possible cause of mental disorders (Rotton & Kelly, 1985). This influential theory inspired the word *lunatic*, which is derived from the Latin word *luna*, meaning "moon." You might hear some of your friends explain something crazy they did one night by saying, "It must have been the full moon." The belief that heavenly bodies affect human behavior still exists, although there is no scientific evidence to support it (Raison, Klein, & Steckler, 1999; Rotton & Kelly, 1985). Despite much ridicule, millions of people around the world are convinced that their behavior is influenced by the stages of the moon or the positions of the stars. This belief is most noticeable today in followers of astrology, who hold that their behavior and the major events in their lives can be predicted by their day-to-day relationship to the position of the planets. No serious evidence has ever confirmed such a connection, however.

The Biological Tradition

Physical causes of mental disorders have been sought since early in history. Important to the biological tradition are an ancient Greek physician, Hippocrates; a disease, syphilis; and the early consequences of believing that psychological disorders are biologically caused.

Hippocrates and Galen

The Greek physician Hippocrates (460–377 B.C.) is considered to be the father of modern Western medicine. He and his associates left a body of work called the *Hippocratic Corpus*, written between 450 and 350 B.C. (Maher & Maher, 1985a), in which they suggested that psychological disorders could be treated like any other disease. They did not limit their search for the causes of psychopathology to the general area of "disease" because they believed that psychological disorders might also be caused by brain pathology or head trauma and could be influenced by heredity (genetics). These are remarkably astute deductions for the time, and they have been supported in recent years. Hippocrates considered the brain to be the seat of wisdom, consciousness, intelligence, and emotion. Therefore, disorders involving these functions would logically be located in the brain. Hippocrates also recognized the importance of psychological and interpersonal contributions to psychopathology, such as the sometimes-negative effects of family stress; on some occasions, he removed patients from their families.

The Roman physician Galen (approximately A.D. 129–198) later adopted the ideas of Hippocrates and his associates and developed them further, creating a powerful and influential school of thought within the biological tradition that extended well into the 19th century. One of the more interesting and influential legacies of the Hippocratic-Galenic approach is the *humoral theory* of disorders. Hippocrates assumed that normal brain functioning was related to four bodily fluids or *humors*: blood, black bile, yellow bile, and phlegm. Blood came from the heart, black bile from the spleen, phlegm from the brain, and choler or yellow bile from the liver. Physicians believed that disease resulted from too much or too little of one of the humors; for example, too much black bile was thought to cause melancholia (depression). In fact, the term *melancholer*, which means "black bile," is still used today in its derivative form *melancholy* to refer to aspects of depression. The humoral theory was, perhaps, the first example of associating psychological disorders with a "chemical imbalance," an approach that is widespread today.

The four humors were related to the Greeks' conception of the four basic qualities: heat, dryness, moisture, and cold. Each humor was associated with one of these qualities. Terms derived from the four humors are still sometimes applied to personality traits. For example, *sanguine* (literal meaning "red, like blood") describes someone who is ruddy in complexion, presumably from copious blood flowing through the body, and cheerful and optimistic, although insomnia and delirium were thought to be caused by excessive blood in the brain. *Melancholic* means depressive (depression was thought to be caused by black bile flooding the brain). A *phlegmatic* personality (from the humor phlegm) indicates apathy and sluggishness but can also mean being calm under stress. A *choleric* person (from yellow bile or choler) is hot tempered (Maher & Maher, 1985a).

Excesses of one or more humors were treated by regulating the environment to increase or decrease heat, dryness, moisture, or cold, depending on which humor was out of balance. One reason King Charles VI's physician moved him to the less stressful countryside was to restore the balance in his humors (Kemp, 1990). In addition to rest, good nutrition, and exercise, two treatments were developed. In one, *bleeding* or *bloodletting*, a carefully measured amount of blood was removed from the body, often with leeches. The other was to induce vomiting; indeed, in a well-known treatise on depression published in 1621, *Anatomy of Melancholy*, Robert Burton recommended eating tobacco and a half-boiled cabbage to induce vomiting (Burton, 1621/1977). If Janelle had lived 300 years ago, she might have been diagnosed with an illness, a brain disorder, or some other physical problem, perhaps related to excessive humors, and been given the proper medical treatments of the day: bed rest, bloodletting, a certain diet, and other ministrations as indicated.

In ancient China and throughout Asia, a similar idea existed. But rather than "humors," the Chinese focused on the movement of air or "wind" throughout the body. Unexplained mental disorders were caused by blockages of wind or the presence of cold, dark wind (yin) as opposed to warm, life-sustaining wind (yang). Treatment involved restoring proper flow of wind through various methods, including acupuncture.

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Emotions are contagious and can escalate into mass hysteria.

National Library of Medicine

Bloodletting, the extraction of blood from patients, was intended to restore the balance of humors in the body.

Hippocrates also coined the word *hysteria* to describe a concept he learned about from the Egyptians, who had identified what we now call the *somatic symptom disorders*. In these disorders, the physical symptoms appear to be the result of a medical problem for which no physical cause can be found, such as paralysis and some kinds of blindness. Because these disorders occurred primarily in women, the Egyptians (and Hippocrates) mistakenly assumed that they were restricted to women. They also presumed a cause: The empty uterus wandered to various parts of the body in search of conception (the Greek word for "uterus" is *hysteron*). Numerous physical symptoms reflected the location of the wandering uterus. The prescribed cure might be marriage or, occasionally, fumigation of the vagina to lure the uterus back to its natural location (Alexander & Selesnick, 1966). Knowledge of physiology eventually disproved the wandering uterus theory; however, the tendency to stigmatize dramatic women as hysterical continued unabated well into the 1970s, when mental health professionals became sensitive to the prejudicial stereotype the term implied. As you will learn in Chapter 6, somatic symptom disorders (and the traits associated with them) are not limited to any one sex.

The 19th Century

The biological tradition waxed and waned during the centuries after Hippocrates and Galen but was reinvigorated in the 19th century because of two factors: the discovery of the nature and cause of syphilis and strong support from the well-respected American psychiatrist John P. Grey.

Syphilis Behavioral and cognitive symptoms of what we now know as *advanced syphilis*, a sexually transmitted disease caused by a bacterial microorganism entering the brain, include believing that everyone is plotting against you (delusion of persecution) or that you are God (delusion of grandeur), as well as other bizarre behaviors. Although these symptoms are similar to those of *psychosis*—psychological disorders characterized in part by beliefs that are not based in reality (delusions), perceptions that are not based in reality (hallucinations), or both—researchers recognized that a subgroup of apparently psychotic patients deteriorated steadily, becoming paralyzed and dying within 5 years of onset. This course of events contrasted with that of most psychotic patients, who remained fairly stable. In 1825, the condition was designated a disease, *general paresis*, because it had consistent symptoms (presentation) and a consistent course that resulted in death. The relationship between general paresis and syphilis was only gradually established. Louis Pasteur's germ theory of disease, developed in about 1870, facilitated the identification of the specific bacterial microorganism that caused syphilis.

Of equal importance was the discovery of a cure for general paresis. Physicians observed a surprising recovery in patients with general paresis who had contracted malaria, so they deliberately injected other patients with blood from a soldier who was ill with malaria. Many of those who survived this treatment recovered because the high fever "burned out" the syphilis bacteria. Obviously, this type of experiment would not be ethically possible today. Ultimately, clinical investigators discovered that penicillin cures syphilis, but with the malaria cure, "madness" and associated behavioral and cognitive symptoms for the first time were traced directly to a curable infection. Many mental health professionals then assumed that comparable causes and cures might be discovered for all psychological disorders.

John P. Grey The champion of the biological tradition in the United States was the most influential American psychiatrist of the time, John P. Grey (Bockoven, 1963). In 1854, Grey was appointed superintendent of the Utica State Hospital in New York, the largest in the country. He also became editor of the *American Journal of Insanity*, the precursor of the current *American Journal of Psychiatry*, the flagship publication of the American Psychiatric Association (APA). Grey's position was that the causes of insanity were *always* physical. Therefore, the mentally ill patient should be treated as physically ill. The emphasis was again on rest, diet, and proper room temperature and ventilation, approaches used for centuries by previous therapists in the biological tradition. Grey even invented the rotary fan to ventilate his large hospital.

Under Grey's leadership, the conditions in hospitals greatly improved, and they became more humane, livable institutions. But in subsequent years, they also became so large and impersonal that individual attention was not possible.

In fact, leaders in psychiatry at the end of the 19th century were alarmed at the increasing size and impersonality of mental hospitals and recommended that they be downsized. It was almost 100 years before the community mental health movement was successful in reducing the population of mental hospitals with the controversial policy of deinstitutionalization, in which patients were released into their communities. Unfortunately, this practice has as many negative consequences as positive ones, including a large increase in the number of chronically disabled patients experiencing homelessness on the streets of our cities.

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In the 19th century, psychological disorders were attributed to mental or emotional stress, so patients were often treated sympathetically in a restful and hygienic environment.

The Development of Biological Treatments

On the positive side, renewed interest in the biological origin of psychological disorders led, ultimately, to greatly increased understanding of biological contributions to psychopathology and to the development of new treatments. In the 1930s, the physical interventions of electric shock and brain surgery were often used. Their effects, and the effects of new drugs, were discovered quite by accident. For example, insulin was occasionally given to stimulate appetite in psychotic patients who were not eating, but it also seemed to calm them down. In 1927, a Viennese physician, Manfred Sakel, began using increasingly higher dosages until, finally, patients convulsed and became temporarily comatose (Sakel, 1958). Some actually recovered their mental health, much to the surprise of everybody, and their recovery was attributed to the convulsions. The procedure became known as *insulin shock therapy*, but it was abandoned because it was too dangerous, often resulting in prolonged coma or even death. Other methods of producing convulsions were needed.

