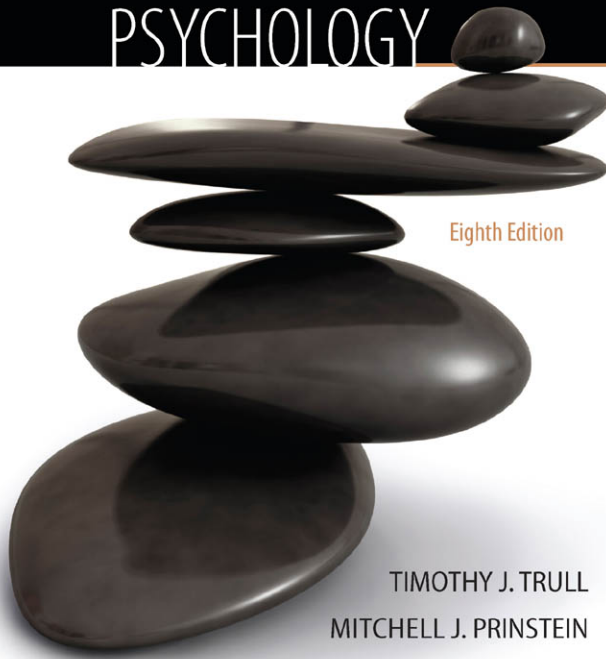


# CLINICAL PSYCHOLOGY

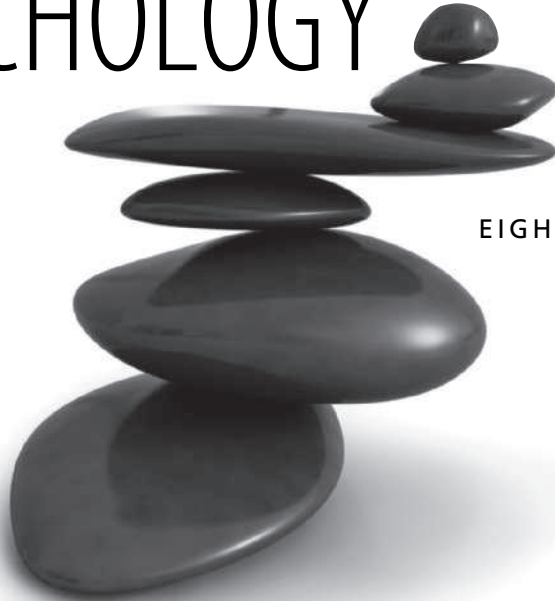


Eighth Edition

TIMOTHY J. TRULL  
MITCHELL J. PRINSTEIN

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# CLINICAL PSYCHOLOGY



EIGHTH EDITION

**TIMOTHY J. TRULL**

University of Missouri–Columbia

**MITCHELL J. PRINSTEIN**

University of North Carolina at Chapel Hill



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**Dr. Timothy Trull** is the Curator's Professor of Psychological Sciences and Byler Distinguished Professor at the University of Missouri–Columbia. He enjoys both teaching a variety of courses in clinical psychology, particularly abnormal psychology and clinical psychology, and supervising clinical psychology graduate students in their research, assessment, and clinical work. Tim earned his M.A. and Ph.D. in clinical psychology at the University of Kentucky. He is a co-author of the *Structured Interview for the Five-Factor Model of Personality* (SIFFM), which assesses both adaptive and maladaptive personality features. Tim publishes much of his research in the *Journal of Abnormal Psychology*, *Psychological Assessment*, and the *Journal of Personality Disorders*. Sponsored through grants from the National Institute of Health, the National Institute on Alcohol Abuse and Alcoholism, and the Borderline Personality Disorder Research Foundation, his research projects include evaluating etiological models of borderline personality disorder, exploring the relations between personality disorders and substance use disorders, assessing genetic and environmental influences on personality and psychopathology, and using of ambulatory assessment in clinical psychology. In addition to his work at the university, Tim is a member of the scientific faculty at the Midwest Alcoholism Research Center (MARC) and is a practicing clinical psychologist. He has won a number of awards that include Outstanding Alumnus, University of Kentucky; the Graduate Faculty Mentoring Award, University of Missouri; the Robert S. Daniels Junior Faculty Teaching Award; and the Psi Chi Professor of the Year. Tim is a Fellow of the American Psychological Association and the Association for Psychological Science.



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*This edition is dedicated to the memory of my father-in-law Armin Klein,  
an inspiring clinical psychologist whose life, compassion, wit, and  
intellect touched many of us. (TJT)*

*Dedicated to my amazing wife, to my happy baby daughter, and to  
future students of clinical psychology who are looking for inspiration. (MJP)*



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# Preface

**W**elcome to the eighth edition of *Clinical Psychology*! *Clinical Psychology* strives to present an in-depth look at the field of clinical psychology, document the many activities of clinical psychologists, and highlight the trends in the field that are likely to shape the field in the coming years. This book emphasizes evidence-based assessment and treatment approaches, as well as the influence of culture, gender, and diversity in these approaches. The first major change you will notice is that Mitch Prinstein, Ph.D. has joined the author team. Mitch brings some great expertise and perspectives to this edition. In addition to being an expert in child and adolescent psychopathology, Mitch is known for his accomplishments in the teaching of clinical psychology, in mentoring undergraduate students who seek careers in psychology, and in training the next generation of clinical psychologists. You will see his “fingerprints” throughout this edition.

As before, this edition of the text has been updated to reflect changes in the field of clinical psychology and new empirical evidence evaluating major approaches to prevention, assessment, and treatment. Briefly, we would like to highlight some of this edition’s major features.

## **Clinical Psychology: Defining the Field**

What features define clinical psychology, and what aspects of clinical psychology make it a unique specialty? Chapters 1–3 present definitions of clinical psychology and its historical roots, contrast clinical psychology with other related fields, and discuss trends and issues (e.g., managed care, prescription privileges, technological innovations) that are influencing the field. In addition, information regarding various training models for clinical psychologists is presented in order to provide a better understanding of the diversity of training within the field. Furthermore, important issues related to multiculturalism and diversity are presented in Chapter 3 (and throughout

the book). Finally, we discuss how a clinical psychologist might provide culturally sensitive mental health services throughout the book but particularly in Chapters 3, 11, and 16.

### **Scientific Foundations of Clinical Psychology**

What is the scientific basis of clinical psychology, and what scientific procedures are used in the field? The field of clinical psychology has increasingly focused on establishing and demonstrating the scientific basis for assessment and treatment. Chapter 4 presents the primary research methodology that is used in clinical psychology, while the remaining chapters present the empirical evidence supporting (or in some cases, not supporting) approaches to assessment and intervention. The American Psychological Association's (APA) 2002 *Ethical Guidelines* that are relevant to research are discussed in this chapter as well. As stated above, each chapter presents and interprets the empirical evidence that is available to address the topic at hand, whether it is the utility of a psychological test, the support for a treatment approach, or the adequacy of a theory.

### **Clinical Assessment**

What clinical assessment procedures are used in the field, and what procedures have the strongest evidence base? Chapters 5–10 provide an in-depth look into major assessment approaches and procedures used by clinical psychologists, including diagnostic assessment, interviewing, intelligence testing, personality assessment, behavioral assessment, and clinical judgment. There are new assessment approaches covered in this edition (e.g., WAIS-IV), new technological advances (Internet-based assessments), as well as a focus on the issue of incremental validity of psychological tests and procedures.

### **Interventions**

What are the leading evidence-based treatments that are used by clinical psychologists? Chapters 11–15 present the major intervention models and techniques. These chapters also take a critical look at the efficacy and utility of these approaches. These issues are further addressed in Chapters 16–19 (which discuss specialties).

### **Lifespan Approach**

The eighth edition of *Clinical Psychology* has been revised to reflect a lifespan approach to the field of clinical psychology. This edition reflects the broad focus both on youth populations (in clinical child and adolescent psychology)

and on adult populations (clinical adult psychology) that are the subject of research, assessment, and treatment in the field. All chapters have been revised to reflect this perspective.

### **Specialties in Clinical Psychology**

As in previous editions, several specialty areas are discussed in this textbook: community psychology, health psychology and behavioral medicine, neuropsychology, and forensic psychology. We focus on these specialties because of their growth potential and interest for students and clinical psychologists in training.

### **Ethical Guidelines**

The American Psychological Association published a new version of *Ethical Guidelines* in 2002. These guidelines are discussed throughout the text, but especially in Chapters 3 and 4. We also discuss the issue of psychological testing and the American Disabilities Act in Chapter 8.

### **New Features**

This edition contains several new features that provide greater focus on important issues. Specifically, we include boxes called (1) Focus on Professional Issues, (2) Focus on Clinical Applications, (3) Clinical Psychologist Perspective, and (4) Graduate Student Perspective. The first two box types highlight issues that are relevant to the profession of clinical psychology (both past and present) and issues concerning the application of clinical psychology (e.g., testing, treatment, etc.), respectively. The latter two box types present personal perspectives written by clinical psychologists about both the general field of clinical psychology as well as specialties in clinical psychology, and personal perspectives on applying to graduate school and being a graduate student in clinical psychology, respectively.

Another new feature in this edition appears in the Appendix, *A Primer for Applying to Graduate Programs in Clinical Psychology*. We hope this is helpful to those considering a career in clinical psychology by highlighting the differences among mental health professionals, the differences between degrees in clinical psychology, the differences in graduate training programs for clinical psychologists, and the nuts and bolts of the application process.

### **Clinical Psychologist and Graduate Student Perspectives**

As we mentioned, new to this edition are a number of Clinical Psychologist and Graduate Student Perspective profiles. In addition to clinical psychologists, we chose to feature graduate students as well. It is our belief that prospective

students in clinical psychology are likely to benefit greatly from the sage advice and experience of those who have been through the application process recently and who have experienced the rigors and rewards of graduate school in clinical psychology.

A total of 36 perspectives appear in the eighth edition of *Clinical Psychology*, including 11 from graduate students in clinical psychology. Here is the complete list of those profiled in this edition:

### **Clinical Psychologists**

- Judith Beck, Ph.D., *Beck Institute of Cognitive Therapy and Research*
- Yossef Ben-Porath, Ph.D., *Kent State University*
- Diane Chambless, Ph.D., *University of Pennsylvania*
- Patrick DeLeon, Ph.D., J.D., *Staff, United States Senate*
- David DeMateo, J.D., Ph.D., *Drexel University*
- Greta Francis, Ph.D., *Brown University*
- Howard Garb, Ph.D., *Wilford Hall Medical Center*
- Leslie Greenberg, Ph.D., *York University*
- Kristin Hawley, Ph.D., *University of Missouri*
- Stephen Haynes, Ph.D., *University of Hawaii*
- Elaine Heiby, Ph.D., *University of Hawaii*
- Brick Johnstone, Ph.D., *University of Missouri*
- Ali Khadivi, Ph.D., *Bronx-Lebanon Hospital Center*
- Kenneth Levy, Ph.D., *Penn State*
- Scott Lilienfeld, Ph.D., *Emory University*
- Richard McFall, Ph.D., *Indiana University*
- Beth Meyerowitz, Ph.D., *University of Southern California*
- Ronda Reitz, Ph.D., *Missouri Department of Mental Health*
- Karen Rudolph, Ph.D., *University of Illinois, Urbana-Champaign*
- Martin Seligman, Ph.D., *University of Pennsylvania*
- Kenneth Sher, Ph.D., *University of Missouri*
- Marina Tolou-Shams, Ph.D., *Brown University*
- Elaine Walker, Ph.D., *Emory University*
- Thomas Widiger, Ph.D., *University of Kentucky*
- Paula Zuffante, Ph.D., *Children's Neuropsychological Services, Albany NY*

### **Clinical Graduate Students**

- Joseph Beeney, *Penn State*
- Danielle Burchett, *Kent State*
- Lizzy Foster, *Drexel University*

- John Guerry, *University of North Carolina, Chapel Hill*
- Shawn Jones, *University of North Carolina, Chapel Hill*
- Christine Maldonado, *University of Missouri*
- Elizabeth Martin, *University of Missouri*
- Julia Martinez, *University of Missouri*
- David Wagner, *University of Missouri*
- Andrew Wegrzyn, *University of Missouri*
- Catalina Woldarsky Meneses, *York University*

### **Resources for Student Success**

A textbook needs to be engaging, clearly written, and organized well so that students can readily comprehend and retain the information provided. Toward this end, a number of features and additional resources are included in this edition. At the beginning of each chapter, focus questions and a chapter outline appear; and each chapter closes with a summary, definitions of key terms, and a list of Web sites of interest.

An *Instructor's Manual* with a *Test Bank* is also available. Topic summaries and suggestions to improve class presentations are included in the manual. Furthermore, the manual provides a list of film and video resources, as well as student exercises and activities relevant to the Web sites that are referred to in the book.

### **The Future of Clinical Psychology**

We believe that the future of clinical psychology is bright, provided that clinical psychologists continue to receive rigorous training in research methods and in evidence-based approaches to assessment and intervention. Further, we must anticipate trends in the marketplace. One important trend is that doctoral-level clinical psychologists are less frequently called upon to provide direct services (e.g., psychotherapy). Managed care (and the associated lower-reimbursement rate for doctoral-level clinicians) has made direct service a less attractive option for clinical psychologists. Further, the mental health field is becoming saturated with service providers from other disciplines. In most cases, these other mental health professionals charge less for their services. However, the rigorous research training and the training in evidence-based assessment and treatment that defines clinical psychology will be an advantage in such a scenario. Increasingly, clinical psychologists will be asked to oversee the training of direct service providers and to evaluate the effectiveness of the interventions that are implemented.

## Thanks and Kudos

I am thankful to have such a supportive and loving partner, Meg, and two amazing daughters, Molly and Janey. I am thankful for the support and friendship of many clinical psychology colleagues, especially Kenny Sher and Tom Widiger. Finally, Ray Ronci has been a great source of friendship and inspiration. Thanks Ray! (TJT)

I am grateful to my always supportive wife, and my very cute baby daughter, for their inspiration and love. I am indebted to my mentors, Drs. Annette La Greca, and Tony Spirito, for their outstanding commitment to the field and the lessons they have taught me about “giving back” to clinical psychology. (MJP)

We are extremely fortunate to have the benefit of the expertise of the Cengage Learning staff. We especially want to thank Jessica Alderman and Jaime Perkins for supporting our efforts and guiding us through the revision process.

We also want to thank those who agreed to be “profiled” for this book. Their comments really help clinical psychology “come alive.”

The feedback and comments from the reviewers of the chapters of this book were extremely helpful: Leonard Burns, *Washington State University*; Glenn Callaghan, *San Jose State University*; Chris Correia, *Auburn University*; Jenny M. Cundiff, *University of Utah*; Regan Gurung, *University of Wisconsin, Green Bay*; Barb J. Heine, *University of California, Irvine*; Jean Hill, *New Mexico Highlands University*; Cindy Lou Matyi, *Ohio University, Chillicothe*; Jennifer Muehlenkamp, *University of Wisconsin, Eau Claire*; Keith Renshaw, *University of Utah*; Denise Sloan, *Boston University*; Jasper Smits, *Southern Methodist University*; Mary Spiers, *Drexel University*; David Topor, *Cleveland State University*; Dustin Wygant, *Eastern Kentucky University*; Eric Youngstrom, *University of North Carolina, Chapel Hill*.

## PART I

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# Foundations of Clinical Psychology

- 1 Clinical Psychology: An Introduction
  - 2 Historical Overview of Clinical Psychology
  - 3 Current Issues in Clinical Psychology
  - 4 Research Methods in Clinical Psychology
  - 5 Diagnosis and Classification of Psychological Problems
-

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# 1



## Clinical Psychology: An Introduction

### FOCUS QUESTIONS

1. What distinguishes a clinical psychologist from other mental health professionals?
2. How does a clinical psychologist integrate research and practice (clinical work)?
3. What current trends will likely affect the future roles of clinical psychologists?
4. What are the major components of a doctoral program in clinical psychology?
5. What are the general qualifications for graduate study in clinical psychology?

### CHAPTER OUTLINE

#### What Is Clinical Psychology?

#### Closely Related Mental Health Professions

Psychiatrists

BOX 1-1: *Professional Issues: But is it the Right Prescription for Clinical Psychology?*

Counseling Psychologists

Other Mental Health Professionals

#### Professions and Titles Not Regulated by the Government

#### The Clinical Psychologist

Activities of Clinical Psychologists

Employment Sites

A Week in the Life of Dr. Karen C

Some Demographic Notes

Research and the Scientific Tradition

#### Training: Toward a Clinical Identity

An Overview

Clinical Psychology Training Programs

BOX 1-2: *Graduate Student Perspective: Julia Martinez*

#### A Profession in Movement

Women in Clinical Psychology

Training Models

Clinical Practice

#### A Tolerance for Ambiguity and a Thirst for New Knowledge

#### CHAPTER SUMMARY

#### KEY TERMS

#### WEB SITES OF INTEREST

## WHAT IS CLINICAL PSYCHOLOGY?

What is a *clinical psychologist*? Although it seems as though we are inundated with real and fictional portrayals of clinical psychologists in the media, the general public remains rather confused about what psychologists do as well as their educational backgrounds. Perhaps this should not be too surprising given that clinical psychologists are a heterogeneous group with respect to age, gender, theoretical allegiance, and roles (Norcross, Karpiak, & Santoro, 2005). Equally confusing, there are many titles that people use to indicate that they practice therapy (e.g., psychotherapist, psychoanalyst) or conduct research related to psychology (e.g., professor, clinical scientist). However, not all of these titles indicate that someone is a clinical psychologist. Indeed, the American Psychological Association and the licensing boards of each North American state and province reserve the title “clinical psychologist” for a very select group of professionals with specific training and qualifications (described in more detail below).

Still, the field of clinical psychology is confusing and often misunderstood. After all these years, people still confuse clinical psychologists with medical doctors/psychiatrists. Some continue to believe that clinical psychology is synonymous with psychoanalysis. Others see a bit of the witch doctor in clinical psychologists, and still others view them as somewhat peculiar. Fortunately, there are many who accurately regard clinical psychologists as researchers, members of prestigious professional societies, and providers of important human services.

In an attempt to define and describe clinical psychology, J. H. Resnick (1991) proposed the following definition and description of clinical psychology:

The field of clinical psychology involves research, teaching, and services relevant to the applications of principles, methods, and procedures for understanding, predicting, and alleviating intellectual, emotional, biological, psychological, social and

behavioral maladjustment, disability and discomfort, applied to a wide range of client populations. (p. 7)

According to Resnick, the skill areas central to the field of clinical psychology include assessment and diagnosis, intervention or treatment, consultation, research, and the application of ethical and professional principles. Clinical psychologists are distinguished by their expertise in the areas of psychopathology, personality, and their integration of science, theory, and practice.

A more recent definition of clinical psychology appears on the Web page of the American Psychological Association’s Division 12 (Society of Clinical Psychology; [www.div12.org/about-clinical-psychology](http://www.div12.org/about-clinical-psychology)):

The field of Clinical Psychology integrates science, theory, and practice to understand, predict, and alleviate maladjustment, disability, and discomfort as well as to promote human adaptation, adjustment, and personal development. Clinical Psychology focuses on the intellectual, emotional, biological, psychological, social, and behavioral aspects of human functioning across the life span, in varying cultures, and at all socioeconomic levels.

Clinical psychologists work with a range of individuals, from infants to the elderly. Their work can involve individuals themselves, families/partners, school personnel, other health care workers, and communities. Clinical psychologists often work in a large range of settings, including universities, hospitals, private practice offices, or group medical practices. Of all of the possible mental health degrees and fields available, some have described the doctoral (Ph.D.) degree in clinical psychology to be the most versatile, since it can lead to a very wide range of possible job opportunities.

Although these definitions describe what clinical psychologists aim to do and, by implication, the skills they possess, we must also take note of how others see the profession and try to correct any false

impressions. The main purpose of this first chapter is to clarify the nature of clinical psychology by describing what clinical psychologists do and where they do it, how they became clinicians, and how they differ from other professionals who also tend to people's mental health needs. In the process, we should gain a better understanding of the field of clinical psychology.

## CLOSELY RELATED MENTAL HEALTH PROFESSIONS

Before we examine the nature of clinical psychology, let us briefly review some of the other major professions in the mental health field. Because most confusion lies in contrasting clinical psychology with psychiatry and with counseling psychology, we focus most of our discussion on these fields. Following this review, we can better present the characteristics that give clinical psychology its unique identity.

### Psychiatrists

A *psychiatrist* is a physician. Psychiatry is rooted in the medical tradition and exists within the framework of organized medicine. Thus, psychiatrists are often accorded the power and status of the medical profession, even though their intellectual heritage comes from the non-medical contributions of Freud, Jung, Adler, and others. Although the latter were physicians, they stepped out of the medical tradition to develop a psychoanalytic system of thought that had very little to do with medicine. The psychiatric profession has vocally and effectively pushed for a superior role in the mental health professional hierarchy, and much of the profession's argument has been based on its medical background. Consistent with its roots in the medical tradition, psychiatry regards psychopathology as a mental "illness" with discrete (often biologically based) causes that can best be remedied with a medical treatment, such as psychotropic medication.

Psychiatrists, like all medical doctors, complete a general medical school curriculum early in their training. Because of their medical training, psychiatrists have the skills to function as physicians. They may prescribe medication, treat physical ailments, and give physical examinations. In addition to some training in psychotherapy and psychiatric diagnosis, psychiatrists make extensive use of a variety of medications in treating their patients' psychological difficulties. Furthermore, their medical training makes them potentially better able to recognize medical problems that may be contributing to the patient's psychological distress. However, as Box 1-1 suggests, even these traditional lines that have served to distinguish psychiatrists from clinical psychologists may become more blurred in the future.

Following completion of the medical degree and the general medical internship required of all physicians, the typical psychiatrist-to-be receives psychiatric training during a four-year residency. This apprenticeship period involves supervised work with patients in an outpatient or hospital setting, accompanied by seminars, reading, discussion, and related activities. The amount of formal psychiatric coursework varies, but the core training experience is the treatment of patients under the supervision of a more experienced psychiatrist.

The following description of a psychiatrist appears on the Web page [HealthyMinds.org](http://HealthyMinds.org) ([www.healthy minds.org/Main-Topic/What-is-a-Psychiatrist.aspx](http://www.healthy minds.org/Main-Topic/What-is-a-Psychiatrist.aspx)), which is maintained by the American Psychiatric Association:

A psychiatrist is a medical physician who specializes in the diagnosis, treatment, and prevention of mental illnesses, including substance use disorders. Psychiatrists are qualified to assess both the mental and physical aspects of psychological disturbance. A psychiatrist has completed medical school (is an M.D. or D.O.) and an additional four or more years of residency training in psychiatry.... Because they are physicians, psychiatrists can order or perform a full range of medical laboratory and

**BOX 1-1 Professional Issues: But Is It the Right Prescription for Clinical Psychology?**

For decades, a number of clinical psychologists expressed the hope that they may eventually be accorded the same privilege of writing prescriptions that psychiatrists have long enjoyed (McGrath, 2009). In particular, they want to prescribe psychotropic medications that affect mental activity, mood, or behavior. But others have urged caution here. They suggest that the reason clinical psychology has flourished is that it is different from psychiatry. Clinical psychologists have developed unique skills in psychological assessment. They have built a profession on a solid scientific basis. To imitate psychiatry by an ill-advised attempt to write prescriptions might destroy clinical psychology's very uniqueness, they say.

Clinical psychologists frequently stress to troubled clients their autonomy and the necessity that they, as clients, collaborate with the therapist in the change process. In contrast, psychiatrists often come from a more authoritarian tradition. The doctor is an expert who tells patients what is wrong with them and then may prescribe medication to ease their suffering and to make life better. Traditionally, clinical psychologists have been committed to psychological, not biological, treatments. Clinicians have not subscribed to the credo of "better living through chemistry" when applied to psychological problems. Although few clinical psychologists would argue that medication is never necessary,

many would argue that, ultimately, most clients must learn to come to grips psychologically with their emotional and behavioral problems. The bottom line seems to be that, at present, the field is conflicted about the value of prescription privileges.

Despite the field's ambivalence, the American Psychological Association did officially endorse this pursuit in 1995 (Martin, 1995). Currently, two states (New Mexico and Louisiana) allow "appropriately" trained psychologists to prescribe medications for treatment of certain mental health conditions (McGrath, 2010). This development has important implications for research, training, and practice. For example, major changes in graduate training would be required to prepare clinical psychologists for this new role.

It is clear that programs will have to be lengthened by at least 1 year to provide even rudimentary training to prepare graduate in this new arena of practice. In some cases, programs would have to be completely revamped. Currently, it appears that the specialization required to earn the right to prescribe will occur at the postdoctoral level (after the Ph.D. or Psy.D. is granted). Most agree that this decision by the APA to pursue prescription privileges will have a lasting impact on the direction of the field. Whether it is a positive or negative effect remains to be seen. We'll have a lot more to say about this issue in Chapter 3.

psychological tests which, combined with interviews/discussions with patients, help provide a picture of a patient's physical and mental state. Their education and years of clinical training and experience equip them to understand the complex relationship between emotional and other medical illnesses, to evaluate medical and psychological data, to make a diagnosis, and to work with a patient to develop a treatment plan.

In contrast to psychiatrists, clinical psychologists typically receive little training in medicine. However, clinical psychologists do receive more extensive training in the psychological principles governing human behavior, in formal assessment of psychological functioning, and in scientific research methods. As compared to psychiatrists,

clinical psychologists also receive more extensive training in psychotherapy (i.e., "talk" therapy as opposed to medications) and are more likely to view psychopathology as a consequence of interactions between individuals' biological/psychological/social predispositions and their experiences within the environment.