Benjamin Franklin made numerous discoveries during his life with which we are familiar, but most people don't know that he discovered accidentally, and then confirmed experimentally in the 1750s, that a mild and modest electric shock to the head produced a brief convulsion and memory loss (amnesia) but otherwise did little harm. A Dutch physician who was a friend and colleague of Franklin tried it on himself and discovered that the shock also made him "strangely elated" and wondered if it might be a useful treatment for depression (Finger & Zaromb, 2006, p. 245).

Independently in the 1920s, Hungarian psychiatrist Joseph von Meduna observed that schizophrenia was rarely found in individuals with epilepsy (which ultimately did not prove to be true). Some of his followers concluded that induced brain seizures might cure schizophrenia. Following suggestions on the possible benefits of applying electric shock directly to the brain—notably, by two Italian physicians, Ugo Cerletti and Lucio Bini, in 1938—a surgeon in London treated a depressed patient by sending six small shocks directly through his brain, producing convulsions (Hunt, 1980). The patient recovered. Although greatly modified, shock treatment is still with us today. The controversial modern uses of *electroconvulsive therapy* are described in Chapter 7. It is interesting that even now we have little knowledge of how it works.

During the 1950s, the first effective drugs for severe psychotic disorders were developed in a systematic way. Before that time, a number of medicinal substances, including opium (derived from poppies), had been used as sedatives, along with countless herbs and folk remedies (Alexander & Selesnick, 1966). With the discovery of *Rauwolfia serpentine* (later renamed *reserpine*) and another class of drugs called *neuroleptics* (major tranquilizers), for the first time hallucinatory and delusional thought processes could be diminished in some patients; these drugs also controlled agitation and aggressiveness. Other discoveries included *benzodiazepines* (minor tranquilizers), which seemed to reduce anxiety. By the 1970s, the benzodiazepines (known by such brand names as Valium and Librium) were among the most widely prescribed drugs in the world. As drawbacks and side effects of tranquilizers became apparent, along with their limited effectiveness, prescriptions decreased somewhat (we discuss the benzodiazepines in more detail in Chapters 5 and 11).

Throughout the centuries, as Alexander and Selesnick point out, "The general pattern of drug therapy for mental illness has been one of initial enthusiasm followed by disappointment" (1966, p. 287). For example, bromides, a class of sedating drugs, were used at the end of the 19th century and beginning of the 20th century to treat anxiety and other psychological disorders. By the 1920s, they were reported as being effective for many serious psychological and emotional symptoms. By 1928, one of every five prescriptions in the United States was for bromides. When their side effects, including various undesirable physical symptoms, became widely known, and experience began to show that their overall effectiveness was relatively modest, bromides largely disappeared from the scene.

Neuroleptics have also been used less as attention has focused on their many side effects, such as chronic tremors and shaking. However, the positive effects of these drugs on some patients' psychotic symptoms of hallucinations, delusions, and agitation revitalized both the search for biological contributions to psychological disorders and the search for new and more powerful drugs, a search that has paid many dividends, as documented in later chapters.

Consequences of the Biological Tradition

In the late 19th century, Grey and his colleagues ironically reduced or eliminated interest in treating mental patients because they thought that mental disorders were the result of some as-yet-undiscovered brain pathology and were therefore incurable. The only available course of action was to hospitalize these patients. Around the turn of the century, some nurses documented clinical success in treating mental patients but were prevented from treating others for fear of raising hopes of a cure among family members. In place of treatment, interest centered on diagnosis, legal questions concerning the responsibility of

patients for their actions during periods of insanity, and the study of brain pathology itself.

The German physician Emil Kraepelin (1856–1926) was the dominant figure during this period and one of the founding fathers of modern psychiatry. He was extremely influential in advocating the major ideas of the biological tradition, but he was little involved in treatment. As a student of Wilhelm Wundt, his lasting contribution was in the area of diagnosis and classification, which we discuss in detail in Chapter 3. Kraepelin (1913) was one of the first to distinguish among various psychological disorders, seeing that each may have a different age of onset and time course, with somewhat different clusters of presenting symptoms, and probably a different cause. Many of his descriptions of schizophrenic disorders are still useful today.

By the end of the 1800s, a scientific approach to psychological disorders and their classification had begun with the search for biological causes. Furthermore, treatment was based on humane principles. There were many drawbacks, however, the most unfortunate being that active intervention and treatment were all but eliminated in some settings, despite the availability of some effective approaches. It is to these that we now turn.

The Psychological Tradition

It is a long leap from evil spirits to brain pathology as the cause of psychological disorders. In the intervening centuries, where was the body of thought that put psychological development, both normal and abnormal, in an interpersonal and social context? In fact, this approach has a long and distinguished tradition. Plato, for example, thought that the two causes of maladaptive behavior were the social and cultural influences in one's life and the learning that took place in that environment. If something was wrong in the environment, such as abusive parents, one's impulses and emotions would overcome reason. The best treatment was to reeducate the individual through rational discussion so that the power of reason would predominate (Maher & Maher, 1985a). This was very much a precursor to modern **psychosocial treatment** approaches to the causation of psychopathology, which focus not only on psychological factors but also on social and cultural ones. Other well-known early philosophers, including Aristotle, also emphasized the influence of social environment and early learning on later psychopathology. These philosophers wrote about the importance of fantasies, dreams, and cognitions and thus anticipated, to some extent, later developments in psychoanalytic thought and cognitive science. They also advocated humane and responsible care for individuals with psychological disturbances.

Moral Therapy

During the first half of the 19th century, a strong psychosocial approach to mental disorders called **moral therapy** became influential. The term *moral* actually referred more to emotional or psychological factors rather than to a code of conduct. Its basic tenets included treating institutionalized patients as normally as possible in a setting that encouraged and reinforced normal social interaction (Bockoven, 1963), thus providing them with many opportunities for appropriate social and interpersonal contact. Relationships were carefully nurtured. Individual attention clearly emphasized positive consequences for appropriate interactions and behavior, and restraint and seclusion were eliminated.

As with the biological tradition, the principles of moral therapy date back to Plato and beyond. For example, the Greek Asclepiad Temples of the 6th century B.C. housed the chronically ill, including those with psychological disorders. Here, patients were well cared for, massaged, and provided with soothing music. Similar enlightened practices were evident in Muslim countries in the Middle East (Millon, 2004). But moral therapy as a system originated with the well-known French psychiatrist Philippe Pinel (1745–1826) and his close associate Jean-Baptiste Pussin (1746–1811), who was the superintendent of the Parisian hospital La Bicêtre (Gerard, 1997; Zilboorg & Henry, 1941).

When Pinel arrived in 1791, Pussin had already instituted remarkable reforms by removing all chains used to restrain patients and instituting humane and positive psychological interventions. Pussin persuaded Pinel to go along with the changes. Much to Pinel's credit, he did, first at La Bicêtre and then at the women's hospital Salpétrière, where he invited Pussin to join him (Gerard, 1997; Maher & Maher, 1985b; Weiner, 1979). Here again, they instituted a humane and socially facilitative atmosphere that produced "miraculous" results.

After William Tuke (1732–1822) followed Pinel's lead in England, Benjamin Rush (1745–1813), often considered the founder of U.S. psychiatry, introduced moral therapy in his early work at Pennsylvania Hospital. It then became the treatment of choice in the leading hospitals. *Asylums* had appeared in the 16th century, but they were more like prisons than hospitals. It was the rise of moral therapy in Europe and the United States that made asylums habitable and even therapeutic.

In 1833, Horace Mann, chair of the board of trustees of the Worcester State Hospital, reported on 32 patients who had been given up as incurable. These patients were treated with moral

Concept Check 1.2

For thousands of years, humans have tried to understand and control abnormal behavior. Check your understanding of these historical theories, and match them to the treatments used to "cure" abnormal behavior: (a) bloodletting; induced vomiting; (b) patient placed in socially facilitative environments; and (c) exorcism; burning at the stake.

1. Supernatural causes; evil demons took over the victims' bodies and controlled their behaviors. _____
2. The humoral theory reflected the belief that normal functioning of the brain required a balance of four bodily fluids or humors. _____
3. Maladaptive behavior was caused by poor social and cultural influences within the environment. _____

therapy, cured, and released to their families. Of 100 patients who were viciously assaultive before treatment, no more than 12 continued to be violent a year after beginning treatment. Before treatment, 40 patients had routinely torn off any new clothes provided by attendants; only 8 continued this behavior after a period of treatment. These were remarkable statistics then and would be remarkable even today (Bockoven, 1963).

Asylum Reform and the Decline of Moral Therapy

Unfortunately, after the mid-19th century, humane treatment declined because of a convergence of factors. First, it was widely recognized that moral therapy worked best when the number of patients in an institution was 200 or fewer, allowing for a great deal of individual attention. After the Civil War, enormous waves of immigrants arrived in the United States, yielding their own populations of mentally ill. Patient loads in existing hospitals increased to 1,000 or 2,000, and even more. Because immigrant groups were thought not to deserve the same privileges as "native" Americans (whose ancestors had immigrated perhaps only 50 or 100 years earlier!), they were not given moral treatments even when there were sufficient hospital personnel.

A second reason for the decline of moral therapy has an unlikely source. The great crusader Dorothea Dix (1802–1887) campaigned endlessly for reform in the treatment of insanity. A schoolteacher who had worked in various institutions, she had firsthand knowledge of the deplorable conditions imposed on patients with insanity, and she made it her life's work to inform the American public and their leaders of these abuses. Her work became known as the **mental hygiene movement**.

In addition to improving the standards of care, Dix worked hard to make sure that everyone who needed care received it, including people who experienced homelessness. Through her efforts, humane treatment became more widely available in U.S. institutions. As her career drew to a close, she was rightly acknowledged as a hero of the 19th century.

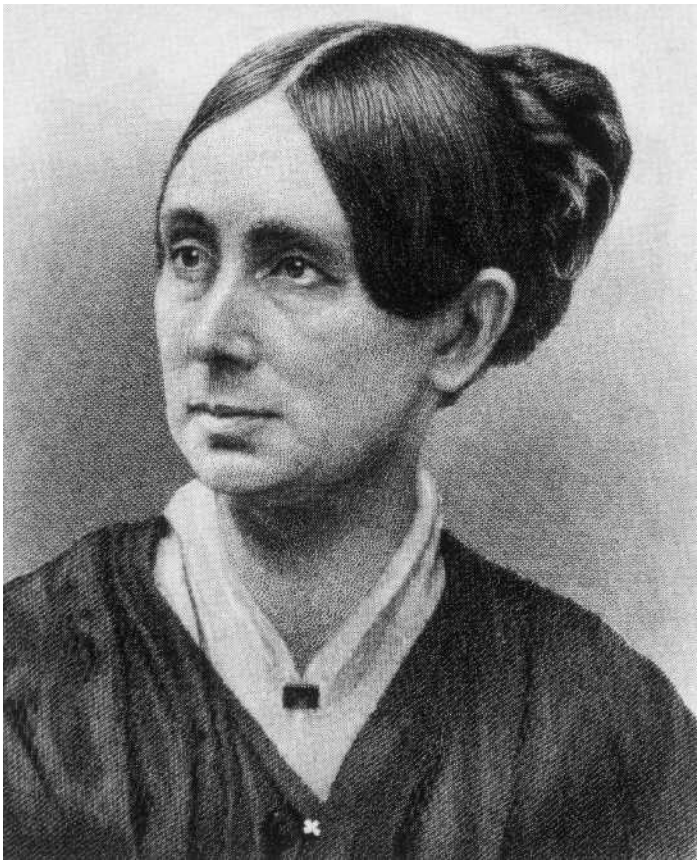
Unfortunately, an unforeseen consequence of Dix's heroic efforts was a substantial increase in the number of mental patients. This influx led to a rapid transition from moral therapy to custodial

Asylums and Poor Farms in Rural America

In 1822 at an annual town meeting, the town of Nantucket, a small island 30 miles off the coast of Massachusetts, voted to build a permanent town poor farm and asylum (Gavin, 2003). In those days, asylums also cared for low-income and older adults. After the War of 1812, Nantucket had prospered from trade as well as from the beginning of the great whaling era, and its citizens wanted to take care of the less fortunate. Inspired by more modern beliefs at the time about the treatment of insanity, it was decided to place the asylum away from town in an area where residents could work productively in a pleasant and restful rural setting with fresh air, individual attention, and the availability of productive activities. Since misuse of alcohol was considered the principal cause of poverty, moving the asylums as far away from taverns as possible seemed logical and was another reason for locating the asylum in the country. But more important, both alcohol misuse and insanity were considered curable after word reached the island of the very positive results from moral therapy at McLean Asylum near Boston (currently McLean Hospital). Thus, it was arranged for residents of the asylum to engage principally in agricultural labor, producing vegetables, eggs, and dairy products or working outside in the wheat and rye fields or with the livestock. Older adults, or those unable to work outside of the asylum, were provided with productive work in their room, such as weaving. Consistent with the tenets of moral therapy, it was thought that a majority of the inmates might recover under the benefits of this healthy and restorative atmosphere. And the poor farm was well run and profitable for the town!

After building the asylum, town officials appointed a Board of Overseers, responsible leaders of Nantucket who immediately became concerned about the number of people visiting the asylum and poor farm, presumably to gawk at the insane. In a further effort to protect the residents, the town passed an ordinance restricting visits only to those who applied in writing and offered a good reason for visiting. Unfortunately, in the winter of February 1844, the structure burned to the ground. Despite heroic efforts of many townspeople, 10 inmates were killed, and the structure was destroyed.

Eventually, a new asylum was built, but by this time it housed only the sick and elderly who could no longer care for themselves. By that time, the new state asylum for the insane had opened far from the island, and the removal of people suffering from insanity to this large (and impersonal) state institution was seen as desirable. New policies were adopted for cases of poverty (presumably those not suffering from addiction of some kind) that included maintaining the poor in their dwellings and providing them with sufficient (but minimal) materials and resources to see them through. A new town "poor department" was created for this purpose. Thus did moral therapy rise and fall in a small rural town in New England, reflecting the tenor of the time (Gavin, 2003).



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Dorothea Dix (1802–1887) began the mental hygiene movement and spent much of her life campaigning for reform in the treatment of the mentally ill.

care because hospitals were inadequately staffed. Dix reformed our asylums and single-handedly inspired the construction of numerous new institutions here and abroad. But even her tireless efforts and advocacy could not ensure sufficient staffing to allow the individual attention necessary to moral therapy. A final blow to the practice of moral therapy was the decision, in the middle of the 19th century, that mental illness was caused by brain pathology and, therefore, was incurable.

The psychological tradition lay dormant for a time, only to reemerge in several different schools of thought in the 20th century. The first major approach was **psychoanalysis**, based on Sigmund Freud's (1856–1939) elaborate theory of the structure of the mind and the role of unconscious processes in determining behavior. The second was **behaviorism**, associated with John B. Watson, Ivan Pavlov, and B. F. Skinner, which focuses on how learning and adaptation affect the development of psychopathology.

Psychoanalytic Theory

Have you ever felt as if someone cast a spell on you? Have you ever been mesmerized by looking deep and long into someone's eyes or at some spectacular firework? If so, you have something in common with the patients of Franz Anton Mesmer (1734–1815) and with millions of people since his time who have been hypnotized. Mesmer suggested to his patients that their problem was caused by an undetectable fluid found in all living organisms called "animal magnetism," which could become blocked.

Mesmer had his patients sit in a dark room around a large vat of chemicals with rods extending from it and touching them. Dressed in flowing robes, he might then identify and tap various areas of their bodies where their animal magnetism was blocked while suggesting strongly that they were being cured. Because of his rather unusual techniques, Mesmer was considered an oddity and maybe a charlatan, strongly opposed by the medical establishment (Winter, 1998). In fact, none less than Benjamin Franklin put animal magnetism to the test by conducting a brilliant experiment in which patients received either magnetized water or nonmagnetized water with strong suggestions that they would get better. Neither the patient nor the therapist knew which water was which, making it a double-blind experiment (see Chapter 4). When both groups got better, Franklin concluded that animal magnetism, or mesmerism, was nothing more than strong suggestion (Gould, 1991; McNally, 1999). Nevertheless, Mesmer is widely regarded as the father of hypnosis, a state in which extremely suggestible subjects sometimes appear to be in a trance.

Many distinguished scientists and physicians were interested in Mesmer's powerful methods of suggestion. One of the best known, Jean-Martin Charcot (1825–1893), was head of the Salpétrière Hospital in Paris, where Philippe Pinel had introduced psychological treatments several generations earlier. A distinguished neurologist, Charcot demonstrated that some techniques of mesmerism were effective with a number of psychological disorders, and he did much to legitimize the fledgling practice of hypnosis. Significantly, in 1885 a young man named Sigmund Freud came from Vienna to study with Charcot.

After returning from France, Freud teamed up with Josef Breuer (1842–1925), who had experimented with a somewhat different hypnotic procedure. While his patients were in the highly suggestible state of hypnosis, Breuer asked them to describe their problems, conflicts, and fears in as much detail as they could. Breuer observed two extremely important phenomena during this process. First, patients often became extremely emotional as they talked and felt quite relieved and improved after emerging from the hypnotic state. Second, seldom would they have gained an understanding of the relationship between their emotional problems and their psychological disorder. In fact, it was difficult or impossible for them to recall some details they had described under hypnosis. In other words, the material seemed to be beyond the awareness of the patient. With this observation, Breuer and Freud believed that they had "discovered" the **unconscious** mind and its apparent influence on the production of psychological disorders. This is one of the most important developments in the history of psychopathology and, indeed, of psychology as a whole. However, as we discuss later, many of Freud's beliefs turned out to be incorrect.

A close second was their discovery that it is therapeutic to recall and relive emotional trauma that has been made unconscious and to release the accompanying tension. This release of emotional material became known as **catharsis**. A fuller understanding of the relationship between current emotions and earlier events is referred to as *insight.* As you shall learn throughout this book, particularly in Chapters 5 and 6 on anxiety and somatic symptom disorders,

Erich Lessing/Art Resource, NY

Franz Anton Mesmer (1734–1815) and other early therapists often used hypnosis and/or strong suggestions to cure their patients.

the existence of "unconscious" memories and feelings and the importance of processing emotion-filled information have been verified and reaffirmed.

Freud and Breuer's ideas were based on case observations, some of which were made in a surprisingly systematic way for those times. An excellent example is Breuer's classic description of his treatment of "hysterical" symptoms in Anna O. in 1895 (Breuer & Freud, 1895/1957). Anna O. was a bright young woman who was perfectly healthy until she reached 21 years of age. Shortly before her problems began, her father developed a serious chronic illness that led to his death. Throughout his illness, Anna O. had cared for him; she felt it necessary to spend endless hours at his bedside. Five months after her father became ill, Anna noticed that during the day her vision blurred and that from time to time she had difficulty moving her right arm and both legs. Soon, additional symptoms appeared. She began to experience some difficulty speaking, and her behavior became unpredictable. Shortly thereafter, she consulted Breuer.