Psychiatry no longer enjoys the prestige and popularity it once did. The proportion of medical school graduates who choose psychiatric residencies has generally declined since 1970, but over the last 5 years has stabilized at about 4.1 to 4.6% (Moran, 2011). In 2011, 640 U.S. medical school graduates matched with a psychiatry residency program. Unlike psychiatry, the medical specialties of family medicine, pediatrics, and internal medicine are enjoying significant growth (Moran, 2011). Further, a large percentage of those entering psychiatry



killeb10/Stockphoto

Psychiatrists are medical doctors that specialize in mental health.

residency programs in the United States, approximately 40% over the last 5 years, consists of international medical school students (Moran, 2007, 2011). Reasons offered for the decline in interest, especially among medical students from the United States, include psychiatry's increased emphasis on biological approaches (thus making the field more conventional and similar to other medical specialties), the economic impact of managed care on psychiatric practice, and the increased competition from other mental health specialties, such as clinical psychology. Consequently, many psychiatrists do not conduct extensive psychotherapy with their patients, but rather often schedule brief (i.e., quarter-hour) "medication management" appointments with each patient (e.g., see Harris, 2011). Opportunities to work in depth with individuals experiencing psychological symptoms or to help teach behavioral skills that may reduce and prevent symptoms are more limited in psychiatry than in clinical psychology.

As mentioned in Box 1-1, a major battleground for the profession of psychiatry is that of prescription privileges for non-medical health care professionals, including clinical psychologists

(Katschnig, 2010; Rabinowitz, 2008). Some have even pointed to the granting of prescription privileges to psychologists in a handful of states to date (e.g., New Mexico, Louisiana), as well as the fact that many physicians do not rely on psychiatrists for advice or guidance concerning the prescription of psychiatric medications, as a signal of the "demise of psychiatry" as a medical specialty (Koocher, 2007). Whether this takes place remains to be seen. However, there is no doubt that the field of psychiatry is suffering currently from a bit of an identity crisis (Katschnig, 2010; Tasar, 2008).

### Counseling Psychologists

The activities of *counseling psychologists* overlap with those of clinical psychologists. Traditionally, counseling psychologists work with normal or moderately maladjusted individuals. Their work may involve group counseling or counseling with individuals. Their principal method of assessment is usually the interview, but counseling psychologists also do testing (e.g., assessment of abilities,

personality, interests, and vocational aptitude). Historically, these professionals have focused on conducting educational and occupational counseling, often from a person-centered or humanistic orientation. Currently, however, it is much more common to encounter counseling psychologists representing a wide range of theoretical orientations (e.g., cognitive-behavioral, psychodynamic) and treating clients across the life span.

Traditionally, the most frequent employment settings for counseling psychologists have been educational settings, especially colleges and universities. However, counseling psychologists (like clinical psychologists) also work in hospitals, rehabilitation centers, mental health clinics, and industry. A good example of the kind of work conducted by counseling psychologists within educational settings is suggested in the heading that appeared above an article in a campus newspaper several years ago: "Counseling Center Responds to Married Students' Needs." The article went on to describe group counseling sessions designed to help students who are parents deal with the special problems that marriage and children create for them in pursuing their academic goals.

In general, counseling psychologists see themselves providing the following services: (a) preventive treatment, (b) consultation, (c) development of outreach programs, (d) vocational counseling, and (e) short-term counseling/therapy of from one to fifteen sessions. However, more and more counselors are engaged in activities, such as individual psychotherapy and even psychological testing, that are traditionally in the clinical province. Today, they are frequently less interested in vocational or career counseling and more interested in private practice.

Although there are a number of similarities between counseling and clinical psychology, there are several distinguishing features as well (Norcross, Sayette, & Mayne, 2008). The field of clinical psychology is much larger in terms of the number of doctoral-level professionals as well as the number of accredited doctoral training programs. There are approximately 3 times as many accredited doctoral programs, producing 4 times as many graduates, in clinical psychology as in counseling psychology. In contrast to the majority of clinical psychology

programs, counseling programs are less frequently housed in psychology departments. Rather, many counseling psychology programs may be based in a department or school of education. Finally, as noted above, counseling psychologists are more likely to provide services for mildly disturbed or maladjusted clients and are more likely to specialize in career or vocational assessment. Norcross, Sayette, Mayne, Karg, and Turkson (1998) indicate several further distinctions between doctoral programs in clinical and counseling psychology:

- About twice as many people apply to clinical programs, although acceptance rates are similar.
- Average GRE scores of accepted students are slightly higher in clinical than in counseling programs.
- Counseling programs accept a higher percentage of ethnic minority students and students with a master's degree.
- Research focusing on minority/cross-cultural issues and vocational testing is more common among counseling faculty at doctoral programs.
- Research focusing on psychological disorders, clinical health psychology, and clinical child and adolescent psychology is more common among clinical faculty at doctoral programs.

There are about 70 doctoral training programs in counseling psychology accredited by the American Psychological Association (APA), and about 360 doctoral degrees in counseling psychology were granted by these programs in 2009–2010 (Kohut & Wicherski, 2010).

### Other Mental Health Professionals

**Clinical Social Workers.** The professional activities of clinically trained *social workers* often seem similar to those of psychiatrists and clinical psychologists. Many social workers conduct psychotherapy on an individual or group basis and contribute to the diagnostic process as well. Interestingly, there are more clinically trained social workers than psychiatrists, psychologists, and psychiatric nurses combined! The Web site of the National Association of

Social Workers ([www.naswdc.org/pressroom/features/general/profession.asp](http://www.naswdc.org/pressroom/features/general/profession.asp)) defines the profession of social work in the following manner:

Professional social workers assist individuals, groups, or communities to restore or enhance their capacity for social functioning, while creating societal conditions favorable to their goals. The practice of social work requires knowledge of human development and behavior, of social, economic and cultural institutions, and of the interaction of all these factors.

In years past, social workers tended to deal with the social forces and external agents that were contributing to the patient's difficulties. The social worker would take the case history, interview employers and relatives, make arrangements for vocational placement, or counsel parents; the psychiatrist conducted psychotherapy with patients; and the clinical psychologist tested them. However, these professional roles have blurred over the years.

Perhaps it was the close association with psychiatrists and psychologists that led many social workers to focus less on social or environmental factors and to become more interested in addressing psychological factors that may play a role in individuals' and family's difficulties. Regardless, clinically trained social workers often perform many of the same psychotherapeutic activities as their psychological and psychiatric counterparts. Typically, however, social workers still place a greater focus on the familial and social determinants of psychopathology.

The social work profession has been a leader in the use of supervised fieldwork as a learning device for students. Fieldwork placement is part of the program for the master's degree (usually the terminal degree for social workers), which typically requires 2 years. Compared to the training of clinical psychologists and psychiatrists, social work training is rather brief. As a result, the responsibilities of the social worker are generally not as great as those of the psychiatrist or clinical psychologist. Characteristic of social workers is their intense



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Social workers typically focus more on the familial and social determinants of mental health problems.

involvement with the everyday lives and stresses of their patients. They are more likely to visit the home, the workplace, or the street—the places where their patients spend the bulk of their lives. Their role tends to be active, and they are less concerned with the abstract, theoretical generalizations that can be drawn from a particular case than they are with the practical matters of living.

Many clinical social workers are employed by public agencies of one sort or another. Some find their way into private practice, where their work in individual or family therapy is often indistinguishable from that of psychiatrists or clinical psychologists. Other clinical social workers function as part of the mental health team (including psychiatrists and clinical psychologists) in hospitals, social service agencies, or mental health clinics.

The field of social work appears to be growing tremendously. It is estimated that social workers provide more than half of all the nation's mental health services, and social workers are likely to gain an even greater foothold in the mental health market in the future because they are a low-cost alternative to psychiatrists and psychologists. Enrollment in social work programs continues to increase, and the number of clinical social workers is predicted to continue rising, perhaps by as much as 30% from 2004 to 2014 (Bureau of Labor Statistics, [www.bls.org](http://www.bls.org)).

**School Psychologists.** *School psychologists* work with students, educators, parents, and school administrators to promote the intellectual, social, and emotional growth of school-age children and adolescents. Toward this end, school psychologists may conduct psychological and educational assessments, develop learning programs and evaluate their effectiveness, and consult with teachers, parents, and school officials. To take one example, a school psychologist may develop a program to assist the development of children with special intellectual, emotional, or social needs. This might begin with an evaluation of the children in question, followed by recommendations concerning special programs, treatment, or placement if necessary. In addition, the school psychologist might consult with teachers and school officials on the

implementation of the programs as well as issues of school policy or classroom management.

School psychologists are in high demand, as U.S. laws require that children who may require special educational resources must receive a thorough educational assessment. School psychologists conduct the majority of these assessments, and thus, there is a great need for school psychologists to evaluate the intellectual ability and academic achievement of youth, many of whom remain on waiting lists for months or years until someone is available to conduct an evaluation. The majority of school psychologists work in schools, but some also work in nurseries, day-care centers, hospitals, clinics, and even penal institutions. A few are in private practice. There are about 60 APA-accredited programs in school psychology, and approximately 200 doctoral degrees in school psychology were awarded by these programs in 2009–2010 (Kohut & Wicherski, 2010).

**Health and Rehabilitation Psychologists.** Although many health and rehabilitation psychologists have doctoral degrees in clinical psychology, there is no requirement for this. Indeed, counseling, social, and experimental psychologists, for example, may specialize in either health or rehabilitation psychology. Such specialization typically occurs at the graduate and postdoctoral level. Because Chapter 17 of this book discusses both health and rehabilitation psychology in more detail, only a brief introduction will be provided here.

The field of health psychology has emerged in the last few decades and continues to grow rapidly. *Health psychologists* are those who, through their research or practice, contribute to the promotion and maintenance of good health. They are also involved in the prevention and treatment of illness. They may design, execute, and study programs to help people stop smoking, manage stress, lose weight, or stay fit. Because this is an emerging field, those in it come from a variety of backgrounds, including clinical psychology, counseling psychology, social psychology, and others. Many health psychologists are employed in medical centers, but increasingly they are serving as

consultants to business and industry—in any organization that recognizes the importance of keeping its employees or members well. As we will discuss in Chapter 3, this specialty is likely to profit most from the sweeping changes in health care.

In both research and practice, the focus of *rehabilitation psychologists* is on people who are physically or cognitively disabled. The disability may result from a birth defect or later illness or injury. Rehabilitation psychologists help individuals adjust to their disabilities and the physical, psychological, social, and environmental barriers that often accompany them. Thus, they advocate for the improvement of life conditions for those with disabilities and help develop and promote legislation to promote this cause (e.g., the Americans with Disabilities Act). Rehabilitation psychologists often work at acute care facilities, medical centers, rehabilitation institutes and hospitals, community agencies, VA hospitals, and universities. In addition to clinical care, rehabilitation

psychologists may provide expert testimony in insurance cases, conduct testing, and serve on interdisciplinary teams.

**Psychiatric Nurses.** We have long been aware of the role of psychiatric nurses. Because they spend many hours in close contact with patients, they are not only in a position to provide information about patients' hospital adjustment but also can play a crucial and sensitive role in fostering an appropriate therapeutic environment. Working in close collaboration with the psychiatrist or the clinical psychologist, they (along with those they supervise—attendants, nurse's aides, volunteers, etc.) implement therapeutic recommendations. Certified nurse practitioners now have prescription privileges in all but a few states in the United States. Therefore, nurses may be used increasingly in the front line of mental health services.

**Others.** Most well-staffed hospitals employ a variety of other therapeutic personnel, including occupational therapists, recreational therapists, art therapists, and so on. By virtue of their training and experience, these people can play a vital adjunctive role in enhancing the adjustment patterns of patients. They can teach skills that will help patients in a variety of non-hospital settings. They can help make hospitalization a more tolerable experience, and they can provide outlets that increase the therapeutic value of institutions. Whether their role is to help put patients in touch with their feelings via art, music, gardening, or dancing or to enhance patients' personal and social skills, the contributions of such therapeutic personnel are significant.

People who are trained to assist professional mental health workers are called *paraprofessionals*, and their role has expanded greatly in recent years. Volunteers are often provided short training sessions and then become the most visible personnel in crisis centers (both walk-in and telephone). Certain paraprofessional activities have become accepted practice. Research indicates strongly that the efforts of paraprofessionals can effectively supplement the work of professionals (e.g., see Christensen & Jacobson, 1994). We will discuss this issue extensively in Chapter 16.



AP Photo/Custom Medical Stock

Psychiatric nurses often work on a team of mental health providers.

**TABLE 1-1 Clinicians' Activities**

Activity	Percentage involved in		Mean percentage of time				
	1995	2003	1973	1981	1986	1995	2003
Psychotherapy	84	80	31	35	35	37	34
Diagnosis/Assessment	74	64	10	13	16	15	15
Teaching	50	49	14	12	14	09	10
Clinical Supervision	62	50	08	08	11	07	06
Research/Writing	47	51	07	08	15	10	14
Consultation	54	47	05 <sup>a</sup>	07	11	07	07
Administration	52	53	13	13	16	11	13

<sup>a</sup>Garfield and Kurtz percentage is for "community consultation."

SOURCE: Adapted from Norcross, J. C., Karpik, C. P., & Santoro, S. O. (2005). Clinical psychologists across the years: The Division of Clinical Psychology from 1960 to 2003. *Journal of Clinical Psychology, 61*, 1467–1483.

## PROFESSIONS AND TITLES NOT REGULATED BY THE GOVERNMENT

Most of the professionals and paraprofessionals listed above have fulfilled specific educational requirements and licensing requirements regulated by state and provincial governments. In other words, these mental health workers must (1) document that they have obtained appropriate professional training; (2) pass a licensing exam indicating familiarity with current practice parameters, ethical regulations, and state laws; (3) and maintain their current knowledge of the field through ongoing educational requirements (i.e., continuing professional education). However, some titles are not regulated by the government (e.g., "therapist," "psychotherapist"), and virtually anyone can offer services using this title. Unfortunately, some members of the public are not aware of this distinction and may confuse the services offered by a professional with other unregulated services.

Now that we have briefly examined some of the other helping professions, let us turn to the work of the clinical psychologist.

## THE CLINICAL PSYCHOLOGIST

It is extraordinarily difficult to list comprehensively all of the issues and symptoms that are relevant to the field of clinical psychology. The number and

kinds of problems are so extensive as to boggle the mind: depression, anxiety, psychosis, personality disorders, mental retardation, addictions, learning disabilities, conduct disorder, attention deficit hyperactivity disorder, pervasive developmental disorders, suicide, vocational problems, and sexual difficulties—to name but a few. Further, this list does not cover those individuals who seek out psychotherapy not because of current dysfunctional symptoms, but as a way to better understand themselves.

Instead of defining clinical psychology in terms of problems or issues clinical psychologists are asked to address, we will try to give a picture of the field by reviewing the activities engaged in by clinical psychologists.

## Activities of Clinical Psychologists

Much of our information about clinical activities comes from a series of studies conducted between 1973 and 2003. Each study involved a random sample of members of Division 12 (Division of Clinical Psychology) of the American Psychological Association (APA). Garfield and Kurtz (1976) examined more than 800 questionnaires collected in 1973; Norcross and Prochaska (1982) analyzed nearly 500 surveys gathered in 1981; Norcross, Prochaska, and Gallagher (1989b) were able to analyze 579 questionnaires from 1986; Norcross, Karg, and Prochaska (1997a, 1997b) surveyed 546 clinical

psychologists in 1994–1995; and finally, Norcross et al. (2005) surveyed 694 clinical psychologists in 2003. The results of these five surveys are presented in Table 1-1 and Table 1-2.

From Table 1-1, it is apparent that psychotherapy of one sort or another is the most frequently engaged in activity and occupies the most time, as it has in all the cited surveys from 1973 to 2003. Diagnosis and assessment also continue as major activities. Research activity has grown over the years (to around 14% of the 2003 respondents' time), which is a bit surprising in light of the fact that 39% of the 2003 sample was employed full-time in private practice. Still, it is important to note that some clinical psychologists never publish a research paper and that only 10–15% of all clinicians produce 40–50% of all the work published by clinical psychologists (Norcross et al., 1989b, 1997b). Teaching is another relatively common activity among clinical psychologists. Unfortunately, the time devoted to administration remains significant, perhaps reflecting the bureaucracy that is so prevalent in modern society. Let us now take a closer look at the six activities represented in Table 1-1.

**Therapy/Intervention.** It is clear from Table 1-1 that therapy is the activity that most frequently engages the typical clinical psychologist's efforts and to which the most time is devoted. Many people have an image of the therapy situation as one in which the client lies on a couch while the therapist, bearded and mysterious, sits behind with notepad and furrowed brow. Actually, therapy comes in many different sizes and shapes. A few (but very few!) therapists still use a couch, but more often, the client sits face-to-face across from the therapist. In most cases, therapy involves a one-to-one relationship, but today, couple's therapy, family therapy, parent training, and group therapy are also very common. For example, a group of six or eight clients, all having trouble with alcohol use, may meet together with a therapist to work on their problems. Or a psychologist may meet with a child's parents to discuss ways that reinforcements in the home may reduce the child's disruptive behavior. Finally, sizable proportions of therapists are women, not men. This gender disparity among therapists is likely to continue for some time, given that over 70% of clinical psychology graduate students each year are women.



Michael Newman/PhotoEdit

Psychotherapy remains one of the major activities of clinical psychologists.

Historically, therapy involved mainly a search for insight into the origins of one's problems or the purposes served by one's undesirable behavior. In other cases, therapy consisted primarily of a relationship between client and therapist designed to produce an atmosphere of trust that would help dissolve the client's debilitating defenses. Today, therapy may involve some "insight-oriented" work, but research suggests that therapies involving specific skills may be more useful for reducing client's problems. For instance, cognitive-behavioral therapies involve a structured format to help the client learn new and more satisfying ways of thinking and behaving. Sometimes the goals of therapy are sweeping and involve major changes in behavior. Other times patients desire help only with a single type of symptom (e.g., a troublesome fear) that prevents them from achieving certain goals. Therapy varies, then, along many different dimensions.

**Diagnosis/Assessment.** All practicing clinicians engage in assessment of one form or another. Take, for example, the following cases:

- A child who is failing the fourth grade is administered an intelligence test and an achievement test. Does she have a learning disability?
- Personality tests are given to a client who is depressed and has lost all zest for life. Can the test results shed light on personality factors contributing to the depression?
- An adolescent has been talking excessively, moving quickly, switching from one idea to another, and has been engaging in more risk-taking behaviors. A diagnostic assessment is conducted to determine whether he may have Bipolar Disorder, ADHD, or some other possible psychological disturbance.
- A father has been charged with child abuse. He is interviewed and tested to determine whether he suffers from a mental disorder that influences his judgment and impulse control.

Common to all these examples is the effort to better understand the individual so that a more informed decision can be made or the most



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Some clinical psychologists specialize in psychological testing and assessment.

desirable course of action selected. Assessment, whether through observation, testing, or interviewing, is a way of gathering information so that an important question can be answered or so that a problem can be solved. These questions or problems are virtually infinite in variety, as the foregoing examples suggest. Assessment has long been a critical part of the clinical psychologist's role. Indeed, for many years, assessment, especially testing, was the chief element in the clinician's professional identity.

**Teaching.** Clinical psychologists who have full- or part-time academic appointments obviously devote a considerable amount of time to teaching. Those whose responsibilities are primarily in the area of graduate education teach courses in advanced psychopathology, psychological testing, interviewing, intervention, personality theory, developmental psychopathology, and so on. Some of them may also teach undergraduate courses such as introductory psychology, personality, abnormal psychology, introduction to clinical psychology, psychological testing, and others. Even clinicians whose primary appointments are in clinics or hospitals or who operate a private practice sometimes teach evening courses at a nearby college or university or may even have part-time appointments in graduate programs to help teach or supervise students working towards their doctoral degree.

Much of this teaching is of the familiar classroom-lecture type. But a considerable amount of teaching is also done on a one-to-one, supervisory basis. Clinical psychologists in clinical settings may also teach informal classes or do orientation work with other mental health personnel, such as nurses, aides, social workers, occupational therapists, and so on. In some cases, the clinician may go out into the community and lead workshops on various topics for police officers, volunteers, ministers, probation officers, and others.

**Clinical Supervision.** Clinical supervision is really another form of teaching. However, it typically involves more one-to-one teaching, small group approaches, and other less formal, non-

classroom varieties of instruction. Whether in university, internship, or general clinical settings, clinical psychologists often spend significant portions of their time supervising students, interns, and others. Becoming skilled in the intricacies of therapy and assessment techniques requires more than just reading textbooks. It also involves seeing clients and then discussing their cases with a more experienced supervisor. In short, one learns by doing, but under the controlled and secure conditions of a trainee-supervisor relationship. This kind of "practicum" teaching and supervision can occur both in university and internship settings and in postdoctoral programs as well.

**Research.** Clinical psychology has grown out of an academic research tradition. As a result, when clinical training programs were first established after World War II, the scientist-practitioner model was adopted. This meant that, in contrast to other mental health workers such as psychiatrists or social workers, all clinicians were to be trained as scientists and as practitioners. This model was not adopted because it was expected that all clinical psychologists would engage in both clinical and research work with equal emphasis, but rather because it was believed that to be an effective clinical psychologist, one must have expertise in "thinking like a scientist." The scientist-practitioner model suggests that clinical work is enhanced by a knowledge of scientific methods, and research is improved by exposure to clinical practice. Although the research emphasis may not be so prominent in some "scientist-practitioner" training programs as it once was, the fact remains that clinical psychologists are in a unique position both to evaluate research conducted by others and to conduct their own research. By virtue of their training in research, their extensive experience with people in distress, and their knowledge of both therapy and assessment, clinical psychologists have the ability to consume and to produce new knowledge.

The range of research projects carried out by clinicians is enormous. Studies include searching for the causes of mental disorders, development and

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(Contents continue)

**FIGURE 1-1** Sample table of contents from the *Journal of Consulting and Clinical Psychology*.

SOURCE: Copyright 2010 by the American Psychological Association. Adapted with permission.

validation of assessment devices, evaluation of therapy techniques, and so on. To provide something of the flavor of these efforts, Figure 1-1 shows the table of contents of a fairly recent issue of the *Journal of Consulting and Clinical Psychology*, a major publication outlet for research by clinical psychologists.

**Consultation.** In consultation and in teaching, the goal is to increase the effectiveness of those to whom one's efforts are directed by imparting to them some degree of expertise. Consultation takes innumerable forms in many different settings. For example, one might consult with a colleague who is having difficulty with a therapy case. Such consultation might be a one-shot affair with someone who simply needs help with one specific case. In other instances, however, a clinician might be retained on a relatively permanent basis to provide the staff of an agency with help. Perhaps, for example, our consulting clinician is

an expert on the problems of individuals addicted to drugs. By working with the staff, the consultant can increase the effectiveness of the entire agency. Consultation could come in the form of case-by-case advice, or the consultant might be asked to discuss general problems associated with drug addiction. Clinical psychologists also can serve as consultants to advertising agencies or corporations interested in developing products that could improve the mental health of their customers. Clinical psychologists offer valuable consultation services within the legal system as well, either by assisting attorneys in the selection of jurors for a case or consulting with police departments in hostage negotiations. Finally, a growing number of clinical psychologists serve as consultants to physicians who deliver primary care services.

Consultation can run the gamut from clinical cases to matters of business, personnel, and profit. It can deal with individuals or entire organizations.

Sometimes it is remedial; other times it is oriented toward prevention. Consulting, regardless of the setting in which it occurs or the particular purpose it has, is a significant activity of many clinical psychologists today. We will discuss consultation in more detail in Chapter 16.

**Administration.** It has been said half jokingly that no one in clinical psychology enjoys administrative work except masochists or those with obsessive-compulsive personalities. Nevertheless, nearly every clinical psychologist spends time on administrative tasks. For example, client records must be maintained, those infernal effort reports must be filled out each month, and research projects must be cleared by committees set up to safeguard the rights of human subjects. Clinical psychologists who work for agencies or institutions will likely serve on several committees: personnel, research, patient rights, or even the committee to select films for the patients' Friday night movies.

Some really hardy souls become full-time administrators. They do so for many reasons. Sometimes they are drafted by colleagues who regard them as skillful in human relations. Others may grow a bit weary of therapy or assessment and want a change. Or maybe they have the fantasy that administration is the route to power and wealth. In any event, good administrators are the ones who keep their organization running smoothly and efficiently. Being sensitive to the needs and problems of people in the organization and having the patience to sometimes suffer in silence are useful attributes of the good administrator. The ability to communicate well with those under supervision is also important, as is a knack for selecting the right people for the right jobs.

It would be difficult to list all the sorts of administrative posts held by clinical psychologists. However, here are a few examples: head of a university psychology department, director of a Veterans Administration clinic, vice president of a consulting firm, director of the clinical training program, director of the psychological clinic in a

university psychology department, chief psychologist in a state hospital, and director of a regional crisis center.

## Employment Sites

Where are clinical psychologists employed? Data from the previously noted surveys will again help answer this question. The results pertaining to work settings from these surveys are shown in Table 1-2. It is evident that private practice has grown steadily over the years and is now clearly the most frequent employment setting for clinical psychologists. University settings are the second most common employment sites, with medical schools a distant third. Although not shown in Table 1-2, the data from Norcross et al. (1997b) indicate that of those clinical psychologists whose primary job is that of a full-time university professor, 59% are engaged in some part-time form of private practice or supervision. From Tables 1-1 and 1-2, the diversity of both activities and work settings is very obvious. This is also evident in the increase over time in the numbers in the "Other" category in Table 1-2. This diversity is illustrated in the background and activities of the hypothetical clinician described in the next section.

## A Week in the Life of Dr. Karen C

Karen C. began her undergraduate career in journalism. However, following a course in general psychology, she decided to switch to psychology. After fulfilling the usual requirements for a psychology major (courses in psychobiology, statistics, cognitive psychology, history and systems, personality, social psychology, etc.), she applied to 11 graduate schools. With a strong grade point average and an equally strong set of scores on the Graduate Record Examination, she was accepted by 4 schools. She chose a large midwestern state university and later did her internship at a local state hospital.



James Shaffer/PhotoEdit

Some clinical psychologists work at community mental health centers.

**TABLE 1-2 Employment Settings of Clinical Psychologists**

Employment Site	1973	1981	1986	1995	2003
	%	%	%	%	%
Psychiatric Hospital	08	08	09	05	04
General Hospital	06	08	05	04	03
Outpatient Clinic	05	05	04	04	04
Community Mental Health Ctr	08	06	05	04	02
Medical School	08	07	07	09	08
Private Practice	23	31	35	40	39
University, Psychology	22	17	17	15	18
University, Other	07	05	04	04	04
VA Medical Center	—	—	—	03	03
None	01	01	04	01	00
Other <sup>a</sup>	01	12	10	11	15

<sup>a</sup>This category includes professional schools, correctional facilities, managed care organizations, nursing homes, child and family services, rehabilitation centers, school systems, psychoanalytic institutes, and health maintenance organizations, and so on.

SOURCE: Norcross, J. C., Karpiak, C. P., & Santoro, S. O. (2005). Clinical psychologists across the years: The Division of Clinical Psychology from 1960 to 2003. *Journal of Clinical Psychology, 61*, 1467–1483.

Five years after enrolling, she was awarded the Ph.D. and began her career as a staff psychologist in a tri-county outpatient clinic. Four years later, we have a typical week in the life of Dr. Karen C.

### *Monday, Wednesday, Friday*

**8:00–9:00 A.M.** Staff meeting. This meeting is devoted to a variety of activities, including discussion of cases, agency policy and problems, insurance questions, and other administrative business.

**9:00–10:00 A.M.** Psychotherapy. The current case is that of a moderately depressed 48-year-old woman who was recently divorced. Mrs. G. is showing gradual improvement, and the prospect of hospitalization seems to have passed. Dr. C. is using what might be termed an eclectic form of psychotherapy that is generally cognitive-behavioral in flavor.

**10:00–10:30 A.M.** Psychotherapy. This patient, Sam F., is 19 years old. He has history of multiple arrests for shoplifting and public intoxication. His intellectual potential is limited, and his difficulties in school led him to drop out of high school at age 16. Dr. C. is using a behavior therapy to focus in on enhancing Sam F.'s repertoire of social skills and decreasing the frequency of his maladaptive behaviors.

**10:30 A.M.–12:00 noon.** This time period is reserved for psychological testing, both for Dr. C.'s patients and for the patients of other therapists. Typically, intelligence tests and self-report questionnaires are administered by Dr. C. Occasionally, she also conducts neuropsychological assessment.

**1:00–2:00 P.M.** Clinical supervision. The local university places several interns with Dr. C.'s agency. This period is devoted to supervising their psychotherapy and their diagnostic efforts. The supervision of two

M.A.-level psychologists employed by the agency is also included here.

**2:00–3:00 P.M.** Psychotherapy. Bob S. is a university student. His major difficulty is moderate depression and feelings of alienation. Dr. C. has tried a variety of therapeutic techniques, but nothing has seemed to work. Although the patient has been able to continue with his classes so far, the prospects of hospitalization seem to be increasing.

**3:00–4:30 P.M.** Group psychotherapy. This period is devoted to the treatment of a group of six men from diverse backgrounds who have alcohol dependence. The group treatment approach is largely supportive, and Dr. C. encourages and reinforces abstinence from alcohol.

**4:30–5:00 P.M.** This time is typically devoted to report writing, administrative duties, and responding to the day's e-mail.

### *Tuesday, Thursday*

**8:00–10:00 A.M.** Dr. C. is engaged in a research project to determine whether certain psychological test responses (e.g., from the MMPI-2) can be used to predict responsiveness to various forms of therapy. Dr. C. is using cases from her own agency along with cases from four other local clinics and institutions.

**10:00 A.M.–12:00 noon.** Psychological testing.

**1:00–3:00 P.M.** Dr. C. is a consultant to the local school system. She serves four schools and meets with teachers to discuss their handling of specific problem children. She provides consultation for the school psychologist as well.

**3:00–5:00 P.M.** Dr. C. is advising a local institution for patients with mental retardation on the establishment of a token economy. The goal is to upgrade the self-care habits of a group of adolescents and young adults in the institution. It is hoped

**TABLE 1-3 Wednesday at the University with Professor L**

8:30–9:00 A.M.	Proofread test for class in Introduction to Clinical Psychology
9:00–10:00 A.M.	Research meeting with two graduate students
10:00–11:30 A.M.	Teaching: Clinical practicum supervision
11:30 A.M.–12:30 P.M.	Jog at the track, followed by brown-bag lunch in the office (read journal articles)
12:30–1:00 P.M.	Attend a Dissertation committee meeting to evaluate a doctoral student's work
1:00–2:00 P.M.	Office hour for undergraduate students; write letters of recommendation for students during unoccupied time
2:00–2:30 P.M.	Analyze data for submission to an upcoming professional conference
2:30–4:00 P.M.	Attend meeting of the campus committee on computer use
4:00–5:00 P.M.	Work on a revision of a manuscript submitted earlier to a journal
7:00–9:00 P.M.	Teaching: Seminar on empirically supported psychological treatments

that the project can serve as a prototype demonstration for use throughout the institution.

**7:00–8:30 P.M.** Two evenings a week, Dr. C. teaches a course in abnormal psychology at the local university. It is a fully accredited course that enrolls both full- and part-time undergraduate students.

### Saturday

**9:00 A.M.–1:00 P.M.** Dr. C. sees a series of patients in private practice. They are typically patients with a variety of concerns (e.g., depression, anxiety). These patients are usually referred by local physicians and other professionals in the community who are aware of Dr. C.'s excellent work and reputation. Dr. C. also does some diagnostic testing on a referral basis during this time.

In contrast to Dr. C., a clinical psychologist who teaches at a major university might have a quite different schedule. Table 1-3 offers a glimpse of one such day for a new assistant professor. As you can see, this clinical psychologist's time is typically devoted to teaching, training, and research.

### Some Demographic Notes

Several demographic characteristics of clinical psychologists are noteworthy (Norcross et al., 2005). First, in this survey of 694 randomly selected clinical psychologists from the APA Division 12 (Clinical Psychology) roster, only 34% were women and only 7% of clinicians were members of racial minorities. However, these percentages are likely to increase dramatically once newer Ph.D.s establish themselves in the profession. For example, in 2006 76% of doctoral recipients in clinical psychology were women and 33% were racial or ethnic minority group members (Heffer et al., 2007).

As for primary *theoretical orientation*, 29% of the Norcross et al. (2005) sample described themselves as eclectic/integrative, 28% as cognitive, 15% as psychodynamic, and 10% as behavioral. Table 1-4 presents the theoretical orientations endorsed by clinical psychologists in the Norcross et al. (2005) survey, as well as those endorsed in four other surveys dating back to 1960. As can be seen, the percentage of clinicians adhering to a psychodynamic orientation has declined over the years, whereas the corresponding percentage for a cognitive orientation has increased dramatically. The popularity of the eclectic orientation has been strong for some time but seemed to peak in the 1973 survey.

**TABLE 1-4 Theoretical Orientations of Clinical Psychologists**

Orientation	1960	1973	1981	1986	1995	2003
	%	%	%	%	%	%
Behavioral	08	10	14	16	13	10
Cognitive	—	02	06	13	24	28
Eclectic/Integrative	36	55	31	29	27	29
Humanistic <sup>a</sup>	02	06	04	06	03	01
Interpersonal	—	—	—	—	04	04
Psychodynamic <sup>b</sup>	35	16	30	21	18	15
Rogerian	04	01	03	06	01	01
Sullivanian	10	03	02	02	01	00
Systems	—	—	04	04	04	03
Other	04	07	06	03	05	07

<sup>a</sup>Humanistic includes existential and Gestalt.

<sup>b</sup>Psychodynamic includes psychoanalytic and psychodynamic. The corresponding 1960 and 1973 figures are for psychoanalysis and Neo-Freudian.

SOURCE: Norcross, J. C., Karpiak, C. P., & Santoro, S. O. (2005). Clinical psychologists across the years: The Division of Clinical Psychology from 1960 to 2003. *Journal of Clinical Psychology, 61*, 1467–1483.

Finally, although hardly a demographic feature, it is reassuring to note that of all the clinical psychologists sampled, only 12% expressed any dissatisfaction with their choice of clinical psychology as a career (Norcross et al., 2005). This most recent survey on satisfaction is in contrast with a survey 50 years ago (Kelly & Goldberg, 1959) which reported that approximately 40% of clinical psychologists would select a different career if given a choice. Fortunately, few contemporary clinical psychologists share this sentiment! Despite the strenuous academic requirements, the lengthy graduate education required, and the long hours, most clinical psychologists find their careers to be very satisfying.

### Research and the Scientific Tradition

Although clinical psychology is dedicated to the improvement of human welfare, it springs from a research tradition that emphasizes the quest for knowledge. This research tradition does not imply

that every clinician should be heavily engaged in research or other scholarly pursuits. What it does suggest is that training in clinical psychology that incorporates courses and experience in research and statistical methods gives clinicians unique skills that help establish their professional identity. Such methodological training helps develop a capacity for evaluation and an attitude of caution and skepticism that permits clinical psychologists to become better, more perceptive diagnosticians and therapists as well as researchers.

## TRAINING: TOWARD A CLINICAL IDENTITY

The preceding pages have provided a sketch of some of the activities, affiliations, and orientations of clinicians and touched upon the scientific tradition. Now let us turn to a discussion of the unique background and skills that set clinical psychologists apart from other mental health professionals. None

of this is set in stone, of course. The field is changing and, as always, there are disagreements among clinicians as to how to train students and in what direction the field should move. However, it is useful to remember that clinical psychology is but a specialized application of the more basic core of psychology.

### An Overview

The typical clinical psychologist completes a bachelor's degree and then 5 years of graduate work. The latter typically includes training in assessment, research, diagnosis, and therapeutic skills, along with an internship. Most often, this effort culminates in a *Ph.D.* (Doctor of Philosophy) degree from a university psychology department. In some instances, the degree awarded is the *Psy.D.* (Doctor of Psychology) either from a university department of psychology or from a training institution not affiliated with a university. There are also two-year programs that award the *master's degree*. Because of contemporary licensing laws that dictate who may practice independently as a psychologist, it is rare that individuals graduating from master's programs can engage in professional clinical work independently. Many of them hope to transfer to *Ph.D.* or *Psy.D.* programs later, and indeed, some are quite successful in doing so. Past evidence suggests that master's-level clinicians are less in demand than doctoral-level clinicians, are paid less, and are perceived as less competent. Few states allow master's-level clinicians to be fully licensed to practice independently in psychology. An exception is the area of school psychology, in which individuals with a master's degree are allowed limited independent practice. However, the number of master's degree programs and the number of master's degrees conferred appear to be growing. Currently, over 3 times as many master's degrees as doctoral degrees are awarded in psychology [APA Center for Psychology Workforce Analysis and Research (CPWAR), <http://research.apa.org>].

Master's-level training in clinical psychology has always been somewhat controversial. Master's-level psychologists note that research evidence suggests that master's-level clinicians are as effective as

doctoral-level clinicians. The American Psychological Association, however, accepts the *doctoral degree* alone as the key to work as an independent professional. Further, to date, the American Psychological Association continues to assert that a doctoral degree is a prerequisite for the title "psychologist" and that a doctoral degree should be required for those who wish to practice psychology independently. Nevertheless, master's-level clinicians continue to work in a variety of service-delivery settings. The increasing influence of managed care in the mental health care marketplace may lead to a resurgence of the popularity of master's programs in clinical psychology. In general, master's-level practitioners charge lower fees, making them an attractive alternative (in managed care insurers' eyes) to doctoral-level clinicians. It will be interesting to see how this controversial issue unfolds as lobbying efforts to give master's-level clinicians "psychologist" status increase and as increasing economic pressures come into play.

With this thumbnail sketch of initial training in clinical psychology, we can now examine the content of doctoral training more closely.

### Clinical Psychology Training Programs

The predominant training philosophy in clinical psychology today is still the *scientist-practitioner model* (Raimy, 1950). We shall have a good deal more to say about this model in the next chapter, and in Chapter 3 we will discuss alternative training models for clinical psychologists as well. For the moment, however, a brief overview of the scientist-practitioner training model will be useful.

Training programs that emerged after World War II were based on the principle that the scientist and practitioner roles could be integrated. The goal was the creation of a unique profession. It is this model that differentiates clinical psychologists from the rest of the mental health pack.

**A Sample Program.** How does this model translate into a program that trains clinical psychologists? Table 1-5 presents a fairly typical program of study.

**TABLE 1-5 Sample Ph.D. Program of Study (Scientist-Practitioner Model)**

<b>Year 1</b>	<b>Fall</b> Statistics (Analysis of Variance) Systems of Psychotherapy Departmental Core Course: Social Psychology Introduction to Data Analysis M.A. Thesis Research	<b>Year 3</b>	<b>Fall</b> Departmental Core Course: Cognitive Elective: Experimental Psychopathology Dissertation Research Clinical Practicum
<b>Year 1</b>	<b>Winter</b> Statistics (Regression) Psychometrics (Test Construction) Assessment (choose Adult or Child Assessment) Introduction to Data Analysis M.A. Thesis Research Clinical Practicum	<b>Year 3</b>	<b>Winter</b> Statistics (Latent Variables and Structural Equation Modeling) Departmental Core Course: Developmental Dissertation Research Clinical Practicum
<b>Year 2</b>	<b>Fall</b> Ethical and Professional Issues Psychopathology M.A. Thesis Research Clinical Practicum	<b>Year 4</b>	<b>Fall</b> Outside Course: Psychological Anthropology Dissertation Research History and Systems of Psychology
<b>Year 2</b>	<b>Winter</b> Departmental Core Course: Functional Neuroscience Elective: Family and Group Process M.A. Thesis Research Clinical Practicum	<b>Year 4</b>	<b>Winter</b> Outside Course: Violence in the Family Dissertation Research
		<b>Year 5</b>	<b>Fall and Winter</b> Clinical Internship

NOTE: During the third year (usually in winter semester), students are expected to complete qualifying examinations.

Several points should be made about the program outlined in Table 1-5. First, it is just one example. Some programs place less emphasis on research and more on clinical techniques. Some are structured so that one can complete all the work in 4 years, especially if summers can be devoted to coursework. In some programs, the internship comes in the fourth year, often before the dissertation has been completed. A few schools still require competence in a foreign language, although many now allow the student to substitute courses in statistics or computer technology. It is also true that each school tends to have its own “personality.” Some programs have a distinct cognitive-behavioral orientation, emphasizing such techniques as cognitive therapy for depression. Others have a

psychodynamic flavor and emphasize projective testing. Faculty interests in some programs center on children, whereas others focus on adults. Although there is diversity among clinical programs, there is a great deal of commonality as well. A student applying for graduate work should investigate such emphases so as to make informed choices.

**Coursework.** Clinical students normally must take a series of basic courses such as statistics and research design, biological foundations of behavior, social psychology, developmental psychology, and cognitive psychology. The exact number and content of these courses vary somewhat from program to program. The intent is to give the student an understanding of the basics that underlie human

behavior or that permit us to investigate that behavior. These courses provide a strong scientific foundation for the student's clinical training and give life to the scientist-practitioner model in clinical psychology. Depending on the student's interests, several electives, advanced courses, and seminars in these same topics are often taken as well.

Clinical students also enroll in several courses that teach the fundamentals of clinical practice or deal with clinical topics at an advanced level. For example, there are often courses in psychopathology, theory and research in therapy, or principles of cognitive-behavioral interventions. There are seminars in such topics as schizophrenia, methods of family and group therapy, community psychology, or neuropsychological assessment.

**Practicum Work.** Books and coursework are fine, but ultimately, one must learn by doing. As a result, all programs seek to build the student's clinical skills through exposure to *clinical practica*. The dictionary defines a practicum as "work done by an advanced student that involves the practical application of previously studied theory." In many instances, the practicum will combine academic content with practical experience. Typically, there are practica or clinics in assessment (intelligence, neuropsychology, personality, etc.), therapy (cognitive-behavioral interventions, family therapy), interviewing, and even methods of consulting with school officials, community agencies, or industry. Whatever the specific form or content of the practicum experience, it is a major vehicle for the acquisition of specific clinical skills. The student's practicum work is supervised by clinical faculty members or by clinicians in the community who have relevant special skills. Most psychology departments that have clinical training programs also operate a *psychological clinic*. This clinic often provides assessment, therapy, and consulting services to university students, staff, and faculty, as well as to families of university personnel and to people in the surrounding community. Cases are accepted selectively in terms of their teaching value. Such a clinic may be staffed by a full-time secretary, clinical faculty, and even clinical psychologists from the local community.

**Research.** The implementation of the scientist-practitioner model requires that the student develop research competence. This is accomplished through courses in statistics, computer software and technology, and research methodology and also by active participation in research projects. There are differences among schools as to the extent of their commitment to the scientist-practitioner approach to training. Therefore, differences also exist among departments in the emphasis they place on research training and in the rewards they dispense to students for devotion to research. Most departments do, however, require the completion of a master's thesis (usually by the end of the second year). A dissertation reporting the results of an original research project is also required (by the end of either the fourth or fifth year, depending on the specific program). The dissertation is a more extensive project than the master's thesis, and it is designed to contribute significant new information to the field. Most programs continue to stress traditional experimental or correlational research for the dissertation.

Programs that emphasize the research commitment usually see to it that research experience is not confined to the thesis and dissertation. In some departments, for example, each clinical student joins the research "team" of a faculty member. The team consists of from four to eight graduate students who are at varying year levels in the program. The team meets one time per week for 2 or 3 hours. Research topics are discussed, and research projects are designed. Thesis and dissertation proposals may be discussed and defended. The more advanced students can provide guidance and also serve as role models for the younger students. The vigorous give-and-take of such meetings can go a long way toward building the research commitment.

**The Qualifying Examination.** Most clinical programs require students to pass a *qualifying examination*, sometimes called the preliminary examination or the comprehensive examination. Whatever its title, some students regard it as the most anxiety-provoking experience in their training. It is a written examination that takes different forms at different universities.

In some cases, three written examinations, each lasting 4 hours, are spread over a week; others have a 5-day examination. Some schools require an oral examination as well. In certain programs, the tests cover all areas of psychology, whereas in others, they are confined to the field of clinical psychology. Most often, these examinations are taken during the third year. In other programs, the qualifying examination requirement is satisfied by asking students to write a thorough, in-depth literature review or a research grant.

**The Internship.** The *internship* is a vital part of any training program. It is the capstone of the student's previous experiences in clinical courses and practica and provides the experience that begins to consolidate the scientist-practitioner role.

An internship of one sort or another is required of all students in clinical programs accredited by the APA. In the years immediately following World War II, the internship was most commonly taken during the third year of training. Now, however, so many programs are essentially 5 years in length that the internship most often seems to come at the end of graduate training. In a few rare instances, students may take half-time internships over a 2-year period. Usually, an intern works at an independent facility off campus. For instance, some intern in such university facilities as counseling centers and medical schools. Over 450 predoctoral internship sites are fully approved by the American Psychological Association; these "approved" internship programs are listed each year in the December issue of the *American Psychologist*.

The values of internship training are many. For example, it allows the student to work full-time in a professional setting. New skills can be acquired; older ones can be sharpened. Experience in a professional setting gives the student a real taste of the demands of professional life. Students are also exposed to clinical psychologists who may have ideas and orientations different from those of their university faculty. Thus, the experience can help break down any provincialism that may have crept into the student's university training. Exposure to different kinds of clients can likewise

enhance the student's competence. Students encounter the clinical conditions that they have studied, and this experience can help stimulate research ideas. Ideally, the internship provides the opportunity to expand one's professional horizons and to integrate what one has learned at the university with the demands of the professional world. It becomes the final element in the three-dimensional world of academics, research, and experience.

To give you a better idea of what graduate training in clinical psychology is like, Box 1-2 presents some personal reflections of an advanced graduate student. The actual nuts-and-bolts of applying to graduate programs in clinical psychology are presented in Appendix A.

## A PROFESSION IN MOVEMENT

Clinical psychology is a profession in flux and ferment. Although clinical psychology retains its basic mission of applying psychological principles to the problems of individuals, the methods and the professional framework through which it seeks to accomplish this mission are undergoing change. Whether such change is good or reflects a major identity crisis that bodes ill for the profession is unclear. But one thing is certain: This is an exciting time to be a clinical psychologist and to participate in the ongoing shaping of a profession.

Briefly, several major trends in the field are introduced to give you a taste of some of the issues facing clinical psychologists today. Chapter 3 will have more to say about these and other contemporary issues.

### Women in Clinical Psychology

One demographic trend is important to note. Earlier in this chapter, we indicated that only approximately one-quarter to one-third of APA Division 12 (Society of Clinical Psychology) members are women. As mentioned earlier, this percentage is likely to increase dramatically in the future given recent trends. More women than men are

**BOX 1-2 A Graduate Student Perspective: Julia Martinez**

Julia Martinez is a 5th-year graduate student in clinical psychology. She provided the following insights regarding her graduate school experience.

**What has graduate school in clinical psychology been like for you?**

I was the first in my family to go to college, so I have always thought of graduate school as a very special challenge and opportunity. On the general academic level, I see it as a place where there are no limits to learning or thought. It becomes your job to think critically about everything, and to formulate research and ideas that have the potential to move us all forward. This is what I think America is all about, and I am proud to be a part of it. With regard to clinical psychology, it usually seems to me like a relatively new field, with a lot of work to be done. This fact is inspiring (and sometimes daunting) to me. Lastly, on the personal level, I would never deny that graduate school is very difficult. You make a lot of emotional investments, both in your work and in your own personal development. Frustrations and victories are part of everyday life. Balance, tenacity, and maybe a sense of humor are all important.

**What things did you least expect about graduate school?**

This is a difficult question for me to answer. Before I started graduate school I thought a lot about what I might expect. Actually, I expected a lot of awful things that have not come to pass, perhaps because I made some preparations. For example, I knew that graduate school would be a lot of hard work, but I was dead set against pulling all-nighters and then feeling terrible, like I had done in college. I thought about how I could improve my work style, so I could get a decent night's sleep. Also, a wise person, Dr. Karen Gillock, told me that graduate school would be filled with wonderful

opportunities—but that if you did not prioritize well, you could easily find yourself overwhelmed, with the result of getting fewer things done (really important things, like your master's thesis). This advice turned out to be completely true, and it was helpful to expect this at the start. I guess the biggest thing I did not expect was learning all the great things that I have learned. Going in, I had no idea what exactly I would learn. I was afraid of statistics, but I have learned to love it. I did not expect growing and changing so much.

**Has graduate school changed you? if yes, how so?**

Most certainly, I have changed. I used to be really sensitive about psychology being called a “pseudo-science” or a “soft science,” but I did not have much knowledge about the field to dispute this claim. Over time though, I have learned a lot about the impact that well-executed research in psychology can have on the public good, which is clearly of importance. I have also changed personally. I wanted graduate school to be a well-rounded and scholarly experience. Although I spend a great deal of time in the lab, I also have sought other ways to broaden my horizons. I have read a lot of classic novels, taken a fencing class, practiced foreign languages with friends, traveled to Spain, recorded my own music, taken up the banjo, and learned to Irish jig and flamenco dance. To me, these are not unessential things; they have helped me to better understand and to love my work.

**Are your professional or research interests similar or different now than they were when you started graduate school?**

In clinical psychology, one can choose to be mainly a clinician or mainly a researcher. I was fascinated with research and I chose a graduate program that focused on research education. My program does a great job at

receiving their doctorates in psychology, and this is especially true for clinical psychology, where the ratio is 3:1 (Heffer et al., 2007). A report by the American Psychological Association (APA, 2006) cites several reasons why the number of women obtaining the doctorate in psychology, especially in clinical psychology, has increased so

dramatically. Over the last several decades, there has been an increased demand for psychologists' skills, increased access to graduate training in psychology for women, and a decreased number of men entering psychology graduate programs due to both societal and economic pressures. For example, other professions like medicine, other

reinforcing and supporting our research work, so I have not changed with regard to my interests.

**Looking back, what activities or experiences were the most important for you in your graduate school program?**

I would have to say that the master's thesis project has been the most important so far. Doing the thesis, I went from feeling very unsure about my skills, to feeling quite confident about executing all parts of a research project. It was an invaluable experience.

**Any additional hints for those trying to make it through graduate school in clinical psychology?**

There are four things I would like to share, that I think are really important:

1. **KNOW WHAT YOU WANT GOING IN.** More specifically, some people want a lot of guidance from their advisors; others want to be left alone until they really need their advisors. And some advisors enjoy closely mentoring their students, while others prefer giving students more independence. It saves a lot of time and energy to identify what type of learner you are, what type of advisor would be best suited to your working style, and how you want to carry out your graduate school experience.
2. **MAKE YOUR CULTURAL DIFFERENCES KNOWN** (in a constructive way). Sometimes we differ culturally, which is fine. It is particularly important to understand and to be sensitive to cultural differences in psychology. But lines of thinking, work habits, and interpersonal exchanges can sometimes be misunderstood, regarded negatively, and not appreciated as being related to cultural differences. If you ever feel that this is the case, never be afraid to tactfully and constructively share your thoughts about relevant cultural

differences. This will help everyone involved to be more informed and to be a better psychologist.