Bettmann/Getty Images

Jean Charcot (1825–1893) studied hypnosis and influenced Sigmund Freud to consider psychosocial approaches to psychological disorders.

Mary Evans Picture Library/Alamy Stock Photo

Josef Breuer (1842–1925) worked on the celebrated case of Anna O. and, with Sigmund Freud, developed the theory of psychoanalysis.

In a series of treatment sessions, Breuer dealt with one symptom at a time through hypnosis and subsequent "talking through," tracing each symptom to its hypothetical causation in circumstances surrounding the death of Anna's father. One at a time, her "hysterical" ailments disappeared, but only after treatment was administered for each respective behavior. This process of treating one behavior at a time fulfills a basic requirement for drawing scientific conclusions about the effects of treatment in an individual case study, as you will learn in Chapter 4. We return to the fascinating case of Anna O. in Chapter 6.

Freud took these basic observations and expanded them into the **psychoanalytic model**, the most comprehensive theory yet constructed on the development and structure of our personalities. He also speculated on where this development could go wrong and produce psychological disorders. Although many of Freud's views changed over time, the basic principles of mental functioning that he originally proposed remained constant through his writings and are still applied by psychoanalysts today.

Although most of it turned out to be incorrect or remains unproven, psychoanalytic theory has had a strong influence, and it is still important to be familiar with its basic ideas; what follows is a brief outline of the theory. We focus on its three major facets: (1) the structure of the mind and the distinct functions of personality that sometimes clash with one another; (2) the defense mechanisms with which the mind defends itself from these clashes, or conflicts; and (3) the stages of early psychosexual development that provide grist for the mill of our inner conflicts.

The Structure of the Mind The mind, according to Freud, has three major parts or functions: the id, the ego, and the superego (see ■ Figure 1.4). These terms, like many from psychoanalysis, have found their way into our common vocabulary, but although you may have heard them, you may not be aware of their meaning. The **id** is the source of our strong sexual and aggressive feelings or energies. It is, basically, the animal within people; if totally unchecked, it could make someone a rapist or a killer. The energy or drive within the id is the *libido.* Even today, some people explain low sex drive as an absence of libido. A less important source of energy, not as well conceptualized by Freud, is the death instinct, or *thanatos*. These two basic drives, toward life and fulfillment on the one hand and death and destruction on the other, are continually in opposition.

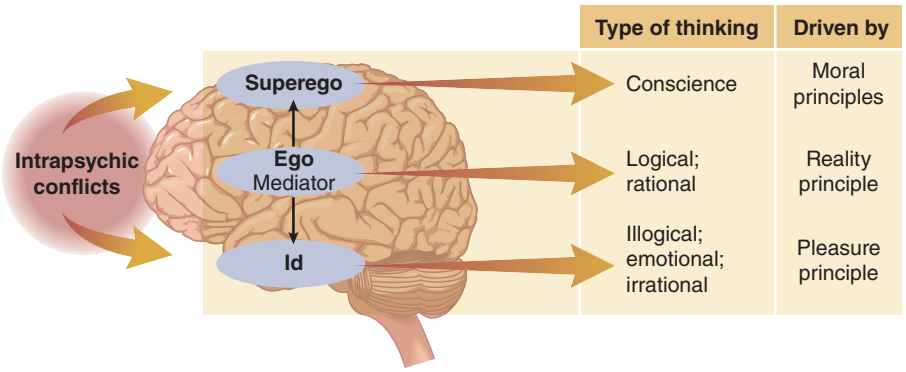


Figure 1.4

Freud's structure of the mind.

The id operates according to the *pleasure principle*, with an overriding goal of maximizing pleasure and eliminating any associated tension or conflicts. The goal of pleasure, which is particularly prominent in childhood, often conflicts with social rules and regulations, as you shall see later. The id has its own characteristic way of processing information; referred to as the *primary process*, this type of thinking is emotional, irrational, illogical, filled with fantasies, and preoccupied with sex, aggression, selfishness, and envy.

Fortunately for all of us, in Freud's view, the id's selfish and sometimes dangerous drives do not go unchecked. In fact, only a few months into life, we know we must adapt our basic demands to the real world. In other words, we must find ways to meet our basic needs without offending everyone around us. Put yet another way, we must act realistically. The part of our mind that ensures that we act realistically is called the **ego**, and it operates according to the *reality principle* instead of the pleasure principle. The cognitive operations or thinking styles of the ego are characterized by logic and reason and are referred to as the *secondary process*, as opposed to the illogical and irrational primary process of the id.

Mary Evans Picture Library/Alamy Stock Photo

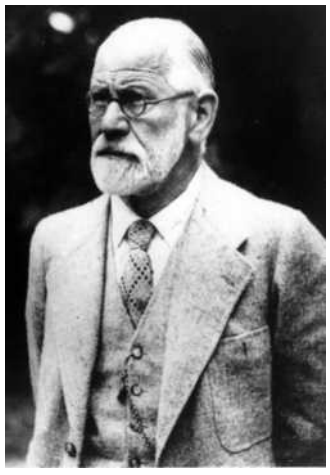
Bertha Pappenheim (1859–1936), famous as Anna O., was described as "hysterical" by Breuer.

The third important structure within the mind, the **superego**, or what we might call *conscience*, represents the *moral principles* instilled in us by our parents and our culture. It is the voice within us that nags at us when we know we're doing something wrong. Because the purpose of the superego is to counteract the potentially dangerous aggressive and sexual drives of the id, the basis for conflict is readily apparent.

The role of the ego is to mediate conflict between the id and the superego, juggling their demands with the realities of the world. The ego is often referred to as the executive or manager of our minds. If it mediates successfully, we can go on to the higher intellectual and creative pursuits of life. If it is unsuccessful and the id or superego becomes too strong, conflict will overtake us, and psychological disorders will develop. Because these conflicts are all within the mind, they are referred to as **intrapsychic conflicts**. Now think back to the case of Anna O., in which Breuer observed that patients cannot always remember important but unpleasant emotional events. From these and other observations, Freud conceptualized the mental structures described in this section to explain unconscious processes. He believed that the id and the superego are almost entirely unconscious. We are fully aware only of the secondary processes of the ego, which is a relatively small part of the mind.

Defense Mechanisms The ego fights a continual battle to stay on top of the warring id and superego. Occasionally, their conflicts produce anxiety that threatens to overwhelm the ego. The anxiety is a signal that alerts the ego to marshal **defense mechanisms**, unconscious protective processes that keep primitive emotions associated with conflicts in check so that the ego can continue its coordinating function. Although Freud first conceptualized defense mechanisms, it was his daughter, Anna Freud, who developed the ideas more fully.

We all use defense mechanisms at times: They are sometimes adaptive and at other times maladaptive. For example, have you ever done poorly on a test because the professor was unfair in the grading? And then you go to a store and you start an argument with a store clerk because you can't find an item? This is an example of the defense mechanism of *displacement*. The ego adaptively decides that expressing primitive anger at your professor might not be in your best interest. Because that store clerk doesn't have the authority to affect you in an adverse way, your anger is displaced to them. Some people may redirect energy from conflict or underlying anxiety into a more constructive outlet such as work, where they may be more efficient because of the redirection. This process is called *sublimation*.



AP Images

Sigmund Freud (1856–1939) is considered the founder of psychoanalysis.

More severe internal conflicts that produce a lot of anxiety or other emotions can trigger self-defeating defensive processes or symptoms. Phobic and obsessive symptoms are especially common self-defeating defensive reactions that, according to Freud, reflect an inadequate attempt to deal with an

internally dangerous situation. Phobic symptoms typically incorporate elements of the danger. For example, a dog phobia may be connected to an infantile fear of castration; that is, a man's internal conflict involves a fear of being attacked and castrated, a fear that is consciously expressed as a fear of being attacked and bitten by a dog, even if he knows the dog is harmless.

Defense mechanisms have been subjected to scientific study, and there is some evidence that they may be of potential import in the study of psychopathology (Vaillant, 1992; 2012). For example, Perry and Bond (2012, 2014) noted that reduction in unadaptive defense mechanisms, and strengthening of adaptive mechanisms such as humor and sublimation, correlated with psychological health. Thus, the concept of defense mechanisms—*coping styles*, in contemporary terminology—continues to be important to the study of psychopathology.

Examples of defense mechanisms are listed below (APA, 2000a):

Denial: Refuses to acknowledge some aspect of objective reality or subjective experience that is apparent to others

Displacement: Transfers a feeling about or a response to an object that causes discomfort onto another, usually less threatening, object or person

Projection: Falsely attributes own unacceptable feelings, impulses, or thoughts to another individual or object

Rationalization: Conceals the true motivations for actions, thoughts, or feelings through elaborate reassuring or self-serving but incorrect explanations

Reaction formation: Substitutes behavior, thoughts, or feelings that are the direct opposite of unacceptable ones

Repression: Blocks disturbing wishes, thoughts, or experiences from conscious awareness

Sublimation: Directs potentially maladaptive feelings or impulses into socially acceptable behavior

Psychosexual Stages of Development Freud also theorized that during infancy and early childhood we pass through a number of **psychosexual stages of development** that have a profound and lasting impact. This makes Freud one of the first to take a developmental perspective on the study of abnormal behavior, which we look at in detail throughout this book. The stages—oral, anal, phallic, latency, and genital—represent distinctive patterns of gratifying our basic needs and satisfying our drive for physical pleasure. For example, the oral stage, typically extending for approximately 2 years from birth, is characterized by a central focus on the need for food. In the act of sucking, necessary for feeding, the lips, tongue, and mouth become the focus of libidinal drives and, therefore, the principal source of pleasure. Freud hypothesized that if we did not receive appropriate gratification during a specific stage or if a specific stage left a particularly strong impression (which he termed *fixation*), an individual's personality would reflect the stage throughout adult life. For example, fixation at the oral stage might result in excessive thumb sucking and emphasis on oral stimulation through eating, chewing pencils, or biting fingernails. Adult personality characteristics theoretically associated with oral fixation include dependency and passivity or, in reaction to these tendencies, rebelliousness and cynicism.