3. **KNOW ABOUT "SHINING STAR" SYNDROME.** That is, a lot of students come into graduate school having been the shining star in their high school and college. All of a sudden, graduate school seems horrible, because everyone is smart and outstanding. Some people get really depressed, thinking they have lost their identity as the "smart one." This is not so. We all build from each other's abilities. It really is a time to learn about everyone's individual skills, and how we can all work together to make the world a better place. With this in mind, please also remember the next point.
4. **YOU ARE NOT AN IMPOSTER.** I definitely have felt intimidated sometimes, and like my colleagues have a better feel for how to do things, or how to go about life in graduate school. The truth is that everyone has a lot to learn. Never be afraid to clarify things you do not completely understand. You will learn and grow as long as you do not give too much importance to your doubts.



sciences, and business, to name a few, have offered greater economic incentives.

What effect this change will have on the field is unclear. However, it is clear that an increased representation of women in clinical psychology will serve to greatly advance the field because it will bring a broader range of perspectives to

problems encountered in both clinical practice and clinical research.

### Training Models

Although the scientist-practitioner training model is still dominant, it is under fire. New models have

emerged. Professional schools with no university affiliation have sprung up. Furthermore, new degree programs have been established within the structure of universities. For example, the *Doctor of Psychology (Psy.D.)* degree has become a more common alternative to traditional research-oriented Ph.D. degrees, with more than 1,300 Psy.D. degrees awarded each year from accredited clinical psychology programs. There are over 60 APA-accredited clinical programs that award the Psy.D.

Others have called for a new model of training housed in for-profit *professional schools*. Professional schools now award about 60% of all doctoral degrees in clinical psychology in the United States (Kohut & Wicherski, 2010). Another alternative training model that has been developed over the last few decades is the combined training program. Combined programs were developed under the assumption that a core of both knowledge and skills cuts across applied areas of psychology (i.e., clinical, counseling, school psychology), and this base of knowledge and skills can be utilized in a wide variety of practice settings (Beutler, Givner, Mowder, Fisher, & Reeve, 2004). Currently, there are 8 accredited programs in combined training in professional psychology. Each program provides training in two or more of the specialty areas of clinical, counseling, or school psychology.

A training model that has gained some prominence over the past decade is the *clinical science model* (Baker, McFall, & Shoham, 2009). This model arose from concerns that clinical psychology, as currently practiced, is not sufficiently grounded in science. Programs that adhere to this model focus training on evidence-based approaches to assessment, prevention, and clinical intervention. Over 50 clinical training programs identify themselves as clinical science training programs. This training model as well as the others will be discussed in more detail in Chapter 3.

### Clinical Practice

Despite the financial impact of managed care, recently trained clinical psychologists continue to go into private practice in large numbers. The

number of psychologists and social workers in the United States has quadrupled over the last 50 years, even though the use of medications to treat mental health issues is increasing rapidly and the overall proportion of mental health expenditures on services typically offered by practicing clinicians is smaller (Goodheart, 2010). These factors have conspired to make the practice of clinical psychology less viable for many. Despite these trends, issues of licensing and certification, participation in governmental health care programs, and other guild concerns seem to be preoccupying the clinical psychologist more and more. Paraprofessionals and master's-level mental health professionals are being employed with greater frequency in a variety of mental health settings traditionally staffed by clinical psychologists. They are performing routine testing functions, assisting in group therapy, carrying out various administrative jobs in agencies, and so on. This trend has been reinforced by the fact that modern clinical psychologists seem less and less willing to invest their time in diagnostic testing.

Some may find signs of the demise of clinical psychology in all of the foregoing; others may be excited by the sheer conflict of it all. But for the prospective student of clinical psychology, the current situation offers an unparalleled opportunity to participate in shaping the future of a profession.

## A TOLERANCE FOR AMBIGUITY AND A THIRST FOR NEW KNOWLEDGE

The orderly thing to do would be to conclude this chapter with a final, crisp definition of clinical psychology—one that would summarize and integrate our previous discussion and could readily be committed to memory. However, such a definition does not seem possible or even useful. The problem resides in the range, diversity, and patterning of the interests and activities of clinical psychologists. To encompass such diversity, a definition would have to be so lengthy or so general as

to be essentially meaningless. For example, some feel that Resnick's (1991) and Division 12's definitions presented at the beginning of this chapter are too broad and not specific to clinical psychology. More than 50 years ago, Shaffer and Lazarus (1952), in their textbook of clinical psychology, commented, "Nowhere is there real agreement over the exact role which should be played by the clinical psychologist" (p. 25). Little has occurred in the meantime to persuade one to reject their evaluation. It might be well, then, to mention an important characteristic of the clinical psychologist: the capacity to tolerate ambiguity.

Assailed by some as charlatans, adored by others as saviors, depressed at times by their lack of

knowledge about human behavior, exhilarated at other times by the remarkable improvement in their patients, bombarded by the conflicting claims of success made by cognitive-behaviorists on the one hand and psychodynamic psychologists on the other, criticized by academicians as being too applied and by other mental health colleagues as being too abstract or scientific—is it any wonder that a tolerance for ambiguity can be a helpful quality for clinicians? For students who want all the answers about human behavior, clinical psychology can be a very disturbing enterprise. But for those who wish to participate in a search for increasingly effective means to improve the human condition, it can be rewarding indeed.

## CHAPTER SUMMARY

Clinical psychology, as a field, is rather difficult to define in a precise way. The activities of clinical psychologists vary greatly, and there is some overlap with other mental health professions. In this chapter, we have presented the most current data available on the characteristics and activities of clinical psychologists within a historical context. The modern clinical psychologist typically spends a significant amount of the workweek engaged in direct clinical service, diagnosis/assessment, administration, and research/writing. Teaching, supervision, and consultation also are important roles. Clinical

psychologists are employed in a wide range of settings, especially private practice, universities, and medical centers. According to surveys, most clinical psychologists are men, most graduate students are women, and the most frequently endorsed theoretical orientations are eclectic/integrative, cognitive, and psychodynamic. Above all, the field of clinical psychology is strongly committed to the research tradition, with an emphasis on evidence-based approaches to assessment, prevention, and intervention. The chapter concluded with an overview of training in clinical psychology.

## KEY TERMS

**accreditation** A designation bestowed by the American Psychological Association on psychological training programs that meet acceptable training standards.

**clinical practicum** A training experience designed to build specific clinical skills (in assessment, psychotherapy, etc.). Often, a practicum combines academic content, or theory, with practical experience.

**clinical psychologist** A member of a profession devoted to understanding and treating individuals affected by a variety of emotional, behavioral, and/or cognitive difficulties. Clinical psychologists may be involved in numerous activities, including psychotherapy, assessment and diagnosis, teaching, supervision, research, consultation, and administration.

**clinical science model** A clinical psychology training model that emphasizes empirically supported approaches to assessment, prevention, and clinical intervention. This model arose from concerns that clinical psychology was not firmly grounded in science.

**clinical social workers** Mental health professionals trained in psychiatric diagnosis and in individual and group psychotherapy. Compared to psychologists and psychiatrists, psychiatric social workers' training is relatively brief, limited to a 2-year master's degree. Social workers are intensely involved in the day-to-day lives of their patients and focus more on the social and environmental factors contributing to their patients' difficulties.

**counseling psychologists** Psychologists whose interests and activities overlap significantly with those of clinical psychologists. Traditionally, counseling psychologists have provided individual and group psychotherapy for normal or moderately maladjusted individuals and have offered educational and occupational counseling.

**doctoral degree** A degree that requires training beyond the master's degree. In clinical psychology, the doctoral degree is usually obtainable after 4 years of graduate training in assessment, diagnosis, psychotherapy, and research, plus a 1-year internship.

**Graduate Record Examination** A test frequently required of applicants to graduate training programs. The GRE assesses quantitative, verbal, and analytical abilities. In addition, the GRE offers subject tests for several disciplines, including psychology.

**health psychologists** Psychologists whose research or practical work focuses on the prevention of illness, the promotion and maintenance of good health, or the treatment of individuals with diagnosed medical conditions.

**internship** An intensive clinical experience required of all clinical psychology students and usually occurring at the very end of their graduate training. Typically, internships last 1 year and involve full-time work at an independent facility.

**master's degree** An advanced degree, usually obtainable after 2 years of graduate work. Individuals with master's-level training in clinical psychology work in a variety of service-delivery settings but may be less likely to gain professional independence than individuals with doctoral degrees.

**paraprofessionals** Individuals (e.g., crisis hotline workers) who have been trained to assist professional mental health workers.

**professional schools** Schools offering advanced training in psychology that emphasizes competence in assessment and psychotherapy over competence in research. Many professional schools are not affiliated with universities, and most award the Psy.D. degree.

**Psy.D. degree** An advanced degree in psychology that is emerging as an alternative to traditional research-oriented Ph.D. degrees.

**psychiatrist** A physician with intensive training in the diagnosis and treatment of a variety of mental disorders. Because of their medical backgrounds, psychiatrists may prescribe medications for the alleviation of problematic behavior or psychological distress.

**psychological clinic** A clinic operated by a clinical psychology training program and staffed by clinical students, faculty, and others. The psychological clinic provides a setting for clinical students to gain practical experience by offering assessment, therapy, and consultation services to the public.

**qualifying examination** An examination required of all clinical psychology students, usually in their third year of training. The function of this exam is to ensure the student's academic competence.

**rehabilitation psychologists** Psychologists whose practice focuses upon individuals with physical or cognitive disabilities. Rehabilitation psychologists most often work in general or rehabilitation hospitals, and they help individuals with disabilities deal with the psychological, social, and environmental ramifications of their conditions.

**school psychologists** Psychologists who work with educators to promote the intellectual, social, and emotional growth of school-age children.

Activities of school psychologists may include evaluating children with special needs, developing interventions or programs to address these needs, and consulting with teachers and administrators about issues of school policy.

**scientist-practitioner model of training** The predominant training philosophy in clinical

psychology today. This model is based on the idea that clinical psychologists should integrate their roles of scientist and practitioner.

**theoretical orientation** The theoretical framework that a psychologist relies on to conceptualize and treat clients' problems. Examples of such orientations include psychodynamic, cognitive, behavioral, interpersonal, systems, and eclectic/integrative.

### WEB SITES OF INTEREST

To visit any of the following Web sites, go to [www.wadsworth.com](http://www.wadsworth.com) and click Links.

1-1 Accredited internship programs

<http://www.apa.org/ed/accreditation/programs/internships-state.aspx>

1-2 Accredited doctoral training programs in clinical psychology

<http://www.apa.org/ed/accreditation/programs/clinical.aspx>

1-3 Example of a clinical psychology program's Web page (University of Missouri)

<http://psychology.missouri.edu/clinical>

1-4 *U.S. News* rankings of clinical psychology programs

<http://grad-schools.usnews.rankingsandreviews.com/best-graduate-schools/top-health-schools/clinical-psychology-rankings>

1-5 Society of Clinical Psychology (Division 12 of the American Psychological Association)

<http://www.div12.org/>

1-6 American Psychiatric Association-Healthy Minds

<http://www.healthyminds.org/>

1-7 National Association of Social Workers

<http://www.socialworkers.org/>

# 2

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## Historical Overview of Clinical Psychology

### FOCUS QUESTIONS

1. What theories have influenced the field of clinical psychology the most?
2. Why did personality assessment and diagnosis come back into favor?
3. How did clinical psychologists come to be so involved in the treatment of adult emotional problems?
4. How might clinical research inform clinical practice and clinical assessment?
5. What factors led to a “splitting” of the American Psychological Association membership?

### CHAPTER OUTLINE

#### Historical Roots

#### Diagnosis and Assessment

- The Beginnings (1850–1899)
- The Advent of the Modern Era (1900–1919)
- Between the Wars (1920–1939)
- World War II and Beyond (1940–Present)

#### Interventions

- The Beginnings (1850–1899)
- The Advent of the Modern Era (1900–1919)
- Between the Wars (1920–1939)
- World War II and Beyond (1940–Present)

#### Research

- The Beginnings (1850–1899)
- The Advent of the Modern Era (1900–1919)

- Between the Wars (1920–1939)
- World War II and Beyond (1940–Present)

#### The Profession

- The Beginnings (1850–1899)
- The Advent of the Modern Era (1900–1919)
- BOX 2-1: *Focus on Professional Issues*: Lightner Witmer: The Founder of Clinical Psychology
- Between the Wars (1920–1939)
- World War II and Beyond (1940–1969)
- The Growth of a Profession (1970–Present)
- The 1988 Schism

#### CHAPTER SUMMARY

#### KEY TERMS

#### WEB SITES OF INTEREST

**R**eflection on the roots of clinical psychology can promote a better understanding of the field. This chapter provides a view of both the historical sweep of clinical psychology and some of the current issues that confront the field.

## HISTORICAL ROOTS

Establishing a certain time period or designating a particular person as the beginning of clinical psychology can be arbitrary if not downright misleading. One can certainly go back to Greek philosophers such as Thales, Hippocrates, or Aristotle who, long ago, were speculating about human beings and the nature of thought, sensation, and pathology (Shaffer & Lazarus, 1952). Because these philosophers are cited as antecedents of nearly every profession, movement, or system of thought in Western society, their citation here does little, perhaps, except to affirm the honorable beginnings of clinical psychology.

For the years prior to 1890, there is really very little in the history of clinical psychology to separate it from the history of abnormal psychology or, as Zilboorg and Henry (1941) termed it, “medical psychology.” Reisman (1976) finds it more useful to search for the roots of modern clinical psychology in the reform movements of the 19th century, which ultimately resulted in improved care for the mentally ill. Such improvements, and the humanitarian values of those who encouraged them, fostered the faint beginnings of the mental health professions as we know them today (Hothersall, 1984). One of the major figures in this movement was Philippe Pinel, a French physician. Shocked by the senseless brutality that was the custom in 19th-century “mental hospitals,” he managed to get himself appointed head of the asylum at Bicêtre and, later, Salpêtrière. Through kindness and humanity, he accomplished much in a very difficult field. Whether Pinel’s accomplishments should be regarded as personal achievements or as logical developments growing out of the philosophy of Rousseau and the idealism of the French Revolution is unclear. In any event,

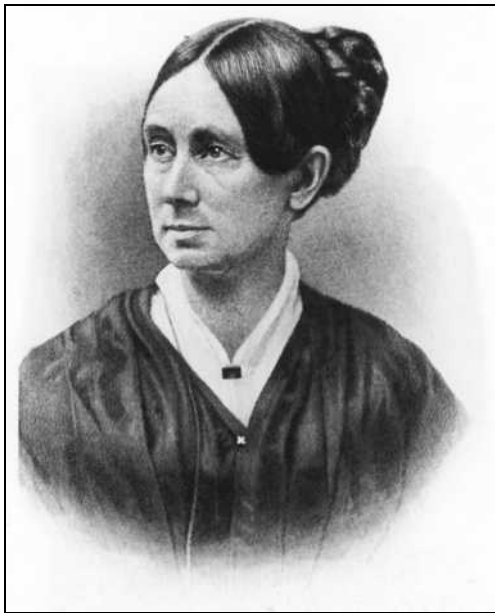
his work was a milestone in the development of psychiatry, the mental health approach, and ultimately, of clinical psychology.

At about the same time, an Englishman, William Tuke, was devoting himself to the establishment of what might be called a model hospital for the humane treatment of the sick and troubled. In America, Eli Todd was laboring long and successfully to develop a retreat in Hartford for the mentally ill. Like his European counterparts, Todd emphasized the role of civilized care, respect, and morality. Through his efforts, it became less fashionable to regard mental patients as incurable. The search for psychological antecedents to mental illness and an emphasis on treatment had begun to replace the routine harshness of custody.

Another American who had a profound effect on the mental health movement was Dorothea Dix (Figure 2-1). She campaigned for better facilities for the mentally ill. With determination and single-mindedness, Dix pushed, prodded, and cajoled until government officials responded. Using the force of logic, facts, public sentiment, and good old-fashioned lobbying, she wrought her will. In 1848, New Jersey responded by building a hospital for the “insane”—the first in a procession of more than 30 states to do so.

Out of the efforts of such people, the groundwork was laid for a field of clinical psychology. However, it would be a mistake to evaluate these contributions apart from the social forces and ideas of the time. In the 19th century, philosophers and writers were proclaiming the dignity and equality of all. Governments were beginning to respond. Even science, which was just coming into its own, contributed to the movement.

An atmosphere of “knowledge through experimentation” began to prevail. A feeling that people can predict, understand, and perhaps even control the human condition began to replace older wisdom. This ferment in science, literature, politics, government, and reform combined to produce the first clear and unmistakable signs of new professions in what would come to be referred to as “mental health.”



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**FIGURE 2-1** Dorothea Dix traveled from state to state for 40 years campaigning for more humane treatment and better facilities for the insane and the mentally retarded. During the Civil War, she was chief of hospital nurses for the Union forces.

These short sketches represent some of the roots of clinical psychology. In the following pages, we trace its development in the specific areas of diagnosis and assessment, intervention, research, and professional matters.

## DIAGNOSIS AND ASSESSMENT

### The Beginnings (1850–1899)

For many, the essence of clinical psychology has always been its emphasis on assessing differences, rather than commonalities, among people. Much of that emphasis can be traced to Francis Galton, an Englishman. Galton devoted a great deal of effort to the application of quantitative methods to understanding differences among people. Pursuing his interests in sensory acuity, motor skills, and

reaction time, he established an anthropometric laboratory in 1882.

This tradition was furthered by the work of James McKeen Cattell and Lightner Witmer, both Americans. Despite the disapproval of their mentor, Wilhelm Wundt, Cattell turned his attention to reaction time differences among people while Witmer became interested in variation in psychological skills among children.

Cattell believed, as did Galton, that the study of reaction time differences was a way of approaching the study of intelligence. In fact, Cattell coined the term *mental tests* to describe his measures (Thorndike, 1997). Through the use of a battery of 10 tests, Cattell hoped to discover the constancy of mental processes, even predicting that such tests could be used in the selection and training of people as well as in the detection of disease. In this early work, we can see the first halting steps of the testing movement.

Witmer began the current model of treatment in clinical psychology by opening the first psychological clinic in 1896 and starting the first psychological journal, called *The Psychological Clinic*. Through his groundbreaking work identifying and treating children who experienced educational difficulties (due to cognitive deficits and/or psychological symptoms), the field of clinical psychology arose as a profession dedicated towards scientific examination and treatment of individuals who were unable to function adaptively in their society. Interestingly, an initial major emphasis in clinical psychology assessment and treatment involved a focus on youth. This emphasis continued until the end of the Second World War.

A related trend of the same general period is illustrated by the diagnostic work of Emil Kraepelin in 1913. Few psychiatrists of the time could equal his professional stature. When Kraepelin divided mental illness into those types determined by exogenous factors (curable) and those caused by endogenous factors (incurable), he initiated a romance with classification schemes that persists even today. His descriptions and classifications of patients were heuristic and have served to stimulate an enormous amount of discussion about psychopathology.

## The Advent of the Modern Era (1900–1919)

One of the major developments in this era was the rise of mental measurement or diagnostic psychological testing. The beginning may lie with Galton or Cattell, but the decisive impetus came from the work of Alfred Binet.

Binet was convinced that the key to the study of individual differences was the notion of norms and deviations from those norms. Following Binet's submission of a proposal to the minister of public instruction in Paris in 1904, a commission approached Binet and his collaborator Theodore Simon about developing a means of ensuring that children with cognitive limitations were properly educated (Thorndike, 1997). To distinguish objectively among various degrees of limitations, the two men developed the 1908 Binet-Simon Scale. It is hard to overestimate the profound influence that this scale has exerted on the *measurement of intelligence*. Henry Goddard later introduced the Binet tests to America, and Lewis Terman produced an American revision in 1916.

Progress was also being made in the area of *personality testing*. Carl Jung began using word-association methods around 1905 to attempt to uncover unconscious material in patients. In 1910, the Kent-Rosanoff Free Association Test was published. Even though Galton had been experimenting with such techniques as early as 1879, these free-association tests marked a significant advance in diagnostic testing.

In 1904, Charles Spearman offered the concept of a general intelligence that he termed *g*. Edward Thorndike countered with a conceptualization that emphasized the importance of separate abilities. Whatever the truth, the great debate regarding the nature of intelligence was on—a debate that still rages today.

When the United States entered World War I in 1917, the need arose to screen and classify the hordes of military recruits being pressed into service. The application of psychological theories to the practices of the U.S. military started a gradual emphasis in clinical psychology, temporarily away from the study and treatment of children and on to adults.

After WWI, a committee of five members from the American Psychological Association (APA) was appointed by the Medical Department of the Army. Its chairman was Robert Yerkes. The committee was charged with the task of creating a system for classifying men according to their ability levels. It designed the Army Alpha test in 1917. This verbal scale was quickly followed by a nonverbal version, the Army Beta test. In a similar vein, Robert Woodworth developed his Psychoneurotic Inventory in 1917. This was perhaps the first questionnaire designed to assess abnormal behavior. With the advent of such rough screening instruments as Woodworth's Personal Data Sheet and the Army Alpha and Beta, the group testing movement was on its way.

## Between the Wars (1920–1939)

Between the two world wars, there was substantial progress in diagnostic psychological testing. Pintner and Paterson introduced their nonverbal intelligence scale. In 1930, the Arthur Point Scale appeared, and in 1934, it was followed by the Cornell-Coxe test. In 1926, the Goodenough Draw-a-Man technique for measuring intelligence was published. The psychologist now had individual and group tests as well as verbal and nonverbal tests, and clinicians were using terms like "intelligence quotients."

Aptitude testing, epitomized by the Seashore tests of musical ability, was now in use. Interest tests had also made their appearance by this time. In 1927, the Strong Vocational Interest Blank came upon the scene, followed later by the Kuder Preference Record.

The continuing debate on theoretical issues in intelligence was further sparked in 1927 by Louis Thurstone's contribution based on factor analysis. Spearman, Thorndike, and Thurstone had all now entered the intelligence arena, and each made important contributions. In 1928, Gesell's developmental scales were published, and in 1936, Doll's Vineland Social Maturity Scale appeared. Doll's scale approached behavior not strictly in terms of intelligence, but in terms of an individual's social maturity or competence.

A major development in the intelligence testing movement occurred in 1939, when David Wechsler published the Wechsler-Bellevue test. Until then, there had been no satisfactory individual measure of adult intelligence. Subsequent revisions of the Wechsler-Bellevue have served as the premier individual tests for adult intelligence. Tests of intelligence, interests, and abilities were not the only testing developments in these years. The field of personality testing was also making great strides. Woodworth's Personal Data Sheet was followed in 1921 by the Pressey X-0 Test for emotions and in 1923 by the Downey Will-Temperament Test. The Allport-Vernon Study of Values came along in 1931.

However, the big news was projective testing. Although some beginning progress had already been made through the word-association research of Galton, Jung, and Kent and Rosanoff, the watershed event for projective testing occurred in 1921, when Hermann Rorschach, a Swiss psychiatrist, published *Psychodiagnostik*. In this book, Rorschach described his use of inkblots to diagnose psychiatric patients. Rorschach's work proposed that when people respond to an ambiguous test stimulus, they will reveal something of their responses to real-life experiences.

It was not until 1937, when S. J. Beck and Bruno Klopfer published their separate manuals and scoring procedures, that the Rorschach method really caught on. Then, in 1939, L. K. Frank coined the term *projective techniques*. From that point on, a veritable flood of research publications, books, courses, and variations of projective techniques poured forth.

Another aspect of the projective movement is represented by the 1935 publication by Christiana Morgan and Henry Murray of the Thematic Apperception Test (TAT). This test requires the person to look at ambiguous pictures and then make up a story to describe the activities, thoughts, and feelings of the people in those pictures. Then, in 1938, Lauretta Bender published her Bender-Gestalt test, which has also been used as a projective measure of personality.

## World War II and Beyond (1940–Present)

Clinical psychology's success with intelligence tests was responsible for its subsequent movement into the area of personality assessment. As clinicians moved beyond the settings of the public schools and the institutions for those with cognitive limitations and into penal institutions, mental hospitals, and clinics, referring physicians and psychiatrists gradually began to ask more complex questions. Questions such as "What is this patient's ability level?" began to evolve into more complicated questions that dealt with differential diagnosis. For example, "Is this patient's level of functioning a product of constitutional intellectual limitations, or is a 'disease process' such as schizophrenia eroding intellectual performance?" Because answering such questions involved more than simply identifying an IQ level, new methods of examining the patient's performance on intelligence tests were developed. In many instances, the psychologist began to look at patterns of performance rather than just an overall score.

In 1943, the Minnesota Multiphasic Personality Inventory (MMPI) appeared (Hathaway, 1943). The MMPI was an objective self-report test whose major function, initially, seemed to be attaching psychiatric labels to patients. Although other tests such as the Rorschach were often put to similar uses, the MMPI was unique in that no theoretical interpretation of scores or responses was necessary.