One of the more controversial and frequently mentioned psychosexual conflicts occurs during the phallic stage (from age 3 to age 5 or 6), which is characterized by early genital self-stimulation. This conflict is the subject of the Greek tragedy *Oedipus Rex*, in which Oedipus is fated to kill his father and, unknowingly, to marry his mother. Freud asserted that all young boys relive this fantasy when genital self-stimulation is accompanied by images of sexual interactions with their mothers. These fantasies, in turn, are accompanied by strong feelings of envy and perhaps anger toward their fathers, with whom they identify but whose place they wish to take. Furthermore, strong fears develop that the father may punish that lust by removing the son's penis—thus, the phenomenon of **castration anxiety**. This fear helps the boy keep his lustful impulses toward his mother in check. The battle of the lustful impulses on the one hand and castration anxiety on the other creates a conflict that is internal, or intrapsychic, called the *Oedipus complex.* The phallic stage passes uneventfully only if several things happen. First, the child must resolve his ambivalent relationship with his parents and reconcile the simultaneous anger and love he has for his father. If this happens, he may go on to channel his libidinal impulses into heterosexual relationships while retaining harmless affection for his mother.

The counterpart conflict in girls, called the *Electra complex*, is even more controversial. Freud viewed the young girl as wanting to replace her mother and possess her father. Central to this possession is the girl's desire for a penis, so as to be more like her father and brothers—hence the term *penis envy*. According to Freud, the conflict is successfully resolved when females develop healthy heterosexual relationships and look forward to having a baby, which he viewed as a healthy substitute for having a penis. Freudian beliefs about LBGTQ and other forms of sexuality and gender identity are even more speculative. Needless to say, these views are seen as sexist and demeaning. It is important to remember that these views are not based on facts; no systematic research exists to support them.

In Freud's view, all nonpsychotic psychological disorders resulted from underlying unconscious conflicts, the anxiety that resulted from those conflicts, and the implementation of ego defense mechanisms. Freud called such disorders **neuroses**, or *neurotic disorders*, from an old term referring to disorders of the nervous system.

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Anna Freud (1895–1982), here with her father, contributed the concept of defense mechanisms to the field of psychoanalysis.

Later Developments in Psychoanalytic Thought Freud's original psychoanalytic theories have been greatly modified and developed in a number of different directions, mostly by his students or followers. Some theorists simply took one component of psychoanalytic theory and developed it more fully. Others broke with Freud and went in entirely new directions.

Anna Freud (1895–1982), Freud's daughter, concentrated on the way in which the defensive reactions of the ego determine our behavior. In so doing, she was the first proponent of the modern field of **ego psychology**. Her book *Ego and the Mechanisms of Defense* (1946) is still influential. According to Anna Freud, the individual slowly accumulates adaptational capacities, skill in reality testing, and defenses. Abnormal behavior develops when the ego is deficient in regulating such functions as delaying and controlling impulses or in marshaling appropriate normal defenses to strong internal conflicts. In another somewhat later modification of Freud's theories, Heinz Kohut (1913–1981) focused on a theory of the formation of self-concept and the crucial attributes of the self that allow an individual to progress toward health, or conversely, to develop **neurosis**. This psychoanalytic approach became known as **self-psychology** (Kohut, 1977).

A related area that is quite popular today is referred to as **object relations**. Object relations is the study of how children incorporate the images, the memories, and sometimes the values of a person who was important to them and to whom they were (or are) emotionally attached. *Object* in this sense refers to these important people, and the process of incorporation is called *introjection*. Introjected objects can become an integrated part of the ego or may assume conflicting roles in determining the identity, or self. For example, your parents or guardians may have conflicting views on relationships or careers, which, in turn, may be different from your own point of view. To the extent that these varying positions have been incorporated, the potential for conflict arises. One day you may feel one way about your career direction, and the next day you may feel quite differently. According to object relations theory, you tend to see the world through the eyes of the person incorporated into your self. Object relations theorists focus on how these disparate images come together to make up a person's identity and on the conflicts that may emerge.

Carl Jung (1875–1961) and Alfred Adler (1870–1937) were students of Freud who came to reject his ideas and form their own schools of thought. Jung, rejecting many of the sexual aspects of Freud's theory, introduced the concept of the **collective unconscious**, which is a wisdom accumulated by society and culture that is stored deep in individual memories and passed down from generation to generation. Jung also suggested that spiritual and religious drives are as much a part of human nature as are sexual drives; this emphasis and the idea of the **collective unconscious** continue to draw the attention of mystics. Jung emphasized the importance of enduring personality traits such as introversion (the tendency to be shy and withdrawn) and extroversion (the tendency to be friendly and outgoing).

Adler focused on feelings of inferiority and the striving for superiority; he created the term *inferiority complex*. Unlike Freud, both Jung and Adler also believed that the basic quality of human nature is positive and that there is a strong drive toward self-actualization (realizing one's full potential). Jung and Adler believed that by removing barriers to both internal and external growth the individual would improve and flourish.

Others took psychoanalytical theorizing in different directions, emphasizing development over the life span and the influence of culture and society on personality. Karen Horney (1885–1952) and Erich Fromm (1900–1980) are associated with these ideas, but the best-known theorist is Erik Erikson (1902–1994). Erikson's greatest contribution was his theory of development across the life span, in which he described in some detail the crises and conflicts that accompany eight specific stages. For example, in the last of these stages, the *mature age*, beginning about age 65, individuals review their lives and attempt to make sense of them, experiencing both satisfaction at having completed some lifelong goals and despair at having failed at others. Scientific developments have borne out the wisdom of considering psychopathology from a developmental point of view.

Psychoanalytic Psychotherapy Many techniques of psychoanalytic psychotherapy, or psychoanalysis, are designed to reveal the nature of unconscious mental processes and conflicts through catharsis and insight. Freud developed techniques of **free association**, in which patients are instructed to say whatever comes to mind without the usual socially required censoring. Free association is intended to reveal emotionally charged material that may be repressed because it is too painful or threatening to bring into consciousness. Freud's patients lay on a couch, and he sat behind them so that they would not be distracted. This is how the couch became the symbol of psychotherapy. Other techniques include **dream analysis** (still quite popular today), in which the therapist interprets the content of dreams, supposedly reflecting the primary-process thinking of the id, and systematically relates the dreams to symbolic aspects of unconscious conflicts. This procedure is often difficult because the patient may resist the efforts of the therapist to uncover repressed and sensitive conflicts and may deny the interpretations. The goal of this stage of therapy is to help the patient gain insight into the nature of the conflicts.

The relationship between the therapist, called the **psychoanalyst**, and the patient is important. In the context of this relationship as it evolves, the therapist may discover the nature of the patient's intrapsychic conflict. This is because, in a phenomenon called **transference**, patients come to relate to the therapist much as they did to important figures in their childhood, particularly their parents. Patients who resent the therapist but can verbalize no good reason for it may be reenacting childhood resentment toward a parent. More often, the patient will fall deeply in love with the therapist, which reflects strong positive feelings that existed earlier for a parent. In the phenomenon of *countertransference*, therapists project some of their own personal issues and feelings, usually positive, onto the patient. Therapists are trained to deal with their own feelings as well as those of their patients, whatever the mode of therapy, and it is strictly against all ethical canons of the mental health professions to accept overtures from patients that might lead to relationships outside therapy.

Classical psychoanalysis requires therapy four to five times a week for 2 to 5 years to analyze unconscious conflicts, resolve them, and restructure the personality to put the ego back in charge. Reduction of symptoms (psychological disorders) is relatively inconsequential because they are only expressions of

underlying intrapsychic conflicts that arise from psychosexual developmental stages. Thus, eliminating a phobia or depressive episode would be of little use unless the underlying conflict was dealt with adequately, because another set of symptoms would almost certainly emerge (*symptom substitution*). Because of the high cost of classical psychoanalysis and the lack of evidence that it is effective in alleviating psychological disorders, this approach is seldom used today.

Psychoanalysis is still practiced, particularly in some large cities, but many psychotherapists employ a loosely related set of approaches referred to as **psychodynamic psychotherapy**. Although conflicts and unconscious processes are still emphasized and efforts are made to identify trauma and active defense mechanisms, therapists use an eclectic mixture of tactics, with a social and interpersonal focus. Seven tactics that characterize psychodynamic psychotherapy include (1) a focus on affect and the expression of patients' emotions; (2) an exploration of patients' attempts to avoid topics or engage in activities that hinder the progress of therapy; (3) the identification of patterns in patients' actions, thoughts, feelings, experiences, and relationships; (4) an emphasis on past experiences; (5) a focus on patients' interpersonal experiences; (6) an emphasis on the therapeutic relationship; and (7) an exploration of patients' wishes, dreams, or fantasies (Blagys & Hilsenroth, 2000). Two additional features characterize psychodynamic psychotherapy. First, it is significantly briefer than classical psychoanalysis. Second, psychodynamic therapists deemphasize the goal of personality reconstruction, focusing instead on relieving the suffering associated with psychological disorders.

Comments Pure psychoanalysis is of historical interest more than current interest, and classical psychoanalysis as a treatment has been diminishing in popularity for years. In 1980, the term *neurosis*, which specifically implied a psychoanalytic view of the causes of psychological disorders, was dropped from the DSM, the official diagnostic system of the APA.

A major criticism of psychoanalysis is that it is basically unscientific, relying on reports by the patient of events that happened years ago. These events have been filtered through the experience of the observer and then interpreted by the psychoanalyst in ways that certainly could be questioned and might differ from one analyst to the next. Finally, there has been no careful measurement of any of these psychological phenomena and no obvious way to prove or disprove the basic hypotheses of psychoanalysis. This is important because measurement and the ability to prove or disprove a theory are the foundations of the scientific approach.

Nevertheless, psychoanalytic concepts and observations have been valuable to the study of psychopathology and psychodynamic psychotherapy and also to the history of ideas in Western civilization. Careful scientific studies of psychopathology have supported the observation of unconscious mental processes, the notion that basic emotional responses are often triggered by hidden or symbolic cues, and the understanding that memories of events in our lives can be repressed and otherwise avoided in a variety of ingenious ways. The relationship of the therapist and the patient, called the *therapeutic alliance*, is an important area of study across most therapeutic strategies. These concepts, along with the importance of various coping styles or defense mechanisms, appear repeatedly throughout this book.

Many of these psychodynamic ideas had been in development for more than a century, culminating in Freud's influential writings (for example, Lehrer, 1995), and they stood in stark contrast to witch trials and ideas of incurable brain pathology. In early years, the source of good and evil and of urges and prohibitions was conceived as external and spiritual, usually in the guise of demons confronting the forces of good. From the psychoanalytic point of view, we ourselves became the battleground for these forces, and we are inexorably caught up in the battle, sometimes for better and sometimes for worse.

Humanistic Theory

You have already learned that Jung and Adler broke sharply with Freud. Their fundamental disagreement concerned the very nature of humanity. Freud portrayed life as a battleground where we are continually in danger of being overwhelmed by our darkest forces. Jung and Adler, by contrast, emphasized the positive, optimistic side of human nature. Jung talked about setting goals, looking toward the future, and realizing one's fullest potential. Adler believed that human nature reaches its fullest potential when we contribute to the welfare of other individuals and to society as a whole. He believed that we all strive to reach superior levels of intellectual and moral development. Nevertheless, both Jung and Adler retained many of the principles of psychodynamic thought. Their general philosophies were adopted in the middle of the century by personality theorists and became known as *humanistic psychology*.

Self-actualizing was the watchword for this movement. The underlying assumption is that all of us could reach our highest potential, in all areas of functioning, if only we had the freedom to grow. Inevitably, a variety of conditions may block our actualization. Because every person is basically good and whole, most blocks originate outside the individual. Difficult living conditions or stressful life or interpersonal experiences may move you away from your true self.

Abraham Maslow (1908–1970) was most systematic in describing the structure of personality. He postulated a *hierarchy of needs*, beginning with our most basic physical needs for food and sex and ranging upward to our needs for self-actualization, love, and self-esteem. Social needs such as friendship fall somewhere between. Maslow hypothesized that we cannot progress up the hierarchy until we have satisfied the needs at lower levels.

Carl Rogers (1902–1987) is, from the point of view of therapy, the most influential humanist. Rogers (1961) originated client-centered therapy, later known as **person-centered therapy**. In this approach, the therapist takes a passive role, making as few interpretations as possible. The point is to give the individual a chance to develop during the course of therapy, unfettered by threats to the self. Humanist theorists have great faith in the ability of human relations to foster this growth. **Unconditional positive regard**, the complete and almost unqualified acceptance of most of the client's feelings and actions, is critical to the humanistic approach. *Empathy* is the sympathetic understanding of the individual's particular view of the world. The hoped-for result of person-centered therapy is that clients will be more straightforward and honest with themselves and will access their innate tendencies toward growth.

Like psychoanalysis, the humanistic approach has had a substantial effect on theories of interpersonal relationships. For example, the human potential movements so popular in the 1960s and 1970s were a direct result of humanistic theorizing. This approach also emphasized the importance of the therapeutic relationship in a way quite different from Freud's approach. Rather than seeing the relationship as a means to an end (transference), humanistic therapists believed that relationships, including the therapeutic relationship, were the single most positive influence in facilitating human growth. In fact, Rogers made substantial contributions to the scientific study of therapist–client relationships.

Nevertheless, the humanistic model contributed relatively little new information to the field of psychopathology. One reason for this is that its proponents, with some exceptions, had little interest in doing research that would discover or create new knowledge. Rather, they stressed the unique, nonquantifiable experiences of the individual, emphasizing that people are more different than alike. As Maslow noted, the humanistic model found its greatest application among individuals without psychological disorders. The application of person-centered therapy to more severe psychological disorders has decreased substantially over the decades, although certain variations have arisen periodically in some areas of psychopathology.

The Cognitive-Behavioral Model

As psychoanalysis swept the world at the beginning of the 20th century, events in Russia and the United States would eventually provide an alternative psychological model. The **cognitive-behavioral model** combines insights from the *behavioral model*, the *cognitive model*, and the *social learning model*. These models revolutionized the field because they brought the systematic development of a more scientific approach to psychological aspects of psychopathology.

Pavlov and Classical Conditioning In his classic study examining why dogs salivate before the presentation of food, physiologist Ivan Petrovich Pavlov (1849–1936) of St. Petersburg, Russia, initiated the study of **classical conditioning**, a type of learning in which a neutral stimulus is paired with a response until it elicits that response. The word *conditioning* (or *conditioned response*) resulted from an accident in translation from the original Russian. Pavlov was really talking about a response that occurred only on the condition of the presence of a particular event or situation (stimulus)—in this case, the footsteps of the laboratory assistant at feeding time. Thus, "conditional response" would have been more accurate. Conditioning is one way in which we acquire new information, particularly information that is somewhat emotional in nature. This process is not as simple as it first seems, and we continue to uncover many more facts about its complexity (Bouton, 2005; Craske, Hermans, & Vansteenwegen, 2006; Lissek et al., 2014; Prenoveau, Craske, Liao, & Ornitz, 2013; Rescorla, 1988). But it can be quite automatic. Let's consider a powerful contemporary example.

Psychologists working in oncology units have studied a phenomenon well known to many cancer patients, their nurses and physicians, and their families. Chemotherapy, a common treatment for some forms of cancer, has side effects including severe nausea and vomiting. But these patients often experience severe nausea and, occasionally, vomiting when they merely see the medical personnel who administered the chemotherapy or any equipment associated with the treatment, even on days when their treatment is not delivered (Kamen et al., 2014; Morrow & Dobkin, 1988; Roscoe, Morrow, Aapro, Molassiotis, & Olver, 2011). For some patients, this reaction becomes associated with a variety of stimuli that evoke people or things present during chemotherapy—anybody in a nurse's uniform or even the sight of the hospital. The strength of the response to similar objects or people is usually a function of how similar these objects or people are. This phenomenon is called *stimulus generalization* because the response generalizes to similar stimuli. In any case, this particular reaction is distressing and uncomfortable, particularly if it is associated with a variety of objects or situations. Psychologists have had to develop specific treatments to overcome this response (Mustian et al., 2011).

Whether the stimulus is food, as in Pavlov's laboratory, or chemotherapy, the classical conditioning process begins with a stimulus that would elicit a response in almost anyone and requires no learning; no conditions must be present for the response to occur. For these reasons, the food or chemotherapy is called the *unconditioned stimulus (UCS)*. The natural or unlearned response to this stimulus—in these cases, salivation or nausea—is called the *unconditioned response (UCR)*. Now the learning comes in. As we have already seen, any person or object associated with the UCS (food or chemotherapy) acquires the power to elicit the same response, but now the response, because it was elicited by the conditional or *conditioned stimulus (CS)*, is termed a *conditioned response (CR)*. Thus, the nurse associated with the chemotherapy becomes a CS. The nauseous sensation (upon seeing the nurse), which is almost the same as that experienced during chemotherapy, becomes the CR.

With unconditioned stimuli as powerful as chemotherapy, a CR can be learned in one trial. Most learning of this type, however, requires repeated pairing of the UCS (for example, chemotherapy) and the CS (for instance, nurses' uniforms or hospital equipment). When Pavlov began to investigate this phenomenon, he substituted a metronome for the footsteps of his laboratory assistants so that he could quantify the stimulus more accurately and, therefore, study the approach more precisely. What he also learned is that presentation of the CS (for example, the metronome) *without* the food for a long enough period would eventually eliminate the CR to the food. In other words, the dog learned that the metronome no longer meant that a meal might be on the way. This process was called **extinction**.

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Ivan Pavlov (1849–1936) identified the process of classical conditioning, which is important to many emotional disorders.

Because Pavlov was a physiologist (he won the Nobel Prize in physiology in 1904 for his studies on the digestive system), it was

natural for him to study these processes in a laboratory and to be quite scientific about it. This required precision in measuring and observing relationships and in ruling out alternative explanations. Although this scientific approach is common in biology, it was uncommon in psychology at that time. For example, early psychoanalysts did not believe that the scientific method was appropriate to measure and test the effects of unconscious conflicts precisely. Therefore, they relied on examinations of their own inner processes. Even early experimental psychologists such as Edward Titchener (1867–1927) emphasized the study of **introspection**. Subjects simply reported on their inner thoughts and feelings after experiencing certain stimuli, but the results of this "armchair" psychology were inconsistent and discouraging to many experimental psychologists.