The 1940s and 1950s witnessed a growing sophistication in testing technology. Triggered by the development of the MMPI, debates over the relative effectiveness of clinical and statistical prediction arose (Meehl, 1954; Sarbin, 1943). Which was superior—the clinician's subjective impressions or hard, objective approaches based on crisp data such as test scores that were readily quantifiable? There were also sophisticated discussions of methods of validating tests and guarding against misleading test-taking attitudes on the part of test respondents (Cronbach, 1946; Cronbach & Meehl, 1955).

Assessment had come a long way since the crude instruments of the World War I era. Indeed, during this period, enough was known about constructing tests that the APA could promulgate standards for their proper development (American Psychological Association, 1954).

In the aftermath of World War II, the importance of intelligence testing continued. In 1949, Wechsler published another individual test. This one, the Wechsler Intelligence Scale for Children, was to become a serious alternative to the Stanford-Binet. Later, in 1955, the Wechsler Adult Intelligence Scale (a revision of the Wechsler-Bellevue Scale) appeared. These tests marked the beginning of a whole series of subsequent revisions of child and adult forms of the Wechsler scales. We discuss contemporary theories of intelligence as well as popular intelligence tests in Chapter 7.

The 1940s and 1950s saw an explosive growth of personality tests, especially projective tests. The Rorschach and the TAT continued in a preeminent position. Clinical psychologists were seen as experts in *psychodiagnosis*—the use and interpretation of psychological test scores as a basis for diagnostic formulation as well as treatment planning. However, a rift was growing within the profession as to whether objective or projective assessment measures were better suited to accurately describe personality and psychopathology. *Objective measures*, such as the MMPI and its revision, MMPI-2 (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989), are based on a nomothetic approach to assessment in which test scores are interpreted using empirically based rules involving the contrast between an obtained score and the average score obtained from a large representative sample. Responses from projective measures, in contrast, are often interpreted using an idiographic approach. The focus may be more on the individual, and interpretations are often guided as much by psychodynamic theory as they are by empirically supported rules. This rift between those who favor either objective or projective techniques continues to this day, as we discuss later in Chapter 8.

Surprisingly, however, the major challenger to personality testing came from outside these ranks. Beginning in the late 1950s, a movement termed *radical behaviorism* began to assert its influence. Those who adhered to this orientation held that only overt behavior can be measured and that it is neither useful nor desirable to infer the level or existence of personality traits from psychological test results; personality traits, according to the radical behaviorists, cannot be measured directly. Personality assessment came under attack, and clinical psychology programs in the 1960s took on much more of a behavioral bent. In 1968, Walter Mischel made a strong case that traits exist more in the minds of observers than in the behavior of the observed. Situations, and not some nebulous set of traits, were said to be responsible for the ways we behave. In tune with this view, the 1970s would witness the rise of *behavioral assessment*. Behaviors were understood within the context of the stimuli or situations that either preceded or followed them. Chapter 9 in this textbook is devoted to this influential approach to assessment.

Did this focus on behavior and its situational determinants in turn mark the death of personality assessment? Actually, it did not. A resurgence of interest in the 1980s and 1990s can be attributed to the presentation and coverage of a variety of *personality disorders* in the American diagnostic system for mental disorders, the introduction of a number of more contemporary and psychometrically sound personality inventories (e.g., the Millon Clinical Multiaxial Inventory and the NEO-Personality Inventory), and several empirical demonstrations that personality traits do appear to be fairly stable across time and across situations (e.g., Costa & McCrae, 1988; Epstein & O'Brien, 1985).

As we mentioned, the official American diagnostic classification system has influenced the clinical assessment field. The first edition of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM-I)* appeared in 1952. Given the substantial postwar needs that funded the work involved in creating the first DSM, its focus remains predominantly on

1882

Galton establishes anthropometric laboratory.

1890

Cattell coins the term *mental test*.

1904

Binet begins work on his intelligence scale.

1905

Jung begins using the word-association method.

1913

Kraepelin publishes work on diagnosis.

1914

Terman's American version of Binet scale.

1921

Rorschach's *Psychodiagnostics* is published.

1935

TAT is published.

1937

Term *projective techniques* is coined.

1939

Wechsler-Bellevue Intelligence Scale is published.

1943

MMPI is published.

1949

Halstead introduces neuropsychological test battery.

1952

*DSM-I* is published.

1968

*DSM-II* is published.

1970s

Rise of behavioral assessment.

1980

*DSM-III* is published.

1980s

Interest rises in personality assessment and computer-based test interpretations.

1987

*DSM-III-R* is published.

1990s

Managed health care impacts psychological assessment.

1994

*DSM-IV* is published.

2013

*DSM-V* scheduled to be published.

1900      1920      1940      1960      1980      2000

Timeline: Significant Events in Assessment

psychopathology in adulthood, including postwar symptoms (years later referred to as posttraumatic stress disorder, or PTSD) and acute psychosis. Revisions of this manual have appeared periodically, the most recent one in 2000 (*DSM-IV-TR*). *DSM-V* is scheduled to be published in 2013. In addition to this diagnostic system's influence on the content of self-report inventories (new inventories were designed to measure the *DSM* mental disorders), it spurred the growth of another line of assessment tools—the *structured diagnostic interviews*. These interviews consist of a standard list of questions that are keyed to the diagnostic criteria for various disorders from the *DSM*. Clinicians (or researchers) who need to formulate a *DSM* diagnosis for a patient (or research participant) can use these interviews; it is no longer necessary to administer a psychological test and then infer a patient's diagnostic status from his or her test scores.

Interest in *neuropsychological assessment* has grown tremendously as well. Neuropsychological assessment is used to evaluate relative strengths and deficits of patients based on empirically established brain–behavior (test responses) relationships. Several tests and measures were introduced to detect impaired neurological functioning. In 1947, Halstead introduced an entire test battery to aid in the diagnosis of neuropsychological problems. Contemporary neuropsychological assessment typically involves one of two approaches. Some use a uniform group, or battery, of tests for all patients. Others use a small subset of tests initially and then, based on the results of these initial tests, use additional tests to resolve and answer the referral questions. Some of the more popular neuropsychological test batteries include the Halstead-Reitan (Reitan, 1969) and the Luria-Nebraska Neuropsychological Battery (Golden, Purisch, & Hammeke, 1985). The field of neuropsychology is becoming increasingly sophisticated. Many neuropsychological tests are now computer administered, more attention is being directed to identifying neuropsychological correlates of mental disorder, brain imaging

resources are now available to neuropsychologists to both validate and supplement information garnered from neuropsychological tests, and test results are integral components of rehabilitation planning.

Finally, the rise and popularity of managed health care in the 1990s had an impact on psychological assessment. Although we will discuss this trend in more detail in Chapter 3, it is worth highlighting here. Managed health care (including mental or behavioral health) developed in response to the rapidly increasing cost of health care. Third-party insurers (e.g., large companies) were attracted to managed health care because it controlled and reduced costs. Managed health care requires those who provide services to be more accountable and more efficient in service delivery. Clinical psychologists who are providers for various managed health care plans have become increasingly interested in using reliable and valid psychological measures or tests that (a) aid in treatment planning by identifying and accurately assessing problematic symptoms, (b) are sensitive to any changes or improvements in client functioning as a result of treatment, and (c) are relatively brief.

A number of these assessment highlights are summarized in the timeline Significant Events in Assessment.

## INTERVENTIONS

### The Beginnings (1850–1899)

Emil Kraepelin's focus was on the classification of psychoses. However, others were investigating new treatments for “neurotic” patients, such as suggestion and hypnosis. Specifically, Jean Charcot gained a widespread reputation for his investigations of patients with hysteria—patients with “physical symptoms” (e.g., blindness, paralysis) that did not seem to have an identifiable physical cause (Figure 2-2). He was a master of the dramatic



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**FIGURE 2-2** Jean Charcot demonstrated with a patient called “Wit.” Although trained as a neurologist, Charcot employed a psychosocial approach to explaining hysteria.

clinical demonstration with hypnotized patients. As a matter of fact, he believed that only patients with hysteria could be hypnotized. However, he was probably investigating hypnosis rather than hysteria. Others, such as Hippolyte Bernheim and Pierre Janet, were critical of Charcot’s work. Bernheim felt that the symptoms of hysteria reflected nothing more than suggestibility. Janet, on the other hand, came to regard hysteria as a manifestation of a “split personality” and also as a kind of hereditary degeneration.

At about the same time, the momentous collaboration of Josef Breuer and Sigmund Freud began. In the early 1880s, Breuer was treating a young patient named “Anna O,” who was diagnosed with hysteria. Anna O’s treatment presented many challenges but also led to theoretical breakthroughs that would influence psychotherapy practice for years to come. Breuer discussed the case extensively with Freud, who became so interested

that he went to Paris to learn all that Charcot could teach him about hysteria. To considerably shorten a long story, in 1895, Breuer and Freud published *Studies on Hysteria*. For a variety of reasons, the relationship between the two men subsequently became quite strained. But their collaboration served as the launching pad for *psychoanalysis*, the single most influential theoretical and treatment development in the history of psychiatry and clinical psychology.

### The Advent of the Modern Era (1900–1919)

Reformers such as Clifford Beers have been important in the history of clinical psychology. Beers was hospitalized in the wake of several severe depressions. While hospitalized, he passed into a manic phase and began recording his experiences in the hospital. When he was free of his



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**FIGURE 2-3** Clifford Beers wrote *A Mind That Found Itself*, a chronicle of his experiences while hospitalized as a mental patient. His efforts were instrumental in launching the mental hygiene movement.

manic-depressive symptoms, he was released. However, this release did not weaken his resolve to write a book exposing the abuses in the hospital care of the mentally ill. He very much wanted to generate a public movement to rectify those abuses. In 1908, *A Mind That Found Itself* was published, and the mental hygiene movement in America was launched (Figure 2-3).

In 1900, shortly before Beers entered the hospital, Freud published *The Interpretation of Dreams*. With this event, the psychoanalytic movement was in full swing. Concepts such as the unconscious, the Oedipus complex, and the ego became part of the mainstream of psychological language, and sexuality became a focus within the psychological realm. Freud's ideas were by no means an overnight success. Recognition was slow in coming, but

converts did begin to beat a path to his door. Alfred Adler, Carl Jung, and others began to take notice. Freud published other books, and the list of converts grew still longer, including A. A. Brill, Paul Federn, Otto Rank, Ernest Jones, Wilhelm Stekel, Sandor Ferenczi, and others.

Earlier in this chapter, we noted Lightner Witmer's establishment of the first psychological clinic. Also important was William Healy's establishment of a child guidance clinic in Chicago in 1909. This clinic used a team approach involving psychiatrists, social workers, and psychologists. They directed their efforts toward what would now be labeled juvenile offenders rather than toward the learning problems of children that had earlier attracted Witmer's attention. Healy's approach was greatly influenced by Freudian concepts and methods. Such an approach ultimately had the effect of shifting clinical psychology's work with children in the dynamic direction of Freud rather than into an educational framework.

In 1905, Joseph Pratt, an internist, and Elwood Worcester, a psychologist, began to use a method of supportive discussion among hospitalized mental patients. This was the forerunner of a variety of group therapy methods that gained prominence in the 1920s and 1930s.

### Between the Wars (1920–1939)

The psychoanalysis of the early 20th century was largely devoted to the treatment of adults and was practiced almost exclusively by analysts whose basic training was in medicine. Freud, however, argued that psychoanalysts did not need medical training. Despite Freud's protestations (Freud, 1926/1959), the medical profession claimed exclusive rights to psychoanalytic therapy and in so doing made the subsequent entry of psychologists into the therapy enterprise quite difficult.

The eventual entry of psychologists into therapeutic activities was a natural outgrowth of their early work with children in various *guidance clinics*. At first, that work was largely confined to the evaluation of children's intellectual abilities, and this, of course, involved consultations with parents and

teachers. However, it is hard to separate intellectual functioning and school success from the larger psychological aspects of behavior. As a result, it was only natural that psychologists should begin to offer advice and make recommendations to parents and teachers about managing children's behavior.

As psychologists looked for psychological principles to aid in their efforts, the work of both Freud and Alfred Adler came to their attention. In particular, they were impressed by Adler's work, which had a more commonsense ring than Freud's. Moreover, Freud's emphasis seemed to lie with adults and with the sexual antecedents of their problems, whereas Adler's de-emphasis of the role of sexuality, and his concomitant emphasis on the structure of family relationships, seemed much more congenial to American mental health professionals in the field. By the early 1930s, Adler's (1930) ideas were firmly ensconced in those American clinics that dealt with children's problems.

A second trend that influenced early work with children—*play therapy*—was more directly derived from traditional Freudian principles. Play therapy is essentially a technique that relies on the curative powers of the release of anxiety or hostility through expressive play. In 1928, Anna Freud, the distinguished daughter of Sigmund Freud, described a method of play therapy derived from psychoanalytic principles.

Group therapy also began to attract attention. By the early 1930s, the works of both J. L. Moreno and S. R. Slavson were having an impact. Another precursor of things to come was the technique of "passive therapy" described by Frederick Allen (1934). In this approach, one can see some of the first stirrings of what would become client-centered therapy. But there were other straws in the wind too. In 1920, John Watson described the famous case of Albert and the white rat, in which a young boy was conditioned to develop a neurotic-like fear of white, furry objects (Watson & Rayner, 1920). A few years later, Mary Cover Jones (1924) showed how such fears could be removed through conditioning. Still later, J. Levy (1938) described "relationship therapy." These latter three events marked the beginnings of *behavior therapy*, a very popular and influential group of therapeutic methods used today.

## World War II and Beyond (1940–Present)

World War II not only required enormous numbers of men but also contributed to the emotional difficulties that many of them developed. The military physicians and psychiatrists were too few in number to cope with the epidemic of these problems. As a result, psychologists began to fill the mental health breach. At first, the role of psychologists was ancillary and often mainly involved group psychotherapy. But increasingly, they began to provide individual psychotherapy, performing well in both the short-term goal of returning men to combat and in the longer-term goal of rehabilitation. Psychologists' successful performance of these activities, along with their already demonstrated research and testing skills, produced a gradually increasing acceptance of psychologists as mental health professionals.

This wartime experience whetted the appetites of psychologists for greater responsibility in the mental health field. It is uncertain whether this increasing focus on psychotherapy stemmed from a desire to gain greater professional responsibility, an awareness that they possessed the skills to perform mental health tasks, an embryonic disenchantment with the ultimate utility of diagnostic work, or some combination of the three. However, the stage had been set.

An additional contributing factor to this chain of events was an outgrowth of the turmoil in Europe in the 1930s. The pressures of Nazi tyranny forced many European psychiatrists and psychologists to leave their homelands, and many of them ultimately settled in the United States. Through professional meetings, lectures, and other gatherings, the ideas of the Freudian movement generated excitement and also gained increasing credence in psychology. Partly as a result, clinical psychologists began to temporarily reduce their emphasis on the assessment of intelligence, ability testing, and the measurement of cognitive dysfunction and became more interested in personality development and its description.

As intelligence testing receded in importance, psychotherapy and personality theory began to move into the foreground. A large part of the activity in these

areas was psychoanalytic in character. In 1946, Alexander and French published an influential book on briefer psychoanalytic interventions. However, in 1950, John Dollard and Neal Miller published *Personality and Psychotherapy*, which was a seminal attempt to translate the psychoanalysis of Freud into the language of learning theory. Indeed, psychoanalysis was such a dominant force of the time that when Carl Rogers published *Client-Centered Therapy* in 1951, his was the first major alternative to psychoanalytic therapy up to that point. Rogers' book was an enormously significant development that had extensive repercussions in the world of psychotherapy and research.

Newer forms of therapy were beginning to proliferate. For example, Perls introduced Gestalt therapy (Perls, Hefferline, & Goodman, 1951), and Frankl (1953) talked about logotherapy and its relationship to existential theory. In 1958, Ackerman described family therapy, and in 1962 Ellis explained his rational-emotive therapy (RET), an important forerunner of cognitive-behavioral therapy. About the same time, along came Berne's (1961) transactional analysis, or TA. Therapy had surely become a growth industry. There was no better indication of the importance of psychotherapy in the professional lives of clinicians than the effect of Eysenck's (1952) critique of therapy. His scathing report on the ineffectiveness of psychotherapy alarmed many and inspired others to conduct research designed to prove him wrong.

However, psychotherapy was not the whole story. The behaviorists were beginning to develop what they regarded as a more "hardheaded" brand of therapy. Andrew Salter (1949) wrote *Conditioned Reflex Therapy*, a pioneering work in what later evolved into desensitization methods. In 1953, B. F. Skinner furthered the behavioral therapy cause when he outlined the application of operant principles to therapeutic and social interventions. Then in 1958, Joseph Wolpe introduced systematic desensitization, a technique based on conditioning principles; the behavior therapy movement was now more firmly entrenched than ever.

However, many recognized that treatment focusing on behavior to the exclusion of patients' cognitions and ways of thinking about themselves and the world around them was limited. Around the time that Ellis

was developing RET, Aaron Beck began developing what would ultimately become one of the most effective psychological treatments for psychological problems—cognitive therapy. Beck (1967) outlined his approach in the book *Depression: Causes and Treatment*. Although the initial focus for cognitive therapy was depression, it is now used effectively to treat a range of conditions, including anxiety disorders, substance use disorders, and personality disorders, both in adults and youth.

Whereas psychoanalysis and psychodynamic psychotherapy were previously the dominant forces, behavior therapy was now gaining in popularity among clinical psychologists. Its appeal stemmed from its focus on observable (and measurable) behavior, the shorter length of treatment required, and the emphasis on the empirical evaluation of treatment outcome. Behavior therapy helped stimulate the growth of psychotherapy research. Previously, only a select number of academics conducted studies of treatment efficacy. We now see many researchers and practitioners who use empirical methods to investigate the effectiveness of various treatment techniques.

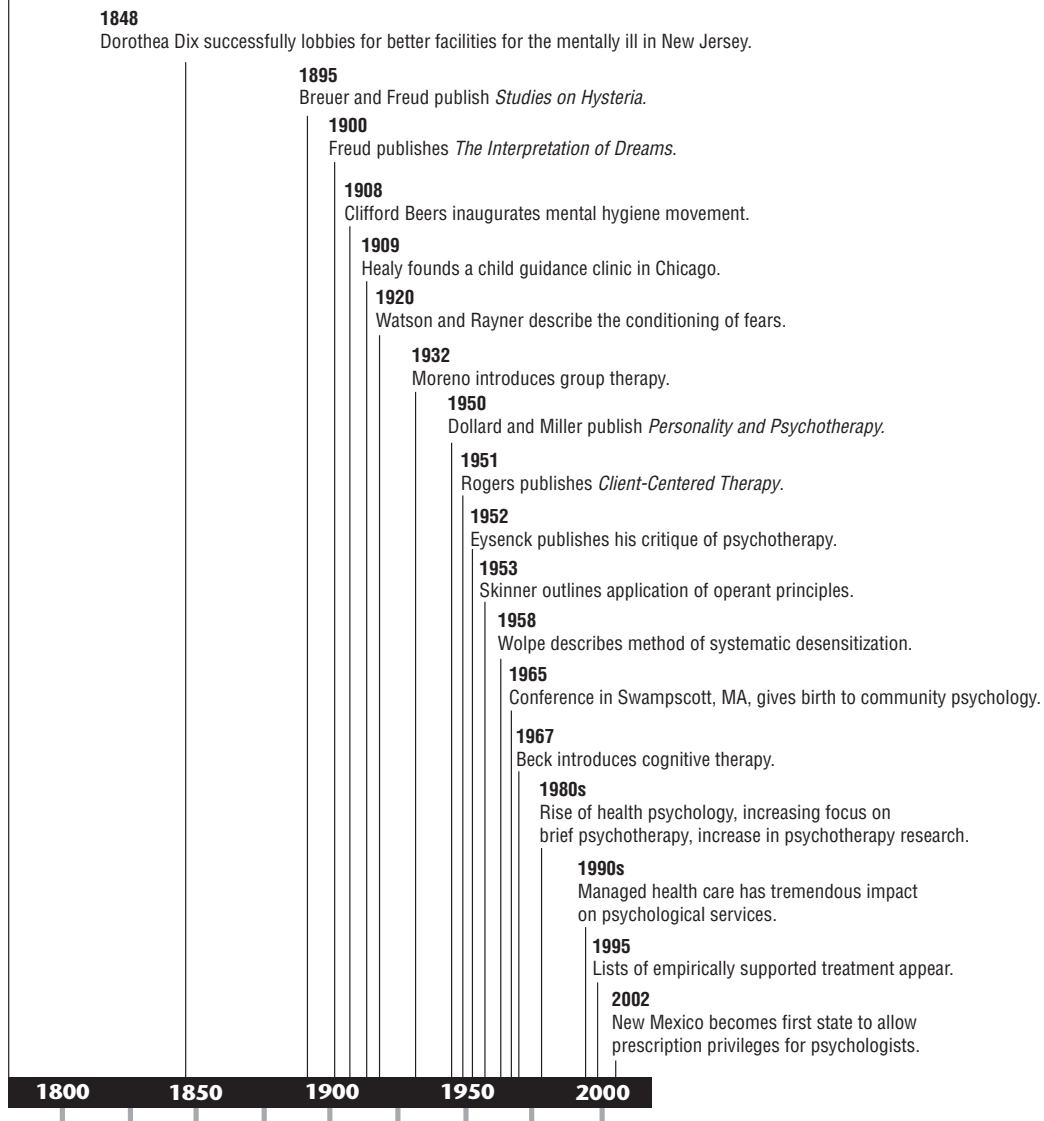


Sam Falk/Photo Researchers, Inc.

B. F. Skinner applied operant conditioning principles to both behavioral treatment and environmental intervention.

1793

Pinel introduces humane care in French asylums.



Timeline: Significant Events in Intervention

Several other trends in intervention are noteworthy. First, the number of treatments employed by clinical psychologists has grown tremendously over the years. These range from cognitive-behavioral approaches that have empirical support to “trendier”

approaches like “inner-child therapy” that have no empirical support. Some have estimated the number of therapies available at well over 400. Unfortunately, many of these are “therapies-of-the-month,” and few have empirical support. Perhaps because of this startling

array of therapeutic orientations and treatment choices, many clinical psychologists refer to themselves as *eclectics*. These clinicians employ the techniques of more than one theoretical orientation, basing their selection on the particular problems presented by the individual client or patient. At the same time, many clinical psychologists are interested in integrating various approaches into one therapeutic modality, as well as identifying common factors that underlie different approaches to treatment (J. D. Frank, 1971).

Second, *brief or time-effective therapy* (Budman & Gurman, 1988) is becoming a preferred mode of psychotherapeutic intervention, for several reasons. Many individuals cannot afford years of psychotherapy. Briefer forms of therapy have been shown to be equally as effective, if not more effective, than traditional psychotherapy. Further, managed care companies that control reimbursement for mental health treatment are often unwilling to reimburse clinicians for more than a handful of sessions. Along with the development of brief forms of therapy, “*manualized*” forms of treatment have been introduced into clinical work (e.g., Beck, Rush, Shaw, & Emery, 1979; Strupp & Binder, 1984). These manuals are useful for clinicians because they outline treatment goals for each session as well as techniques to be used, and typically, the treatment “package” can be implemented and completed in 10 to 15 sessions or less. Further, they assist research aimed at determining the efficacy or effectiveness of psychological interventions. Currently, treatment manuals are available for a wide range of psychological problems, including depression, anxiety disorders, and personality disorders. Many of these treatments will be highlighted throughout this book. Manuals offered a way to communicate a standardized set of techniques that have been demonstrated to reduce symptoms when studied in carefully controlled research studies. Over time, considerable emphasis has been placed on the flexible use of techniques described within these manuals, recognizing that many cases are considerably more complex than those included in research studies.

Third, by the 1950s, some clinicians had begun to be disenchanted with therapy methods that dealt with one patient at a time (or even 10 patients at a time, as in group therapy). They sought a more “preventive” approach. Their search culminated in the rise of

*community psychology* in the 1960s and *health psychology* in the 1980s. A growing number of clinical psychologists provide services related to the prevention of health problems, mental health problems, and injury. The area of prevention is often associated with health psychology and will increasingly be in the spotlight in years to come as psychology is called upon by primary care physicians and managed care companies.

Finally, starting in 1995, lists of “empirically supported treatments” for adults and youth have been widely disseminated among clinical psychologists (e.g., Task Force on Promotion and Dissemination of Psychological Procedures, 1995). The original list and subsequently revised lists have identified those interventions for commonly encountered clinical problems that have garnered empirical support through multiple outcome studies. We will discuss many of these interventions in later chapters.

Recently, some psychologists began to place pressure on state legislatures to allow psychologists with specialized training the authority to write prescriptions for psychotropic medication. First, in 1995, the American Psychological Association officially endorsed the pursuit of prescription privileges for psychologists. Then in 2002, New Mexico became the first state to enact a law authorizing properly trained psychologists to prescribe psychotropic medications to patients or clients. Louisiana passed a similar law in 2004, and although the Oregon legislature also passed a similar law in 2010, it was vetoed by the state’s governor. It is unclear how this movement may continue, and how psychologists’ prescription authority may change the field.

A summary of the major historical events relevant to interventions is presented in the timeline Significant Events in Intervention.

## RESEARCH

### The Beginnings (1850–1899)

The academic research tradition in psychology owes much to the work of two men. Wilhelm Wundt, a German, is usually credited with establishing the first formal psychological laboratory, in Leipzig in 1879. In that same decade, an American, William James,

also established a laboratory, and in 1890, he published his classic text *Principles of Psychology*. The works of both these men exemplify the scholarly tradition. Their influence is also clearly discernible in the scientist-practitioner model that has served the field of clinical psychology for so many years.