Watson and the Rise of Behaviorism An early American psychologist, John B. Watson (1878–1958), is considered the founder of behaviorism. Strongly influenced by the work of Pavlov, Watson decided that to base psychology on introspection was to head in the wrong direction, that psychology could be made as scientific as physiology, and that psychology needs introspection or other nonquantifiable methods no more than chemistry and physics do (Watson, 1913). This point of view is reflected in a famous quotation from a seminal article published by Watson in 1913: "Psychology, as the behaviorist views it, is a purely objective experimental branch of natural science. Its theoretical goal is the prediction and control of behavior. Introspection forms no essential part of its methods" (p. 158).

Most of Watson's time was spent developing behavioral psychology as a radical empirical science, but he did dabble briefly in the study of psychopathology. In 1920, he and a student, Rosalie Rayner, presented an 11-month-old boy named Albert with a harmless fluffy white rat to play with. Albert was not afraid of the small animal and enjoyed playing with it. Every time Albert reached for the rat, however, the experimenters made a loud noise behind him. After only five trials, Albert showed the first signs of fear if the white rat came near. The experimenters then determined that Albert displayed mild fear of any white furry object, even a Santa Claus mask with a white fuzzy beard. You may not think that this is surprising, but keep in mind that this was one of the first examples ever recorded in a laboratory of producing fear of an object not previously feared. This experiment would be considered unethical by today's standards, and it turns out Albert may have also had some neurological impairment that could have contributed to developing fear (Fridlund, Beck, Goldie, & Irons, 2012), but the study remains a classic one.

Mary Cover Jones (1896–1987) was one of the first psychologists to use behavioral techniques to free a patient from phobia.

Another student of Watson's, Mary Cover Jones (1896–1987), thought that if fear could be learned or classically conditioned in this way, perhaps it could also be unlearned or extinguished. She worked with a boy named Peter, who at 2 years, 10 months, old was already quite afraid of furry objects. Jones decided to bring a white rabbit into the room where Peter was playing for a short time each day. She also arranged for other children, whom she knew did not fear rabbits, to be in the same room. She noted that Peter's fear gradually diminished. Each time it diminished, she brought the rabbit closer. Eventually Peter was touching and even playing with the rabbit (Jones, 1924a, 1924b), and years later the fear had not returned.

The Beginnings of Behavior Therapy The implications of Jones's research were largely ignored for two decades, given the fervor associated with more psychoanalytic conceptions of the development of fear. But in the late 1940s and early 1950s, Joseph Wolpe (1915–1997), a pioneering psychiatrist from South Africa, became dissatisfied with prevailing psychoanalytic interpretations of psychopathology and began looking for something else. He turned to the work of Pavlov and became familiar with the wider field of behavioral psychology. He developed a variety of behavioral procedures for treating his patients, many of whom suffered from phobias. His best-known technique was termed **systematic desensitization**. In principle, it was similar to the treatment of little Peter: Individuals were gradually introduced to the objects or situations they feared so that their fear could decline; that is, they could test reality and see that nothing bad happened in the presence of the phobic object or scene. Wolpe added another element by having his patients do something that was incompatible with fear while they were in the presence of the dreaded object or situation. Because he could not always reproduce the phobic object in his office, Wolpe had his patients carefully and systematically *imagine* the phobic scene, and the response he chose was relaxation because it was convenient. For example, Wolpe treated a young man with a phobia of dogs by training him first to relax deeply and then imagine he was looking at a dog across the park. Gradually, he could imagine the dog across the park and remain relaxed, experiencing little or no fear. Wolpe then had him imagine that he was closer to the dog. Eventually, the young man imagined that he was touching the dog while maintaining a relaxed, almost trancelike state.

Wolpe reported great success with systematic desensitization, one of the first wide-scale applications of the new science of behaviorism to psychopathology. Wolpe, working with fellow pioneers Hans-Jürgen Eysenck and Stanley Rachman in London, called this approach **behavior therapy**. Although Wolpe's procedures are seldom used today, they paved the way for modern-day fear and anxiety reduction procedures in which severe phobias can be eliminated in as little as 1 day (see Chapter 5).

B. F. Skinner and Operant Conditioning Sigmund Freud's influence extended far beyond psychopathology into many aspects of our cultural and intellectual history. Only one other behavioral scientist has made a similar impact: Burrhus Frederic (B. F.) Skinner (1904–1990). In 1938 he published *The Behavior of Organisms*, in which he laid out, in a comprehensive manner, the principles of *operant conditioning*, a type of learning in which behavior changes as a function of what follows the behavior.

Skinner observed early on that a large part of our behavior is not automatically elicited by a UCS and that we must account for this. In the ensuing years, Skinner did not confine his ideas to the laboratories of experimental psychology. He ranged far and wide in his writings, describing, for example, the potential applications of a science of behavior to our culture. Some best-known examples of his ideas are in the novel *Walden Two* (Skinner, 1948), in which he depicts a fictional society run on the principles of operant conditioning. In another well-known work, *Beyond Freedom and Dignity* (1971), Skinner lays out a broader statement of problems facing our culture and suggests solutions based on his own view of a science of behavior.

Skinner was strongly influenced by Watson's conviction that a science of human behavior must be based on observable events and relationships among those events. The work of psychologist Edward L. Thorndike (1874–1949) also influenced Skinner. Thorndike is best known for the *law of effect*, which states that behavior is either strengthened (likely to be repeated more frequently) or weakened (likely to occur less frequently) depending on the consequences of that behavior. Skinner took the simple notions that Thorndike had tested in the animal laboratories, using food as a reinforcer, and developed them in a variety of complex ways to apply to much of our behavior. For example, if a 5-year-old child starts shouting at the top of their lungs in a restaurant, much to the annoyance of the people around them, it is unlikely that their behavior was automatically elicited by a UCS. Also, they will be less likely to do it in the future if their parents scold them, take them out to the car to sit for a bit, or consistently reinforce more appropriate behavior. Then again, if the parents think their behavior is cute and laugh, chances are they will do it again.

Skinner coined the term *operant conditioning* because behavior operates on the environment and changes it in some way. For example, the child's behavior affects their parents' behavior and probably the behavior of other customers. Therefore, the child changes their environment. Most things that we do socially provide the context for other people to respond to us in one way or another, thereby providing consequences for our behavior. The same is true of our physical environment, although the consequences may be long term (polluting the air eventually will poison us). Skinner preferred the term **reinforcement** to "reward" because it connotes the effect on the behavior. Skinner once said that he found himself a bit embarrassed to be talking continually about reinforcement, much as Marxists used to see class struggle everywhere. But he pointed out that all of our behavior is governed to some degree by reinforcement, which can be arranged in an endless variety of ways, in *schedules of reinforcement*. Skinner wrote a whole book on different schedules of reinforcement (Ferster & Skinner, 1957). He also believed that using punishment as a consequence is relatively ineffective in the long run and that the primary way to develop new behavior is to positively reinforce desired behavior. Much like Watson, Skinner did not see the need to go beyond the observable and quantifiable to establish a satisfactory science of behavior. He did not deny the influence of biology or the existence of subjective states of emotion or cognition; he simply explained these phenomena as relatively inconsequential side effects of a particular history of reinforcement.


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B. F. Skinner (1904–1990) studied operant conditioning, a form of learning that is central to psychopathology.

The subjects of Skinner's research were usually animals, mostly pigeons and rats. Using his new principles, Skinner and his disciples taught the animals a variety of tricks, including dancing, playing Ping-Pong, and playing a toy piano. To do this he used a procedure called **shaping**, a process of reinforcing successive approximations to a final behavior or set of behaviors. For example, if you want a pigeon to play Ping-Pong, first you provide it with a pellet of food every time it moves its head slightly toward a Ping-Pong ball tossed in its direction. Gradually, you require the pigeon to move its head ever closer to the Ping-Pong ball until it touches it. Finally, receiving the food pellet is contingent on the pigeon hitting the ball back with its head.

Pavlov, Watson, and Skinner contributed significantly to behavior therapy (see, for example, Wolpe, 1958), in which scientific principles of psychology are applied to clinical problems. Their ideas have substantially contributed to current psychological treatments and so are referred to repeatedly in this book.

Comments The behavioral model has contributed greatly to the understanding and treatment of psychopathology, as is apparent in the chapters that follow. Nevertheless, this model is incomplete and inadequate to account for what we now know about psychopathology. In the past, there was little or no room for biology in behaviorism because disorders were considered, for the most part, environmentally determined reactions. The model also fails to account for development of psychopathology across the life span. Recent advances in our knowledge of how information is processed, both consciously and subconsciously, have added a layer of complexity. Integrating all these dimensions requires a new model of psychopathology.

The Present: The Scientific Method and an Integrative Approach

As William Shakespeare wrote, "What's past is prologue." We have just reviewed three traditions or ways of thinking about causes of psychopathology: the supernatural, the biological, and the psychological (further subdivided into two major historical components—psychoanalytic and behavioral).

Supernatural explanations of psychopathology are still with us. Superstitions prevail, including beliefs in the effects of the moon and the stars on our behavior. This tradition has little influence on scientists and other professionals, however. Biological, psychoanalytic, and behavioral models, by contrast, continue to further our knowledge of psychopathology, as you will learn in the next chapter.