### The Advent of the Modern Era (1900–1919)

During this period, Ivan Pavlov was lecturing on the conditioned reflex. His work on conditioning left an important legacy for clinical psychology. The notion of classical conditioning has become a central part of theory and research while also playing a significant role in a variety of therapeutic methods. Another important development was research on intelligence testing. In 1905, Binet and Simon offered some evidence for the validity of their new test, and in 1916, Terman's research on the Binet-Simon test appeared. This was also the era of the development of the Army Alpha and Beta tests, described earlier.

### Between the Wars (1920–1939)

Clinical research was still in its infancy. Much of the noteworthy work was in the area of test development—for example, the 1939 publication of the Wechsler-Bellevue test and all the personality testing work of the 1930s. On the academic research scene, behaviorism and Gestalt psychology were prominent. Behaviorism taught clinicians the power of conditioning in the development and treatment of behavior disorders.

Gestalt psychology emphasized the importance of understanding that patients' unique perceptions contribute to their problems.

### World War II and Beyond (1940–Present)

By the mid-1960s, diagnosis and assessment had become less important for many clinicians. However, in the 1950s, you would hardly have predicted that. The journals were full of research

studies dealing with both intelligence testing and personality assessment. Study after study dealt with various aspects of the Stanford-Binet and the Wechsler scales. Research on their validity and reliability, their use with various diagnostic groups, short forms, and implications for personality appeared in waves. The story was similar for projective tests. Literally hundreds of studies dealing with the Rorschach and TAT were published. Many of these studies also focused on issues of reliability and validity. Some observers attribute part of the subsequent decline in projective testing to the many negative validity studies that appeared during this time.

Another very important research development during these years was the emergence of studies on the process and effectiveness of psychotherapy. As noted previously, Eysenck's critique sent clinicians scrambling to shore up psychotherapy's image through solid research evidence. One of the real pioneers in therapy research was Carl Rogers (1951). His use of recordings to study the process of therapy opened windows to an activity that had long been shrouded in mystery. Rogers and Dymond (1954) reported controlled research findings on the counseling process.

Another research landmark of this era was the publication of Julian Rotter's *Social Learning and Clinical Psychology* in 1954. It presented not only a social learning theory but also a series of controlled



Albert Bandura is a major figure in social learning theory.

studies that provided an empirical foundation for the theory. Research on the theory's implications for assessment and therapy was also included. The work provided a solid foundation upon which subsequent social learning theorists could build.

The 1950s also witnessed the explicit beginnings of the more behaviorally oriented forms of intervention. B. F. Skinner, Ogden Lindsley, and Harry Solomon described a behavior therapy research project in 1953. Joseph Wolpe's research in South Africa on animal and human learning convinced him that his work was relevant to human emotional problems and led him to develop the method of *systematic desensitization* (Wolpe, 1958). This behavioral method relies neither on insight, thought to be so necessary by the psychoanalysts, nor on growth potential, considered equally necessary by the client-centered school of therapy. Arnold Lazarus and Stanley Rachman also helped facilitate this movement. Another influential figure in the behavioral research movement was Hans Eysenck, who introduced many clinicians to behavior therapy through his important book on the topic in 1960.

As noted earlier, beginning in the 1950s, the effectiveness of psychotherapy was being questioned. However, in 1977, Mary Smith and Gene Glass published a survey that supported the efficacy of therapy. This work laid the basis for a series of studies that has helped us better understand the way therapeutic methods affect patients. As noted previously, the field of *psychotherapy research* continues to grow to this day.

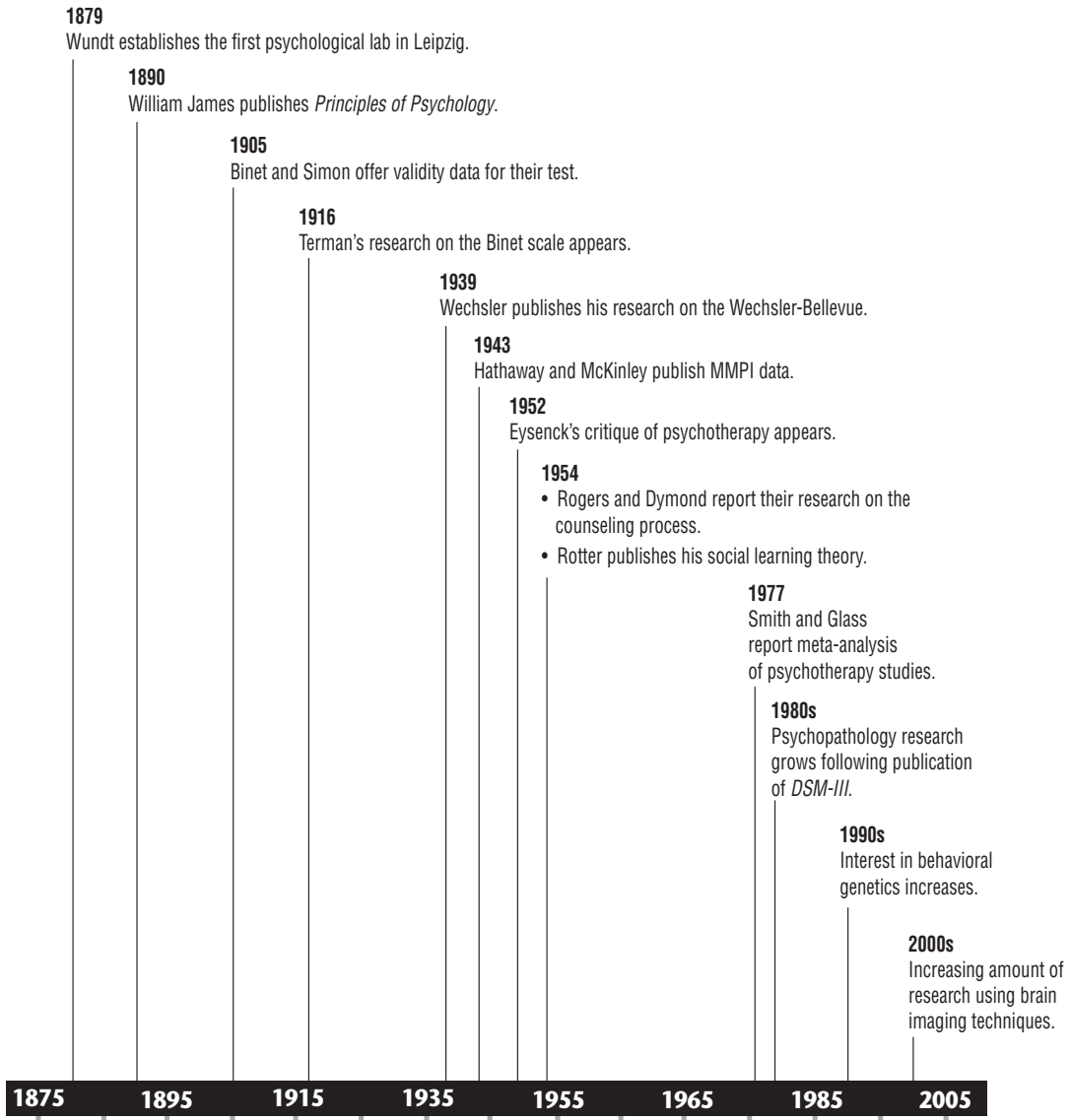
Other areas of research that have grown tremendously are diagnosis and classification as well as psychological testing and measurement. The publication of *DSM-III* (American Psychiatric Association, 1980) spurred an explosion of research aimed at evaluating the reliability, validity, and utility of specific criteria listed for the mental disorders included in this manual. Both psychiatry and psychology journals published numerous studies on the *DSM-III* criteria for syndromes such as schizophrenia, major depression, and antisocial personality disorder. In addition, more clinical psychologists began

conducting research aimed at identifying the *etiological* (causal) factors associated with the development of various mental disorders. The factors investigated ranged from genetic predispositions to traumatic childhood events such as physical or sexual abuse.

Published research on psychological inventories, interviews, and rating scales has also increased. With the proliferation of psychological instruments available to researchers and clinicians, the reliability and validity of these measures need to be evaluated empirically. Symptomatic of the growth of this research area is the "splitting" of a major clinical psychology journal, the *Journal of Consulting and Clinical Psychology (JCCP)*, into two. Now, in addition to *JCCP*, we have the journal *Psychological Assessment*, the primary outlet for research on psychological tests and measures used by clinical psychologists. It is important to note, however, that the research of clinical psychologists is published in many other high-quality journals besides these two. The following list indicates the range of journals that publish research important to the field:

*Journal of Consulting and Clinical Psychology*  
*Development and Psychopathology*  
*Psychological Assessment*  
*Clinical Psychology: Science and Practice*  
*Journal of Clinical Child and Adolescent Psychology*  
*Journal of Abnormal Psychology*  
*Journal of Abnormal Child Psychology*  
*Psychological Bulletin*  
*Behavior Therapy*  
*Psychological Science*  
*American Journal of Psychiatry*  
*Archives of General Psychiatry*  
*Professional Psychology: Research and Practice*  
*Clinical Psychology Review*

Finally, the last few decades have witnessed an increasing amount of interest among clinical psychologists in the field of behavioral genetics and in brain imaging. Behavioral genetics is a research



Timeline: Significant Events in Research

specialty in which both genetic and environmental influences on the development of behavior are evaluated. Behavioral geneticists have investigated these influences in a wide range of behaviors and individual differences, including intelligence, personality, and psychopathology. Brain imaging allows a view of both the structure and function

of the brain and is becoming an important component in research on psychopathology. Findings from this relatively newer area of research will likely influence both our theories and treatments of a variety of psychological disorders.

Because research is such an important part of all clinical psychology, we will be discussing research



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Twin research has helped inform us about the genetic influences on emotions, behavior, and personality.

methods, research on particular topics, and the historical context of research in these areas throughout this book. Many of the research highlights are mentioned in the timeline Significant Events in Research.

## THE PROFESSION

### The Beginnings (1850–1899)

Two events of great significance in the development of clinical psychology as a profession occurred just as the 19th century was winding down. The first was the founding of the American Psychological Association (APA) in 1892, with G. Stanley Hall as its first president. Although the membership of the association was still fewer than 100 by the close of the 19th century, the profession had truly begun.

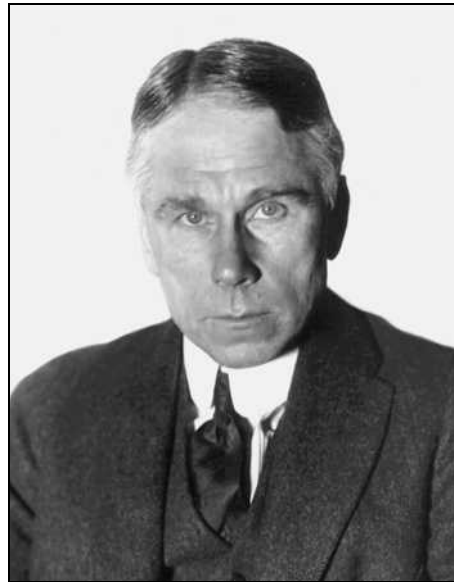
The birth of clinical psychology was not far behind. In 1896, Lightner Witmer established the first psychological clinic at the University of Pennsylvania. Many would date the real beginning of clinical psychology from this time (McReynolds, 1996) (Figure 2-4).

Witmer's clinic was devoted to the treatment of children who were experiencing learning problems or who were disruptive in the classroom.

In the first issue of *The Psychological Clinic* in 1907, Witmer wrote:

Children from the public schools of Philadelphia and adjacent cities have been brought to the laboratory by parents or teachers; these children had made themselves conspicuous because of an inability to progress in school work as rapidly as other children, or because of moral defects which rendered them difficult to manage under ordinary discipline.

When brought to the psychological clinic, such children are given a physical and mental examination; if the result of this examination shows it to be desirable, they are then sent to specialists for the eye or ear, for the nose and throat, and for nervous diseases, one or all, as each case may require. The result of this conjoint medical and psychological examination is a



Brown Brothers

**FIGURE 2-4** Lightner Witmer's development of the first psychological clinic began with the referral of a boy who showed an odd spelling problem. It ended by stimulating the establishment of a profession that was different from both education and medicine.

diagnosis of the child's mental and physical condition and the recommendation of appropriate medical and pedagogical treatment. (Witmer, 1907, p. 1)

In many ways, Witmer's influence on the field was historical rather than substantive. That is, he got the profession under way but really added little in terms of new theories or methods. It was he who named the field "clinical psychology," and he was the first to teach a specific course in clinical psychology. Further, it was Witmer who in 1907 founded the first journal in clinical psychology, *The Psychological Clinic*—a journal that he edited and contributed articles to until it ceased publication in 1935. Although the manner in which clinical psychologists do things today may not have been much influenced by Witmer, the fact that they are doing them at all is due in no small measure to his efforts and foresight (McReynolds, 1987, 1996). Box 2-1 summarizes Witmer's seminal contributions to the field.

### The Advent of the Modern Era (1900–1919)

In the first decade of the 20th century, only a very small number of psychologists could be found employed outside the universities. In 1906, Morton Prince began publishing the *Journal of Abnormal*

*Psychology*, and in 1907, Witmer began publication of *The Psychological Clinic* (see Figure 2-5). With two journals of their own, applied clinicians could now begin to form their identity. This identity was further reinforced when, in 1909, Healy established the juvenile Psychopathic Institute in Chicago. The Iowa Psychological Clinic had been started in 1908, the same year that Goddard began offering psychological internships at the Vineland Training School in New Jersey. With its own journals, clinics, and internships, the profession of clinical psychology was beginning to take shape.

By 1910, there were 222 APA members, paying annual dues of \$1. (In 2008, membership dues were \$279, not including an additional \$133 special assessment fee for licensed health care psychologists!) However, the focus of APA was on psychology as a science, not as a profession. At the same time, the public schools of the day were beginning to clamor for testing services, and universities were beginning to respond with testing courses and studies of those with cognitive limitations. Finally, in 1919, the first Section of Clinical Psychology was created within the APA. Meanwhile, an ever-increasing number of psychological clinics were being established (e.g., the organization by Healy in 1917 of the Judge Baker Foundation in Boston). However, World War I and the growth of the group testing movement did as much as anything to spur the development of the new profession.

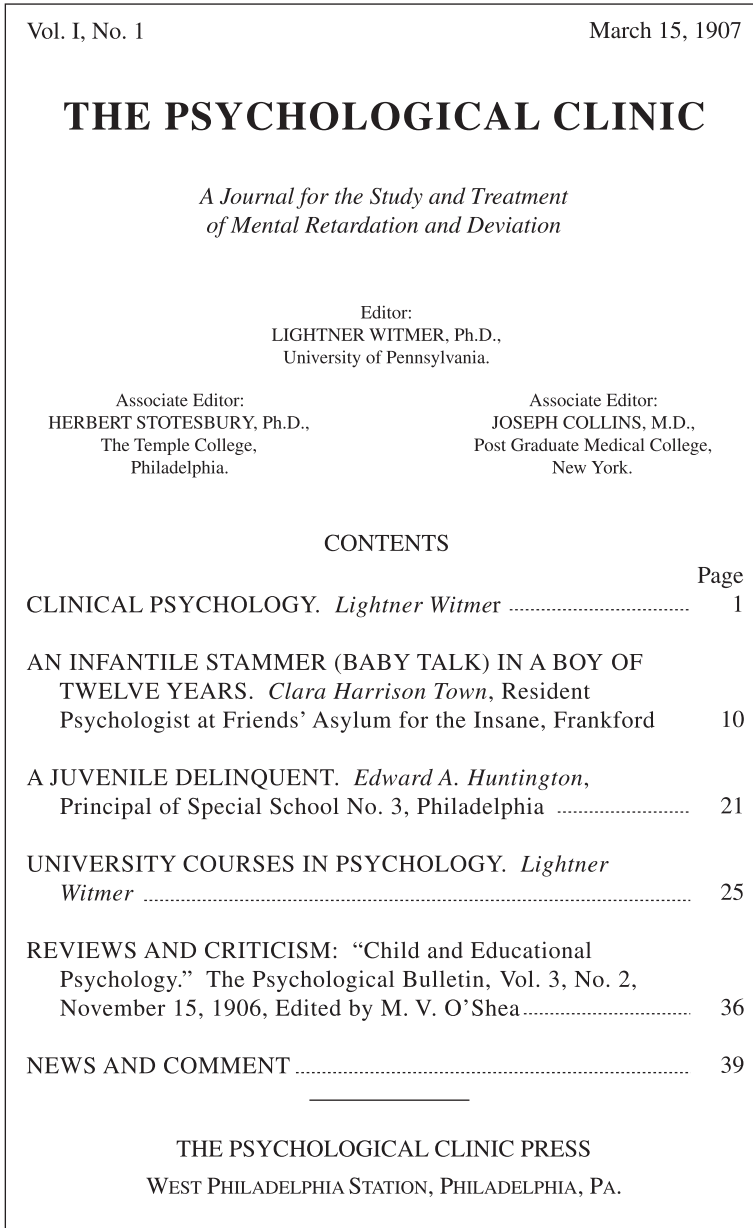
#### BOX 2-1 Focus on Professional Issues Lightner Witmer: The Founder of Clinical Psychology

Lightner Witmer (1867–1958) is credited with founding the field of clinical psychology. His contributions to the field include the following:

- In 1896, he established the first "psychological" clinic.
- In 1907, he proposed a new profession, clinical psychology.
- He served as founder and editor of the first journal in the field, *The Psychological Clinic*.

- He developed the first training program in clinical psychology (McReynolds, 1996).

In addition, Witmer's work influenced and anticipated future developments in clinical psychology, including an emphasis on children's academic problems, the use of active clinical interventions to improve individuals' lives, and collaboration with other professionals (e.g., physicians) in providing treatment (Routh, 1996).



**FIGURE 2-5** Cover of the first issue of The Psychological Clinic.

### Between the Wars (1920–1939)

The APA had long proclaimed that its mission was to further psychology as a science. However, by the close of the 1920s, many clinically oriented psychologists

were becoming uneasy and increasingly sought to gain recognition of their unique roles and interests from the APA. In 1931, the Clinical Section of the APA appointed a committee on training standards,

and in 1935, the APA Committee on Standards of Training defined clinical psychology as “that art and technology which deals with the adjustment problems of human beings” (Reisman, 1976, p. 250). It is doubtful whether many clinicians even today would reject this definition.

In 1936, Louttit published the first clinical psychology text, and in 1937, the *Journal of Consulting Psychology* was founded. Still published today as the *Journal of Consulting and Clinical Psychology (JCCP)*, it serves as a major publication outlet for the research of many clinicians. Such events signaled real growth for clinical psychology as a profession. Another trend also attested to the development of the field: Psychological tests were beginning to become financial winners. James McKeen Cattell founded the Psychological Corporation in 1921 to develop and market psychological tests (particularly those of interest to industry). The proceeds were used to stimulate psychological research. Thus, money began to invade the ivory tower. For example, a \$75,000 gift enabled Morton Prince to establish the Harvard Psychological Clinic in 1927. Nevertheless, the clinical psychologists of the day were quite different in terms of both activities and training from those of today.

### **World War II and Beyond (1940–1969)**

The process of absorbing large numbers of soldiers into the U.S. military in the early 1940s generated many needs. One such need was for a large-scale screening program to weed out those who were unfit for military service. Psychologists had already begun to develop the rudiments of a testing technology that would assist in this task, and they also had expertise in research methods. These skills set them apart from their psychiatric colleagues. Both their technology and their research orientation served psychologists well in the establishment of a professional identity. More than 1,700 psychologists served in World War II, and they returned to civilian life with increased confidence in their abilities and a determination to build a profession.

All of this was very important in affecting the federal government’s response to the mental health problems facing the United States after World

War II. To the Veterans Administration (VA) fell the enormous burden of providing care and rehabilitation for the thousands upon thousands of men and women who had suffered some form of emotional trauma from their military service. Without a marked increase in mental health professionals, there was no way that the VA could fulfill its mission and cope with the rising tide of patients that swept into its clinics and hospitals. The VA’s solution was to increase the availability of mental health professionals by providing financial support for their training.

In the case of clinical psychology, the VA provided financially attractive internships for graduate students in approved university Ph.D. programs. Although not required to do so, many of these students chose to remain with the VA after completing their training. Through its programs, the VA played a chief role in upgrading and building the profession of clinical psychology. Its willingness to hire clinicians at salaries higher than could generally be obtained elsewhere raised the entire pay scale of the profession. Its need to deal with the psychological problems of adults resulted in a major shift in clinical psychologists’ services from children to adults. At the same time, the VA came to expect clinical psychologists to conduct individual and group psychotherapy along with their accustomed psychodiagnostic activities. They also continued to serve in their familiar capacity as the research experts on mental health teams. When, in 1946, the VA initiated its program to train clinical psychologists, clinical training had secured a firm financial foundation. By 1949, 42 schools were offering the doctorate in clinical psychology, and large numbers of high-quality students were applying. The profession had attained public visibility.

The VA was not the only federal agency to promote the rise of clinical psychology. The aftermath of the war and the general increase in government activity also led to an attempt to ameliorate some of the mental health problems in the nation as a whole. The U.S. Public Health Service and the National Institute of Mental Health initiated support of clinical psychology graduate students working toward the Ph.D. and sponsored research and training programs designed to provide answers to the nation’s mental health problems.

Further evidence of professional growth was the publication of the first *American Psychologist* in 1946. In 1945, Connecticut became the first state to pass a certification law for psychologists. During the following year, the American Board of Examiners in Professional Psychology (ABEPP) was established to certify the professional competence of clinicians holding the Ph.D. In 1949, the Educational Testing Service was started. The APA was now asserting that psychotherapy was an integral function of clinical psychologists—notwithstanding the opposition from the psychiatric profession. The APA was also assuming a more activist role. It was beginning to make recommendations for the training of clinical psychologists and also to certify clinical training programs. In 1953, it published *Ethical Standards*, a landmark achievement in the codification of ethical behavior for psychologists and a great step forward in the protection of the public. By the beginning of the 1950s, the APA could claim more than 1,000 members in its Clinical Division. In just a few years after World War II, the profession had made enormous strides.

In 1949, a conference on graduate education in clinical psychology was held in Boulder, Colorado. The Boulder Conference was a truly significant event in clinical psychology because it explicated the *scientist-practitioner model* for training clinical psychologists that has served as *the* principal guideline for training ever since. In succinct terms, this model asserts (a) clinical psychologists shall pursue their training in university departments; (b) they shall be trained as psychologists first and clinicians second; (c) they shall be required to serve a clinical internship; (d) they shall achieve competence in diagnosis, psychotherapy, and research; and (e) the culmination of their training shall be the Ph.D. degree, which involves an original research contribution to the field. By and large, this still serves as the training model, even though the scientist-practitioner model has always had its critics.

The 1950s witnessed a marked growth in the psychological profession. The membership of APA rose from 7,250 in 1950 to 16,644 in 1959—a phenomenal increase. In approximately the same period, federal research grants and contracts for psychological research rose from \$11 million to more than \$31 million.

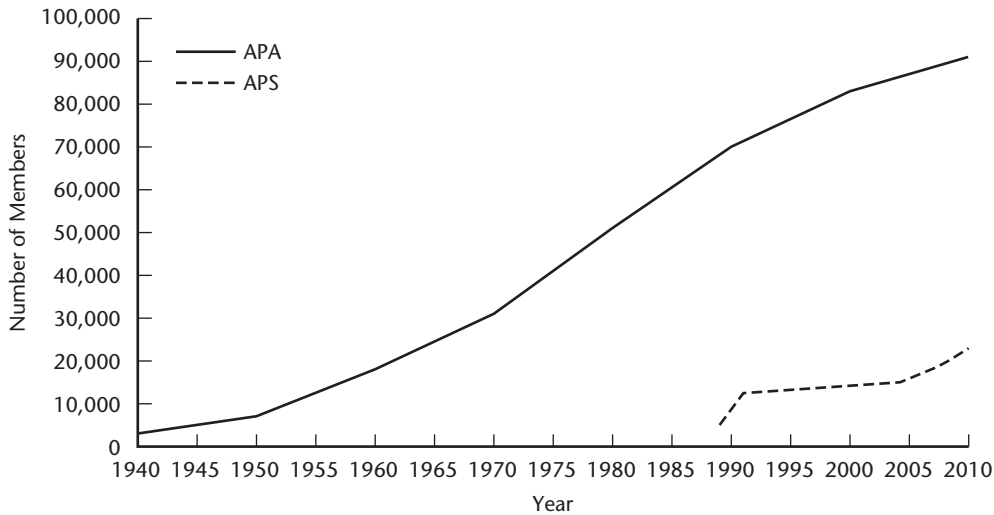
## The Growth of a Profession (1970–Present)

In the areas of assessment, intervention, and research, clinical psychology has become increasingly behavioral since the mid-1960s. The focus has shifted from a search for the traits or internal factors that lead people into a psychopathological condition to an analysis of the situational factors that control their behavior. In the late 1960s, the road to changing undesirable behavior began swerving sharply from psychotherapy (and the insight it was designed to produce) to conditioning and altered reinforcement contingencies. Research journals were full of articles describing new objective methods of assessing behavior and novel behavioral approaches to the treatment of everything from alcoholism, sexual dysfunctions, and lack of assertiveness to obesity, smoking, and loneliness. The key to everything lay not in patients' thoughts, but in their behavior.

Some, of course, began to suspect that all this was an overreaction. Were traits really fictions that had no utility? Could behavioral analyses and methods address and cure everything? Many thought not, and by the mid-1970s, cognition had begun to creep back onto the scene. People now began talking about “cognitive behavior methods” (Goldfried & Davison, 1976). The cognitive-behavioral orientation to treatment is now among the most common.

At the same time, the field of community psychology, which had seemed poised in the 1960s to revolutionize clinical psychology, began to falter. To many, its promise seemed unfulfilled. Then in the 1980s, the preventive focus reappeared with the development of the field of health psychology. All these concepts, methods, and trends of the past 40 years constitute the major thrusts of this book and will be covered in detail in the ensuing chapters.

The 1970s and 1980s witnessed further growth in the profession. In 1970, there were 81 fully approved graduate training programs in clinical psychology and well over 12,000 clinicians. As for APA itself, in 1892, there had been 42 members. By 1987, there were almost 67,000, and approximately 80,000 by 1997. This phenomenal growth is shown in Figure 2-6.



**FIGURE 2-6** Membership in the American Psychological Association (APA) and in the Association for Psychological Science continues to grow.

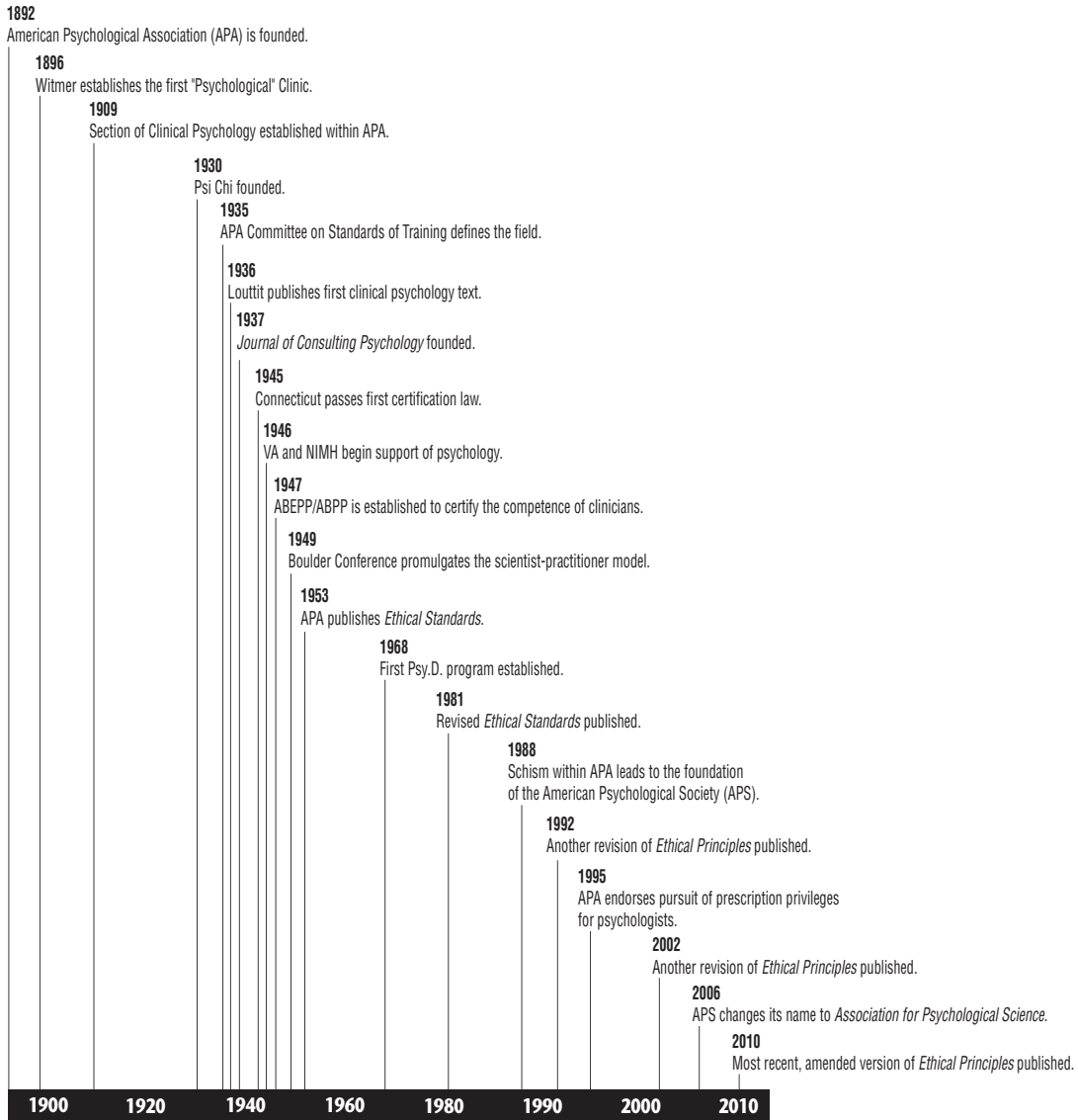
Currently, membership in the APA is over 150,000 (counting student affiliates), and the operating budget is over \$100 million. Also, the Division of Clinical Psychology (Division 12; now called the Society of Clinical Psychology) was the largest single unit in the APA. All 50 states, the District of Columbia, Puerto Rico, and several Canadian provinces either licensed or certified psychologists. Many clinical psychologists now have hospital privileges, and most can be reimbursed for their services by insurance and managed care companies. There has also been an increase in the number of clinical psychology graduate programs. Today, there are more than 200 doctoral training programs in clinical psychology that have full APA approval.

### The 1988 Schism

Within the APA, there have always been conflicts, sometimes acrimonious, between clinicians and their scientific counterparts. Often, these conflicts placed the scientist-practitioner squarely in the middle. By 1988, the academic-scientific wing of the APA seems to have concluded that the APA was under the control of the practitioners, who were using their power to promote their own interests.

Scientific interests, they said, were being replaced by goals that were essentially guild-like. The APA seemed to be preoccupied with such professional issues as writing prescriptions, hospital privileges, reimbursement questions, licensing, legal actions against psychiatry, and so on. In short, many had come to feel that the APA was no longer responsive to the academic-scientific needs of a significant number of its members. Indeed, former APA president Janet Spence charged that 90% of APA council meetings were taken up by the professional interests of practicing clinicians.

Matters seemed to come to a head when, in 1988, a plan to reorganize the APA so as to help heal the growing schism between the clinical wing and the academic-scientific wing failed by a 2-to-1 vote of the membership. The response of those disenchanted with the APA was to form a new, separate organization. The *American Psychological Society (APS)* was founded in 1988, led by 22 former APA presidents who became founding members. The initial advisory board of APS read like a scientific “Who’s Who.” The first APS convention was held in June 1988 and by most accounts was a resounding success. This organization now has a newsletter,



Timeline: Significant Events in the Profession of Clinical Psychology

*The Observer*, a monthly employment bulletin, and four scientific journals: *Psychological Science*, *Psychological Science in the Public Interest*, *Current Directions in Psychological Science*, and *Perspectives on Psychological Science*. Today, the total APS membership exceeds 20,000. Approximately 20% of APS members identify their major field as clinical psychology. The

professed goals of APS, now called the *Association for Psychological Science* (as of 2006), are to:

- advance the discipline of psychology,
- preserve the scientific base of psychology,
- promote public understanding of psychological science and its applications,

- enhance the quality of education. and
- encourage the “giving away” of psychology in the public interest.

Many on both sides of the APA–APS split feel the break was tragic. They believe that it was unfortunate for both sides—that what the field needs is greater integration of the science of psychology and its practice. Unfortunately, the split may produce even less integration than now exists. Many believe that it will only hasten the day when the APA becomes unabashedly a guild organization. Of course, many in the academic–scientist group and many who are traditional scientist–practitioners now belong to both the APA and APS. Many scientific psychologists are exhilarated over the quick growth of the APS. In any case, let us hope that both the APA and APS remember their larger obligations to the public good.

Some of the highlights of these professional developments are summarized in the timeline Significant Events in the Profession of Clinical Psychology.

Today, the field of clinical psychology is challenged by a host of professional issues. In Chapter 3, we will discuss several of these in some detail. Briefly, they include the question of the optimal training model for contemporary clinical psychologists (Baker, McFall, & Shoham, 2009), the impact of the health care revolution and managed care on clinicians (Goodheart, 2010), the current push for prescription privileges for clinical psychology (McGrath, 2010), and issues related to ethics and diversity. The way that these issues are addressed and, in some cases, resolved will greatly affect the field of clinical psychology for years to come.

## CHAPTER SUMMARY

Clinical psychology has changed, and it will certainly change even more. Witmer would scarcely recognize it. G. Stanley Hall, the APA’s first president, would doubtless be amazed at the things the APA and APS are doing. However, although training and practice are in a state of flux, certain constants remain. Clinical psychologists are still

involved in assessment and treatment. They still have research contributions to make, and they are still concerned with their professional development. The goal that binds clinical psychologists together remains the same: to apply their knowledge and skill to the mental health needs of people everywhere.

## KEY TERMS

### **Association for Psychological Science (APS)**

The professional psychological organization formed in 1988 when an academic–scientific contingent broke off from the APA. Goals of the APS include advancing the discipline of psychology, preserving its scientific base, and promoting public understanding of the field and its applications.

**behavior therapy** A popular learning framework for treating disorders that is based on the principles

of conditioning. Behavior therapy usually focuses on observable behavior and is typically of relatively brief duration.

**behavioral assessment** An approach to understanding and changing behavior by identifying the context in which it occurs (the situations or stimuli that either precede it or follow from it).

**brief (time-effective) therapy** Generally speaking, therapy of 15 or fewer sessions’ duration. Brief therapy has gained popularity in recent years due

to the financial constraints imposed by managed care, as well as studies demonstrating that its effectiveness is on par with that of traditional psychotherapy.

**community psychology** A psychological specialty that focuses on the prevention and treatment of mental health problems, particularly among people who are traditionally underserved.

**eclectics** Clinicians who employ the techniques of more than one theoretical orientation. The nature of the presenting problem determines which orientation to use in a given case.

**etiological** Causal; for example, an etiological factor for depression is believed to contribute to its onset.

**g** A term introduced by Charles Spearman to describe his concept of a general factor of intelligence.

**guidance clinics** Clinics devoted to the evaluation and treatment of children's intellectual and behavioral difficulties.

**health psychology** A psychological specialty that focuses on the prevention of illness, the promotion and maintenance of good health, and the psychological treatment of individuals with diagnosed medical conditions.

**manualized treatment** Treatment that is presented and described in a manual format (i.e., outlining the rationales, goals, and techniques that correspond to each phase of the treatment).

**measurement of intelligence** The use of tests to measure various mental capacities (e.g., the speed of mental processes, the ability to learn over trials).

**mental tests** The term coined by James McKeen Cattell to describe his measures of individual differences in reaction time. He believed that performance on these tests was associated with intelligence.

**neuropsychological assessment** An assessment approach—based on empirically established brain-behavior relationships—that evaluates a person's relative strengths and weaknesses across a number

of areas (e.g., memory, speed of processing, and manual dexterity).

**objective measures** Psychological tests that draw conclusions about people's states or traits on the basis of their responses to unambiguous stimuli, such as rating scales or questionnaire items. Responses to objective measures are often interpreted using a nomothetic approach.

**personality disorders** Enduring and maladaptive patterns of experience and behavior that emerge by adolescence or young adulthood and persist through much of adulthood. Examples include the paranoid, antisocial, and dependent personality disorders.

**personality testing** The use of measures or techniques to provide insight into enduring characteristics or traits.

**play therapy** A technique, derived from traditional Freudian principles, that uses expressive play to help release anxiety or hostility. Proponents believe that such a release has a curative effect.

**projective techniques** Psychological testing techniques, such as the Rorschach or the Thematic Apperception Test, that use people's responses to ambiguous test stimuli to make judgments about their personality traits or their psychological state.

**psychoanalysis** A framework for understanding and treating mental illness based on the collaborative work of Breuer and Freud in the late 1800s.

**psychodiagnosis** The use and interpretation of psychological test scores for the purposes of diagnosis and treatment planning.

**psychotherapy research** Research that evaluates the effectiveness of therapy or certain therapy components. Psychotherapy research may be used to determine which intervention is more effective for treating a certain condition or which component of a particular therapy is most crucial for bringing about an observed change.

**radical behaviorism** A movement in psychology that began in the late 1950s and persisted through the 1960s. Proponents of this movement asserted that only overt behaviors could be

measured and even questioned the existence of personality traits.

**scientist-practitioner model** The principal model for clinical psychology training of the past 50 years (also referred to as the Boulder model). This model strives to produce professionals who can effectively integrate the roles of scientist and practitioner.

**structured diagnostic interviews** A class of assessment tools, all of which consist of questions

keyed to diagnostic criteria. The term *structured* means that interviewers ask all interviewees the same questions in the same order and score the answers in standard ways.

**systematic desensitization** A behavioral technique for the treatment of anxiety disorders in which patients practice relaxation while visualizing anxiety-provoking situations of increasing intensity.

### WEB SITES OF INTEREST

To visit any of the Web sites listed, go to [www.wadsworth.com](http://www.wadsworth.com) and click Links.

2-1 American Psychological Association  
<http://www.apa.org/>

2-2 Association for Psychological Science  
<http://www.psychologicalscience.org/>

2-3 Society for a Science of Clinical Psychology  
<http://sites.google.com/site/sscpwebsite/>

2-4 Classics in the History of Psychology  
<http://psychclassics.yorku.ca/>

2-5 Daily Calendar of Events in the History of Psychology  
<http://www.cwu.edu/~warren/today.html>

2-6 Society of Clinical Psychology (Division 12 of the APA)  
<http://www.div12.org/>

2-7 Web sites dedicated to specific individuals important in the history of psychology  
<http://academic.udayton.edu/GregElvers/hop/welcome.asp>

2-8 Women in Psychology  
<http://www.psych.yorku.ca/femhop/>

2-9 Ethical principles of psychologists and code of conduct: 2010 Amendments  
<http://www.apa.org/ethics/code/index.aspx>

# 3

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## Current Issues in Clinical Psychology

### FOCUS QUESTIONS

1. What are the advantages and disadvantages of various models of training for clinical psychologists? Why is a firm grounding in psychological science important for future clinical psychologists?
2. What obstacles face clinical psychologists who specialize in private practice?
3. How will managed care affect the practice of clinical psychology? What advantages might clinical psychologists have in a managed care environment?
4. What are the advantages and disadvantages of obtaining prescription privileges? How might this pursuit affect graduate training?
5. What technological innovations are likely to influence the practice of clinical psychology?
6. What important diversity and ethical issues guide the practice of clinical psychology?

### CHAPTER OUTLINE

#### Models of Training in Clinical Psychology

The Scientist-Practitioner Model  
The Doctor of Psychology (Psy.D.) Degree  
Professional Schools  
Clinical Scientist Model  
BOX 3-1: *Clinical Psychologist Perspective: Richard M. McFall, Ph.D.*  
Combined Professional-Scientific Training Programs  
Graduate Programs: Past and Future

#### Professional Regulation

BOX 3-2: *Graduate Student Perspective: Christine Maldonado*

#### Private Practice

#### The Costs of Health Care

#### Prescription Privileges

BOX 3-3: *Clinical Psychologist Perspective: Patrick H. DeLeon, Ph.D., J.D.*  
BOX 3-4: *Clinical Psychologist Perspective: Elaine M. Heiby, Ph.D.*

#### Technological Innovations

Telehealth  
Ambulatory Assessment  
Computer-Assisted Therapy

#### Culturally Sensitive Mental Health Services

## Ethical Standards

### Competence

BOX 3-5: *Focus on Professional Issues: Clinicians Who Participate in Radio Call-In Shows, TV Talk Shows, or Internet Groups: Are They Ethical?*

In Chapter 2, we reviewed the history and development of the field of clinical psychology by examining important events in the areas of diagnosis and assessment, interventions and psychotherapy, research, and the profession. That review helped us to appreciate the roots of clinical psychology, as well as to put current activities in the appropriate historical context.

In this chapter, we discuss a variety of contemporary issues in clinical psychology: What are the best training models for a clinical psychologist? What is the best way to ensure professional competence? What are the issues that currently face clinical psychologists in private practice? How might increasing health care costs affect the practice of clinical psychology? What technological innovations are likely to affect clinical assessment and intervention? How should clinical psychology respond to the increasing diversity of the population it serves? What are the benefits and the concerns of clinical psychologists obtaining prescription privileges? What are contemporary ethical standards for clinical psychologists?

We begin with one of the most contentious of these issues: the appropriate training models for future clinical psychologists.

## MODELS OF TRAINING IN CLINICAL PSYCHOLOGY

### The Scientist-Practitioner Model

**The Training Model.** In Chapter 2, we briefly discussed the landmark conference on graduate education in clinical psychology held in Boulder,

Privacy and Confidentiality

Human Relations

## CHAPTER SUMMARY

### KEY TERMS

### WEB SITES OF INTEREST

Colorado, in 1949. Out of this conference arose the Boulder model, or *scientist-practitioner model*, of training. This model represents an attempt to “marry” science and clinical practice, and it remains the most popular training model for clinical psychologists even to this day.

It is useful to remember that clinical psychology began in universities as a branch of scientific psychology. It arose within the structure of colleges of arts and sciences, where teaching, research, and other scholarly efforts were prominent. During this era, training in the practice of clinical psychology did not receive priority. Clinical psychology professors carried out research and they published their work. However, their critics (often graduate students or clinicians in the field) complained that much of the research was trivial. Worse, it seemed to some professors that their own research detracted from their training of clinical students in the skills of the profession. Some students complained that they were learning too much about statistics, theories of conditioning, or principles of physiological psychology and too little about psychotherapy and diagnostic testing.

These are the kinds of events and situations that led to demands for change. The *Boulder model*, also known as the *scientist-practitioner model*, saw a profession comprised of skilled practitioners who could produce their own research as well as consume the research of others. The goal was to create a profession different from any that had gone before. The psychological clinician would practice with skill and sensitivity but would also contribute to the body of clinical knowledge by understanding how to translate experience into testable hypotheses and how to test those hypotheses. The Boulder vision was of a systematic union between clinical skill and the logical empiricism of science. To separate the practitioner from the source of scientific knowledge might create someone who passively

consumes information or accepts and uses techniques with little support.

The scientist-practitioner model is less a quantitative breakdown of one's daily activities than it is a state of mind. No one ever intended to have all clinicians devote exactly 50% of their time to their clinical practice and 50% to formal research. Some will be primarily researchers and others primarily clinicians. Rather, it was intended that the scientist-practitioner model would help students of clinical psychology "think" like a scientist in whatever activities they engaged in. As a clinician, they would evaluate their clients' progress scientifically and select treatments that were based on empirical evidence. Although it is true that practicing clinicians do not do much in the way of research, this may be largely because their work settings do not permit it and not because they do not wish to do it.

The scientist-practitioner model is just as applicable to clinical researchers as it is to practicing clinicians. The former can only produce solid, meaningful research if they keep their clinical sensitivity and skills honed by continuing to see patients. Just as practitioners must not forsake their research training and interests, neither must researchers ignore their clinical foundation.

**The Debate Continues.** A series of training conferences culminating in one at Salt Lake City, Utah, in 1987 eroded any strict interpretation of the scientist-practitioner model. These conferences recognized alternative routes to professional competence. Specifically, they accepted approaches that deemphasize research experience in favor of more direct and extensive training in clinical skills.

The Boulder model has been durable, but the debate continues. The mood of professionalism seems to grow every year. Increasingly, clinical psychologists are split into two groups: those interested primarily in clinical practice and those interested primarily in research. Although many believe that the scientist-practitioner model has served us well and successfully, others conclude that it is a poor educational model that deserves the wrath of its critics. But the prospect of totally abandoning the

Boulder model is worrisome to many. As Meltzoff (1984) put it years ago:

To train a new strain of purely applied psychologists who will be obliged to accept on faith what is handed down to them without being able to evaluate it or advance it, is the certain pathway to mediocrity. Research training conveys a mode of thought. It teaches how to be inquisitive and skeptical, how to think logically, how to formulate hypotheses and to test them, how to gather data rather than opinion, how to analyze those data and draw inferences from them, and how to make a balanced presentation of the findings. These are skills that help ... professional psychologists to rise above the technician level. (p. 209)

### The Doctor of Psychology (Psy.D.)

#### Degree

The foregoing controversy was at least partially responsible for the emergence of *Doctor of Psychology (Psy.D.)* degrees. The special characteristics of these degrees are an emphasis on the development of clinical skills and a relative de-emphasis on research competence. A master's thesis is not required, and the dissertation is usually a report on a professional subject rather than an original research contribution.

The first of these programs was developed at the University of Illinois in 1968 (D. R. Peterson, 1971), although that school has since closed its program. Subsequently, similar programs were developed at Rutgers, Baylor, and elsewhere. As Peterson (1968) envisioned them, Psy.D. programs are not substantially different from Ph.D. programs during the first two years of training. The real divergence begins with the third year. At that point, increasing experience in therapeutic practice and assessment becomes the rule. The fourth year continues the clinical emphasis with a series of internship assignments. More recently, Psy.D. programs have moved toward compressing formal coursework into the first year and expanding

clinical experience by requirements such as 5-year practica. A good description and history of Psy.D. programs have been provided by Peterson (1997, 2003). Currently, there are more than 60 accredited doctoral programs in clinical psychology that offer the Psy.D., and an increasing percentage of doctorates awarded in clinical psychology are Psy.D. degrees. In fact, more Psy.D. degrees are awarded each year in clinical psychology (over 1,300) than are Ph.D. degrees. Clearly, Psy.D. programs have gained a strong foothold in the profession.

Early on, there were concerns that graduates with a Psy.D. degree might be seen as less qualified than those with Ph.D.s for professional practice and have more trouble finding employment. However, this has not been the case (Norcross, Castle, Sayette, & Mayne, 2004). In an effort to further explore differences between Psy.D. and Ph.D. programs in clinical psychology, Norcross et al. (2004) conducted a survey. Some of the differences found included a higher acceptance rate of applicants to Psy.D. programs (41% vs. less than 15%), a lower percentage of Psy.D. faculty with a cognitive-behavioral theoretical orientation, a lower percentage of Psy.D. students receiving full financial assistance (20%), a lower percentage of Psy.D. students obtaining an internship (74%), but a shorter period of time to complete the Psy.D. degree ( $M = 5.1$  years).

More recent data on differences between Ph.D. and Psy.D. programs concerning acceptance rates, enrollment, and degrees awarded from 2009 to 2010 (Kohut & Wicherski, 2010) indicate that these differences remain. Although the average number of applications for each type of program are similar, Psy.D. programs accept more applicants each year ( $Mdn = 47$  vs. 8), enroll more students each year ( $Mdn = 28$  vs. 6), have more students in the program ( $Mdn = 130$  vs. 39), and award more doctoral degrees each year (1,350 vs. 1,222) than do Ph.D. programs in clinical psychology.

### Professional Schools

Although the Psy.D. model represents a clear break with tradition, an even more radical innovation is the development of *professional schools*. Many of

these schools have no affiliation with universities; they are autonomous, with their own financial and organizational framework. Often referred to as “freestanding” or “for-profit” schools, most offer the Psy.D. Most schools emphasize clinical functions and generally have little or no research training in the traditional sense. Faculty are chiefly clinical in orientation. The first such freestanding professional school was the California School of Professional Psychology (Dorken, 1975), founded by the California State Psychological Association. Now called Alliant International University, this school has nine campuses (three of which are international) and offers several mental health degrees.

In 1987, there were 45 professional schools in operation, awarding several hundred of the 3,000 yearly clinical doctorates (Strickland, 1988). Today, there are about twice as many professional schools, and each year over 60% of the doctorates in clinical psychology are awarded by professional schools (1,574 vs. 919; Kohut & Wicherski, 2010)! The proportion of doctorates in clinical psychology awarded by professional schools has increased dramatically over time. These programs tend to admit far more students (sometimes over 100!) than traditional university-based scientist-practitioner programs.

How many professional schools ultimately will survive is still uncertain. One of their greatest problems is stability of funding. Many such institutions must depend on tuition as their chief source of funds, which may not generate enough money to make them financially secure. In contrast, the majority of university-based Ph.D. programs waive tuition completely for graduate students. Professional schools also often depend heavily on part-time faculty whose major employment is elsewhere—a shaky foundation for an academic structure. As one consequence, it sometimes is difficult for students to have the frequent and sustained contacts with their professors that are so vital to a satisfactory educational experience.

Although some professional schools are fully accredited by the APA, they are the exception rather than the rule. This is a major handicap that such schools will have to overcome if their graduates are to find professional acceptance everywhere.

Despite these concerns, recent conferences on training seem to suggest that both Ph.D. and Psy.D. programs have found secure niches and are here to stay.

### Clinical Scientist Model

Over the past several decades, empirically oriented clinical psychologists have become increasingly concerned that clinical psychology, as currently practiced, is not well grounded in science (Baker, McFall, & Shoham, 2009; McFall, 2006). According to this view, many of the methods that practitioners employ in their treatment have not been demonstrated to be effective in controlled clinical studies. In some cases, empirical studies of these techniques have not been completed; in other cases, research that has been completed does not support continued use of the technique. Similarly, the use of assessment techniques that have not been shown to be reliable and valid and to lead to positive treatment outcome has been called into question. These concerns led to a proposed new model of training for clinical psychologists, the *clinical scientist model*.

The “call to action” for clinical scientists appeared in 1991, in the “Manifesto for a Science of Clinical Psychology” (McFall, 1991). In this document, McFall argued:

1. “Scientific clinical psychology is the only legitimate and acceptable form of clinical psychology” (p. 76).
2. “Psychological services should not be administered to the public (except under strict experimental control) until they have satisfied these four minimal criteria:
  - a. The exact nature of the service must be described clearly.
  - b. The claimed benefits of the service must be stated explicitly.
  - c. These claimed benefits must be validated scientifically.
  - d. Possible negative side effects that outweigh any benefits must be ruled out empirically” (p. 80).
3. “The primary and overriding objectives of doctoral training programs in clinical psychology must be to produce the most competent clinical scientists possible” (p. 84).