Each tradition has failed in important ways. First, scientific methods were not often applied to the theories and treatments within a tradition, mostly because methods that would have produced the evidence necessary to confirm or disprove the theories and treatments had not been developed. Lacking such evidence, many people accepted various fads and superstitions

that ultimately proved to be untrue or useless. New fads often superseded truly useful theories and treatment procedures. King Charles VI was subjected to a variety of procedures, some of which have since been proved useful and others that were mere fads or even harmful. How we use scientific methods to confirm or disconfirm findings in psychopathology is described in Chapter 4. Second, health professionals tend to look at psychological disorders narrowly, from their own point of view alone. Grey assumed that psychological disorders were the result of brain disease and that other factors had no influence. Watson assumed that all behaviors, including disordered behavior, were the result of psychological and social influences and that the contribution of biological factors was inconsequential.

In the 1990s, two developments came together as never before to shed light on the nature of psychopathology: (1) the increasing sophistication of scientific tools and methodology and (2) the realization that no one influence—biological, behavioral, cognitive, emotional, or social—ever occurs in isolation. Literally, every time we think, feel, or do something, the brain and the rest of the body are hard at work. Perhaps not as obvious, however, is that our thoughts, feelings, and actions inevitably influence the function and even the structure of the brain, sometimes permanently. In other words, our behavior, both normal and abnormal, is the product of a continual interaction of psychological, biological, and social influences.

The view that psychopathology is multiply determined had its early adherents. Perhaps the most notable was Adolf Meyer (1866–1950), often considered the dean of American psychiatry. Whereas most professionals during the first half of the century held narrow views of the cause of psychopathology, Meyer steadfastly emphasized the equal contributions of biological, psychological, and sociocultural determinism. Although Meyer's ideas had some proponents, it took 100 years before the wisdom of his advice was fully recognized in the field.

By 2000, a veritable explosion of knowledge about psychopathology was occurring. The young fields of cognitive science and neuroscience began to grow exponentially as we learned more about the brain and about how we process, remember, and use information. At the same time, startling new findings from behavioral science revealed the importance of early experience in determining later development. It was clear that a new model was needed that would consider biological, psychological, and social influences on behavior. This approach to psychopathology would combine findings from all areas with our rapidly growing understanding of how we experience life during different developmental periods, from infancy to old age.

This development is in line with the Strategic Plan for Research of the National Institute of Mental Health (NIMH), the main funding agency for research on mental health (NIMH, 2020). This plan specifically states four goals: (1) to define the brain mechanisms underlying complex behaviors, (2) to examine mental illness trajectories across the lifespan, (3) to strive for prevention and cures, and (4) to strengthen the public health impact of research. It still includes but less strongly emphasizes the earlier so-called Research Domain Criteria (RDoC) framework. The goal of this previous NIMH initiative was to offer an alternative to the DSM by utilizing brain circuits and basic biology processes to describe and understand mental disorders. This approach did not turn out to be practically feasible.

In the remainder of this book, we explore the reciprocal influences among neuroscience, cognitive science, behavior science, and developmental science and demonstrate that the only currently valid model of psychopathology is multidimensional and integrative.

Concept Check 1.3

Match the treatment with the corresponding psychological theory of behavior: (a) behavioral model, (b) moral therapy, (c) psychoanalytic theory, and (d) humanistic theory.

1. Treating institutionalized patients as normally as possible and encouraging social interaction and relationship development. _____
2. Hypnosis, psychoanalysis-like free association and dream analysis, and balance of the id, ego, and superego. _____
3. Person-centered therapy with unconditional positive regard. _____
4. Classical conditioning, systematic desensitization, and operant conditioning. _____

Summary

Understanding Psychopathology

- A psychological disorder is (1) a psychological dysfunction within an individual that is (2) associated with distress or impairment in functioning and (3) a response that is not typical or culturally expected. All three basic criteria must be met; no one criterion alone has yet been identified that defines the essence of abnormality.
- The field of psychopathology is concerned with the scientific study of psychological disorders. Trained mental health professionals range from clinical and counseling psychologists to psychiatrists and psychiatric social workers and nurses. Each profession requires a specific type of training.
- Using scientific methods, mental health professionals can function as scientist-practitioners. They not only keep up with the latest findings but also use scientific data to evaluate their own work, and they often conduct research within their clinics or hospitals.

- Research about psychological disorders falls into three basic categories: description, causation, and treatment and outcomes.

The Supernatural, Biological, and Psychological Traditions

- Historically, there have been three prominent approaches to abnormal behavior. In the supernatural tradition, abnormal behavior is attributed to agents outside our bodies or social environment, such as demons, spirits, or the influence of the moon and stars. Although still alive, this tradition has been largely replaced by biological and psychological perspectives. In the biological tradition, disorders are attributed to disease or biochemical imbalances; in the psychological tradition, abnormal behavior is attributed to faulty psychological development and to social context.
- Each tradition has its own way of treating individuals who experience psychological disorders. Supernatural treatments include exorcism to rid the body of the supernatural spirits. Biological treatments typically emphasize physical care and the search for medical cures, especially drugs. Psychological approaches use psychosocial treatments, beginning with moral therapy and including modern psychotherapy.
- Sigmund Freud, the founder of psychoanalytic therapy, offered an elaborate conception of the unconscious mind, much of which is still conjecture. In therapy, Freud focused on tapping into the mysteries of the unconscious through such techniques as catharsis, free association, and dream analysis. Although Freud's followers veered from his path in many ways and although many of his views turned out to be incorrect or remain untested, Freud's influence can still be felt today.
- One outgrowth of Freudian therapy is humanistic psychology, which focuses more on human potential and self-actualizing than on psychological disorders. Therapy that has evolved from this approach is known as person-centered therapy; the therapist shows almost unconditional positive regard for the client's feelings and thoughts.
- The behavioral model moved psychology into the realm of science. Both research and therapy focus on things that are measurable, including such techniques as systematic desensitization, reinforcement, and shaping.

The Present: The Scientific Method and an Integrative Approach

- With the increasing sophistication of our scientific tools, and new knowledge from cognitive science, behavioral science, and neuroscience, we now realize that no contribution to psychological disorders ever occurs in isolation. Our behavior, both normal and abnormal, is a product of a continual interaction of psychological, biological, and social influences.

Key Terms

psychological disorder, 3
abnormal behavior, 3
phobia, 4
psychopathology, 6
scientist-practitioner, 6
presenting problem, 6
clinical description, 7
prevalence, 7
incidence, 7
course, 7
prognosis, 7
etiology, 7
exorcism, 8
psychosocial treatment, 15
moral therapy, 15
mental hygiene movement, 16
psychoanalysis, 17
behaviorism, 17
unconscious, 17
catharsis, 17
psychoanalytic model, 18
id, 18
ego, 19
superego, 19
intrapsychic conflicts, 19
defense mechanisms, 19
psychosexual stages of development, 20
castration anxiety, 20
neurosis (plural neuroses), 21
ego psychology, 21
self-psychology, 21
object relations, 21
collective unconscious, 21
free association, 21
dream analysis, 21
psychoanalyst, 21
transference, 21
psychodynamic psychotherapy, 22
self-actualizing, 22
person-centered therapy, 22
unconditional positive regard, 22
cognitive-behavioral model, 23
classical conditioning, 23
extinction, 23
introspection, 24
systematic desensitization, 24
behavior therapy, 24
reinforcement, 25
shaping, 25

Answers to Concept Checks

1.1

Part A

1. d; **2.** b, c

Part B

3. d; **4.** c; **5.** a; **6.** f; **7.** e; **8.** b

1.2

1. c; **2.** a; **3.** b

1.3

1. b; **2.** c; **3.** d; **4.** a

Timeline of Significant Events

400 B.C.–1875


The Image Works


National Library of Medicine

400 B.C.: Hippocrates suggests that psychological disorders have both biological and psychological causes.

1300s: Superstition runs rampant, and mental disorders are blamed on demons and witches; exorcisms are performed to rid victims of evil spirits.

1400–1800: Bloodletting and leeches are used to rid the body of unhealthy fluids and restore chemical balance.

1793: Philippe Pinel introduces moral therapy and makes French mental institutions more humane.

400 B.C. | **1300s** | **1500s** | **1825–1875**

200 C.E.: Galen suggests that normal and abnormal behaviors are related to four bodily fluids, or humors.

1400s: Enlightened view that insanity is caused by mental or emotional stress gains momentum, and depression and anxiety are again regarded by some as disorders.

1500s: Paracelsus suggests that the moon and the stars, not possession by the devil, affect people's psychological functioning.

1825–1875: Syphilis is differentiated from other types of psychosis in that it is caused by a specific bacterium; ultimately, penicillin is found to cure syphilis.

1930–1968

1930: Insulin shock therapy, electric shock treatments, and brain surgery begin to be used to treat psychopathology.

1943: The Minnesota Multiphasic Personality Inventory is published.

1950: The first effective drugs for severe psychotic disorders are developed. Humanistic psychology (based on ideas of Carl Jung, Alfred Adler, and Carl Rogers) gains some acceptance.

1958: Joseph Wolpe effectively treats patients with phobias using systematic desensitization based on principles of behavioral science.

1930 | **1943** | **1950** | **1968**

1938: B. F. Skinner publishes *The Behavior of Organisms,* which describes the principles of operant conditioning.


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1946: Anna Freud publishes *Ego and the Mechanisms of Defense.*


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1952: The first edition of the *Diagnostic and Statistical Manual* (DSM-I) is published.

1968: DSM-II is published.