Like-minded clinical psychologists were urged to help build a *science* of clinical psychology by integrating scientific principles into their own clinical work, differentiating between scientifically valid techniques and pseudoscientific ones and focusing graduate training on methods that produce clinical scientists—individuals who “think and function as scientists in every respect and setting in their professional lives” (McFall, 1991, p. 85).

This document has proved to be quite provocative. One outgrowth of this model of training is the *Academy of Psychological Clinical Science*, formed in 1995. The academy consists of graduate programs and internships that are committed to training in empirical methods of research and to the integration of this training with clinical training (Baker, McFall, & Shoham, 2009). The academy is affiliated with the Association for Psychological Science (APS), and it is comprised of over 60 member programs (including both doctoral and internship programs). The primary goals of the academy are:

1. *Training*: To foster the training of students for careers in clinical science research, who skillfully will produce and apply scientific knowledge.
2. *Research and Theory*: To advance the full range of clinical science research and theory and their integration with other relevant sciences.
3. *Resources and Opportunities*: To foster the development of and access to resources and opportunities for training, research, funding, and careers in clinical science.
4. *Application*: To foster the broad application of clinical science to human problems in responsible and innovative ways.
5. *Dissemination*: To foster the timely dissemination of clinical science to policy-making groups, psychologists, and other scientists, practitioners, and consumers (<http://acadpsychclinicalscience.org/index.php?page=mission>).

**BOX 3-1 Clinical Psychologist Perspective: Richard M. McFall, Ph.D.**

Dr. McFall is Professor Emeritus in the Department of Psychological and Brain Sciences at Indiana University. He is an expert in the area of interpersonal competence, and his widely cited research has appeared in numerous journals and books read by clinical psychologists. In addition to his research pursuits, Dr. McFall has taught and trained many clinical psychologists through his roles as faculty member and director of clinical training. Finally, Dr. McFall is recognized as influential in establishing the clinical science model of training. He served as the president of the Academy of Psychological Clinical Science from 1995 to 1998. Currently, he is the Executive Director for a new accreditation system for clinical science programs.

Dr. McFall was kind enough to respond to the following questions we posed:

**What originally got you interested in the field of clinical psychology?**

As an undergraduate at DePauw University, I was an art major until my junior year, when it occurred to me to ask my art professor what I might be able to do with a degree in art. Among other things, he suggested that I might become an account executive in advertising. He suggested that I take a psychology course to learn what motivated people to buy things. So, I went over to the psychology department. Of course, I had to take prerequisites (introductory, statistics, experimental, and so on) before I could take the “good stuff,” and before I knew it, I was a psychology major. At the start of my senior year, still intending to go into advertising, I took a clinical psychology course taught by John Exner (the world-famous Rorschach expert), devoted primarily to projective tests. Exner encouraged me to apply to graduate school in clinical psychology and gave me a list of prospective graduate programs, all psychodynamically oriented. As I began filling out applications, my roommate’s father, who happened to be a psychologist, visited campus. He suggested that I apply to Ohio State University (where he got his

degree). I did, more or less as a “backup.” OSU admitted me and offered a generous assistantship—more than any other program. Being financially independent and in debt, I accepted OSU’s offer. As it turned out, the OSU clinical program was one of the best in the country at the time. It had a very strong scientific emphasis. I quickly learned that I had entered graduate school for illusory reasons; however, the research orientation of OSU’s program was compelling, and I soon developed an interest in clinical psychology as a science.

**Describe what activities you are involved in as a clinical psychologist.**

First and foremost, I have been actively involved in the profession as a teacher. For most of my career, I taught Introduction to Clinical Psychology to advanced undergraduates and Clinical Psychology to first-year graduate students. My goal in both classes was to teach the students to think skeptically and critically about the problems that are the primary focus in clinical psychology. I also taught a clinical practicum for advanced doctoral students in which we reviewed the empirical research evidence on the effectiveness of different methods of treating persons with obsessive-compulsive disorders (OCD); applied the best of the available methods to OCD clients in our own clinic; and evaluated the results of our interventions.

I also have been an active researcher. The common theme of my research is interpersonal competence—how to define and measure it, how to predict and promote it, and the factors that lead to incompetence. Competence and psychopathology can be seen as opposite sides of the same coin. Psychopathology can be viewed as a lack of competence in one or more critical areas of functioning. To understand the etiology of psychopathology, then, clinical psychologists might want to understand the nature and origins of competence. My research draws heavily on the knowledge and methods of psychology as a whole, especially

Essentially, a network of graduate programs and internships that adhere to the clinical science model has developed. These programs share ideas, resources, and training innovations. Further, they collaborate on projects aimed at increasing grant funding from governmental agencies, addressing

state licensing requirements for the practice of psychology, and increasing the visibility of clinical science programs in undergraduate education. Most recently, this organization has been a leader in setting up a new accreditation system (PCSAS, <http://www.pcsas.org/>) that will “brand” clinical science

cognitive science and neuroscience. This means that I must be an active student of the discipline. Another facet of my professional life is my involvement in administrative and service roles. I have been director of the clinical training program at Indiana University; have been on the board of directors of the local community mental health center; have served on editorial boards of journals; and have been active in professional organizations at the national level. Virtually all of my professional efforts, in one way or another, are devoted to differentiating science from pseudoscience within clinical psychology and to promoting clinical psychology as a science.

**What are your particular areas of expertise or interest?**

I've already described my content focus in research: interpersonal competence. In pursuing this interest, I have studied a variety of specific clinical problems and populations—including shy college men and women; nonassertive individuals; persons suffering from schizophrenia, depression, OCD, eating disorders, and addiction to tobacco; adolescent boys and girls identified as juvenile delinquents; and men who are sexually coercive toward women. My research across these problem areas has been characterized by an emphasis on conceptual and measurement issues. Recent work, in particular, has explored the use of concepts and methods adapted from cognitive science and neuroscience. My goal is to build better theoretical and quantitative models of clinically relevant phenomena.

**What are the future trends you see for clinical psychology?**

Clinical training programs that continue to have a strong "practice" focus (whether they identify themselves as Psy.D. programs or scientist-practitioner Ph.D. programs) are ignoring the dramatic changes currently taking place within the mental health field (increasingly called the behavioral health field). As health care in the United States shifts from the traditional

fee-for-service model to the managed care model, clinical psychologists are losing their role as primary care providers. The reasons are obvious. Two to three social workers can be hired for the price of one psychologist. If the research evidence shows no difference in treatment outcome between doctoral-level clinical psychologists and master's-level social workers, then the cost-conscious managed care systems will hire social workers, rather than psychologists, to provide most mental health services. One feature distinguishes some doctoral-level clinical psychologists from most other mental health specialists, however; this is the psychologist's research training, or special preparation for the role of research scientist. Only those clinical training programs that have maintained and strengthened the Ph.D.'s traditional focus on scientific research training are preparing their students for a viable future in the changing mental health care field.



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training by accrediting those programs that adhere to the goals of psychological clinical science and produce outcomes consistent with these goals (Baker et al., 2009).

As evidenced by the Academy's membership growth over the last two decades, more programs

have embraced this model of training for clinical psychologists. Further, the addition of internships into the Academy has provided the opportunity for a continuum of clinical science training in a variety of settings (e.g., classroom, research laboratory, and clinical settings).

### **Combined Professional-Scientific Training Programs**

A final alternative training model that we will discuss briefly involves a combined specialty in counseling, clinical, and school psychology. This training model assumes that (a) these specialties share a number of core areas of knowledge and (b) the actual practices of psychologists who graduate from each of these specialties are quite similar (Beutler & Fisher, 1994; Beutler, Givener, Mowder, Fisher, & Reeve, 2004). The curriculum in these combined training programs focuses on core areas within psychology and exposes students to each subspecialty of counseling, clinical, and school psychology.

The combined training model emphasizes breadth rather than depth of psychological knowledge. However, this feature can also be seen as a potential weakness of the model. Graduates from this type of training program may not develop a specific subspecialty or area of expertise by the end of their doctoral training (Beutler et al., 2004). Further, this model of training appears to be better suited for the future practitioner than for the future academician or clinical scientist (Beutler & Fisher, 1994). Currently, there are eight APA-accredited programs in combined professional-scientific psychology, three of which offer a Psy.D. degree (<http://www.apa.org/ed/accreditation/programs/accred-prof-scientific.aspx>).

### **Graduate Programs: Past and Future**

In many ways, the changes in graduate training over the past 60 years have mirrored the marketplace for clinical psychologists. Starting in the mid-1960s, a shift occurred from university-based academic jobs to jobs in private practice. Not surprisingly, complaints about the limitations of the scientist-practitioner model of training surfaced soon thereafter. These complaints focused primarily on the perceived inadequacy of the Boulder model of training for future practitioners. According to the critics, training in clinical skills was deficient, and

faculty members were oblivious to the training needs of future practitioners.

Out of the Vail Training Conference in 1973 came an explicit endorsement of alternative training models to meet the needs of the future practitioner. The alternative Psy.D. degree and professional school model of training can be traced to the positions adopted by those attending this conference. Clearly, these alternative training programs became increasingly influential, as indicated by the number of new doctorates they graduate. In addition, some have argued in support of designating any clinical psychologist who practices clinical work with a Psy.D. degree (A. E. Shapiro & Wiggins, 1994).

However, several trends may affect the viability and success of the various training models discussed here. First, for some time, many have argued that there is an oversupply of practice-oriented psychologists given market demands (Baker et al., 2009; McFall, 2006; Robiner, 2006). If true, this may ultimately affect the number of students entering and finishing graduate programs in clinical psychology. In recent years, there have been many more applicants for internship positions than slots available. The net result has been that some graduate students have not been able to secure an internship position (recently, as high as 25% of those that applied). For several years now, students from practice-oriented doctoral programs have had more difficulty securing internships than those from scientist-practitioner and clinical scientist programs (Neimeyer, Rice, & Keilin, 2007). As the internship and practice-oriented job markets tighten, the programs that primarily train practitioners (professional schools, schools awarding the Psy.D. degree) will likely feel the brunt of this effect. This will be especially true for professional schools whose economic viability is heavily dependent on tuition fees and large numbers of students.

Second, the managed health care revolution in this country will likely affect the demand for clinical psychologists in the future as well as the curriculum in training programs (Baker et al., 2009;

McFall, 2006). More emphasis will be placed on coursework involving empirically supported brief psychological interventions and focal assessment. Training programs that do not employ faculty with expertise in these areas may produce graduates without the requisite skills to compete in the marketplace.

Finally, there may be an undersupply of academic and research-oriented clinical psychologists. If true, scientist-practitioner and clinical scientist programs may be in a better position to meet this need. Research-oriented clinical psychologists will be better able to develop and evaluate effective treatments for psychological problems, evaluate programs in health care settings, and provide supervision for both research and for administering empirically supported treatments. As we discuss later in this chapter, all of these roles are highly valued in the current behavioral health care market in which effectiveness, accountability, and cost-efficiency are emphasized (Baker et al., 2009).

## PROFESSIONAL REGULATION

As clinical psychology grew and the number of its practitioners multiplied, issues of professional competence began to arise. How is the public to know who is well trained and who is not? Many people have neither the time, inclination, nor sophistication to distinguish the well-trained professional from the charlatan. Professional regulation, therefore, has attempted to protect the public interest by developing explicit standards of competence for clinical psychologists. Professional regulation is complicated by the fact that no national standard exists; the requirements for both certification and for licensure can vary markedly from state to state.

**Certification.** *Certification* is a relatively weak form of regulation in most cases. Originally developed by state psychological associations, it

guarantees that people cannot call themselves “psychologists” while offering services to the public for a fee unless they have been certified by a state board of examiners. Such certification often involves an examination, but sometimes it consists only of a review of the applicant’s training and professional experience. Certification is an attempt to protect the public by restricting the use of the title “psychologist.” Its weakness is that it does not prevent anyone (from the poorly trained to outright quacks) from offering psychological services to the public so long as the noncertified persons who offer such services do not use the title “psychologist” or the word *psychological* to describe themselves or their services. Some cynics have alleged that certification does more to protect psychologists than it does to protect the public.

Certification laws were often the result of effective psychiatric lobbying of state legislatures. Because many psychiatrists wanted to reserve psychotherapy as the special province of medicine, they resisted any law that would recognize the practice of psychotherapy by any non-medical specialty. As a result, certification laws were the best regulation that psychologists could obtain.

**Licensing.** *Licensing* is a stronger form of legislation than certification. It not only specifies the nature of the title (“psychologist”) and training required for licensure but it also usually defines what specific professional activities may be offered to the public for a fee. With certification, for example, individuals might call themselves “therapists” and then proceed to provide “psychotherapeutic” services with impunity. Many state licensing laws are designed to prevent such evasions by defining psychotherapy and specifically making it the province of psychiatry, clinical psychology, or other designated professions. However, determined charlatans are difficult to contain, and such persons may be very clever in disguising the true nature of their activities.

To help strengthen this system of oversight and consumer protection, the American Psychological Association developed a model act for the licensure

**BOX 3-2 Graduate Student Perspective: Christine Maldonado**

Christine Maldonado recently completed her internship (and Ph.D.!) in clinical psychology. She provided the following insights regarding her graduate school experience.

**What has graduate school in clinical psychology been for you?**

Graduate school has been like an academic marathon for me. It pushes you to academic and emotional limits that you thought you never had. It is rewarding, exhausting, stressful, and exhilarating all at once. However, I have learned that just when you think you can't go on for much longer, you reach a milestone (e.g., finishing your first year, getting your master's or completing the comprehensive exam process) and at least for me, upon the completion of these events, I'm infused with pride, a feeling of accomplishment and confidence, and a renewed strength to keep on going. In some ways, graduate school mimics the Peace Corps slogan: it is the hardest job you'll ever love!

**What things have you least expected about graduate school?**

Success in graduate school has less to do with your "smarts" than it does with your ability to persevere and be dedicated and disciplined to your research and your studies. You might find that many of your peers who were very much intellectually capable of finishing graduate school leave the program not because they were unable to perform academically, but that they were unable to "keep their eye on the prize" and think of the long-term investment that graduate work is. While it is not the most pleasant experience at

times, it will pay off in the long run. The key is to remember why you came here, what you want, and to keep these reasons posted on your desk for those 3 A.M. nights when you are still running analyses and ready to give up.

**Has graduate school changed you? If yes, how so?**

Yes, most definitely. Paradoxically, graduate school humbles you greatly, but in the same breath, instills great confidence within you. When I first came to graduate school, I thought I was "hot stuff." In some ways, I think many incoming students think this, and it is not surprising because they would not have gotten into a clinical program if they were not the cream of the crop in their undergraduate institute. However, upon entering the program, you realize that you have now been thrown into an environment where all your peers were the cream of the crop, and you quickly realize how little you do know. However, as you move through the program, you come to understand and think about the field of psychology from different perspectives, to be critical of research, and to develop your own line of research. It is in these processes that you come to be more confident in your knowledge of the field in that you are no longer merely memorizing facts and bits of information for your survey on abnormal psychology, but you are now seeing how these facts fit in the greater scope of the research literature, the limitations of these facts, and how you could develop a study to address these limitations. I think it is ability to do the latter that builds confidence in you as a researcher, academic, and member of the psychological community.

of psychologists (e.g., American Psychological Association, 1987b). More recent revisions were published in 2001 by the Association of State and Provincial Psychology Boards (ASPPB, <http://www.asppb.org/>) and in 2010 by the American Psychological Association (American Psychological Association, 2011). States and provinces have used these guidelines to develop their own specific requirements for licensure in their jurisdictions

(e.g., see DiLillo, DeGue, Cohen, & Morgan, 2006). Although licensing laws vary from state to state (and province to province), there are several common requirements. These are summarized in Table 3-1.

Most states and provinces require applicants for licensure to take an examination (sometimes both a written exam and an oral exam). In addition, the licensing board usually examines the applicant's

**Looking back, what activities or experiences were the most important for you in your graduate school program?**

While I'm not sure I would ever voluntarily put myself through our written comprehensive exam process again, I know that this experience has been the single most influential experience for me as a clinical scientist. By taking months to read and learn about all aspects of the field (from statistical techniques to empirically validated treatments to assessing various disorders to understanding sex differences in diagnoses), I have learned that you really cannot study any aspect of psychology in and of itself—the field and its issues are all intertwined and related. If you think you can blow off your psychometrics class because it is not your *forte*, think again! Everything builds upon itself in psychology. The more you know about the fundamentals of our field, the stronger you will be in your ability to ask important and meaningful research questions, design innovative studies (because you will know where the gaps in the literature are), and contribute knowledge to your particular research interest's literature.

**Any additional hints for those trying to make it through graduate school in clinical psychology?**

Find whatever motivates you to keep on going and do it. There will be days when you will want to quit. Be prepared for this. For me, getting my Ph.D. has been my dream since I was in high school. That being said, I have printed out a sign that I have hung on my door where my desk is at home that reads "Dr. Christine Maldonado." Every time I go into my study to work, I see that sign and it reminds me that in a few short years that paper sign will be replaced with the real deal. Additionally, I would find an activity that has NOTHING to do

with psychology and make time for yourself to do that activity. For me, I decided to train for a marathon during my fourth year. During these training runs, I could think about nothing, mull over research ideas, or just be alone with my thoughts. Finding time for yourself is invaluable in your survival in graduate school. Without this time, you will burn out. You need to find your own outlet, not only to succeed in the program, but for your mental and physical health as well.



Christine Maldonado

Christine Maldonado

educational background and sometimes requires several years of supervised experience beyond the doctorate. Many states also have subsequent continuing education requirements, like attending workshops or scientific presentations. It appears that licensing boards are becoming increasingly restrictive, sometimes requiring specific courses, excluding master's candidates, and demanding degrees from APA-approved programs. They are

also occasionally beginning to intrude into the activities of academic and research psychologists. For example, a state may require that any psychologist studying depressed patients be licensed, even if no treatment is administered.

Licensing and certification remain topics of intense professional interest. Some insist that licensing standards should not be enforced until research demonstrates their utility and positive client

**TABLE 3-1 Summary of Typical Requirements for Licensure**

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**Education**

A doctoral degree from an APA-accredited program in professional psychology (e.g., clinical) is required.

**Experience**

One to two years of supervised postdoctoral clinical experience is required.

**Examinations**

A candidate for licensure must pass (i.e., score at or above a certain threshold score) the Examination for Professional Practice in Psychology (EPPP). In addition, some states and provinces require an oral or essay examination.

**Administrative Requirements**

Additional requirements include citizenship or residency, age, evidence of good moral character, and so on.

**Specialties**

Licensure to practice psychology is generic. However, psychologists must practice within the scope of their demonstrated competence, as indicated by their educational background and training.

---

outcomes can be shown to relate to the licensee's competence. Others have pointed out that certification and licensing are in no way valid measures of professional competence. However, others suggest that licensing should be designed to ensure that the public will not be harmed rather than to regulate levels of competence. At the present time, licensing examinations may be the best safeguard against poor practice. Finally, some academic clinical psychologists are concerned that licensing requirements violate academic freedom because these requirements essentially dictate the coursework offered by clinical psychology programs. They argue that the faculty members involved in a clinical psychology training program have a better idea of what coursework is needed to produce well-trained clinical psychologists. Further, the requirements for licensure may make it difficult for academic clinical psychologists themselves to attain licensure (DiLillo et al., 2006).

Despite these questions and problems, the regulation of professional practice seems here to

stay. To date, it is the only method we have, imperfect though it is, to protect the public from the poorly trained. Current challenges related to licensure include establishing a national standard for licensure (which will allow easier mobility from state to state or province to province), deciding whether or not an oral examination is necessary in addition to a written examination, and addressing licensing issues related to telehealth and distance practice over the Internet (Rehm & DeMers, 2006).

**American Board of Professional Psychology (ABPP).** Because of the failure of individual states to take the lead on professional regulation, the American Board of Examiners in Professional Psychology was established as a separate corporation in 1947. In 1968, its name was shortened to *American Board of Professional Psychology (ABPP)*, <http://www.abpp.org/>. ABPP offers certification of professional competence in the fields of clinical child and adolescent psychology, clinical psychology, clinical health psychology, clinical neuropsychology, cognitive and behavioral psychology, counseling psychology, couple and family psychology, forensic psychology, group psychology, organization and business consulting psychology, police and public safety psychology, psychoanalysis in psychology, rehabilitation psychology, and school psychology.

To illustrate the requirements and process of obtaining ABPP certification, consider the clinical psychology specialty. In addition to verification of credentials in clinical psychology (e.g., doctoral degree and clinical internship from accredited institutions, licensure in state), candidates are required to submit practice samples (videotaped), provide a written statement regarding professional expertise and handling of clinical cases, and successfully complete an oral examination conducted by three expert peers. As you can see, these requirements are more rigorous than those involved in state certification or licensing. In essence, the public can be assured that such a clinician is someone who has submitted to the scrutiny of a panel of peers.

Benefits to the clinical psychologist include reduced liability insurance, increased status as a clinician or expert witness, and increased ease of mobility if one chooses to move to another state (Finch, Simon, & Nezu, 2006).

**National Register.** In recent years, insurance companies have increasingly extended their coverage to include mental health services. At the same time, clinical psychologists have gained recognition as competent providers of those services involving prevention, assessment, and therapy. In 1975, the first *National Register of Health Service Providers in Psychology* was published. The *Register* (<http://www.nationalregister.org/>) is a kind of self-certification, listing only those practitioners who are licensed or certified in their own states and who submit their names for inclusion and pay to be listed. Along with the increasing numbers of clinicians in private practice and their recognition as health care providers by insurance and managed care companies, the Register is one more indication of the growing professionalism of clinical psychology.

## PRIVATE PRACTICE

Earlier, we observed that substantial numbers of clinical psychologists work in private practice settings. For some time, this seemed to be an ever-increasing trend, mirroring the aspirations of many students in clinical training. For some clinical psychology graduate students, their goal is essentially to open an office and hang out a shingle. This suggests that the physician is now serving as a role model for these aspiring clinicians—a model that does create certain hazards.

In the recent past, for example, the medical profession has experienced a great deal of criticism and the loss of its Good Samaritan image because it has appeared more concerned with economic privileges than with the welfare of patients. Doctors operate strong lobbies in Congress and in state

legislatures. They have gotten legislation passed that not only restricts entry by others into what they perceive as their professional arena but also protects them and their vested interests. The American Medical Association is often perceived not as the public's guardian, but as the protector of the rights and advantages of the physician.

What alarms many psychologists is that clinical psychology seems to be moving in the same direction. The emphasis on restrictive legislation, diplomas, and political activism and the de-emphasis on research strike many as misguided (McFall, 2002, 2006). They fear that what began as an honest and dedicated attempt to improve training, provide continuing professional growth, protect the public, and improve the common good will end in a selfish posture of vested interest. Obviously, private practice is not the only place such trends can develop, but the danger exists. A larger social question is whether training clinicians for private practice is an economical, efficient response to the nation's mental health needs. Nevertheless, private practice—with all its concern about insurance coverage, professional rivalry with psychiatry, and statutory regulation—seems here to stay.

Traditional fee-for-service private practice is a thing of the past (Baker et al., 2009; McFall, 2002, 2006); managed health care now dominates the scene. Private practice psychologists have felt the brunt of this change. However, training programs must ensure that future clinical psychologists are not sent out into the real world lacking the requisite skills and knowledge demanded by managed health care systems. Table 3-2 summarizes several sets of recommendations for the training needs for future practicing psychologists (e.g., see Baker et al., 2009; Eby, Chin, Rollock, Schwartz, & Worrell, 2011; McFall, 2006).

This economic squeeze on the private practitioner has raised many concerns (Comas-Díaz, 2006). For example, how will changes in health care coverage affect the viability of delivery of psychological services? If managed care companies endorse empirically supported treatments as standards for psychological intervention, how will this impact

**TABLE 3-2 What Future Practicing Clinical Psychologists Need to Know**

Here we list several key areas of knowledge that seem especially relevant to future practicing clinical psychologists:

1. Knowledge of new and evolving health care delivery systems such as managed care organizations (MCOs).
2. Sensitivity to ethical issues relevant to managed care settings, including confidentiality and informed consent.
3. Experience in multidisciplinary environments, such as medical settings.
4. Managed-care-relevant clinical skills, including brief interventions, treatment team approach, and focused assessment.
5. Expertise in “applied” research, such as program evaluation, cost-effectiveness, and medical cost offset.
6. Management and business skills—for example, contracts, utilization review, marketing.
7. Technology such as computers, databases, and telemedicine.
8. Empirically supported and evidenced-based practices (EBPs) in clinical assessment and intervention.
9. Training in supervision; it is likely that fewer clinical psychologists will be directly delivering services in the future.
10. Sensitivity to cultural differences and knowledge of empirical findings concerning EBPs appropriate for ethnic subgroups.

private practice? As a result of declining earnings over the last few decades, some predict that private practitioners will need to expand their roles to areas such as alternative medicine, telehealth, psychopharmacy, and life coaching, for example (Comas-Diaz, 2006).

It may even be the case that, because of cost, today’s Ph.D. clinicians will be replaced by tomorrow’s master’s-level mental health professionals (Baker et al., 2009; Eby et al., 2011; McFall, 2002, 2006)! We will have more to say about the impact of managed care on the practice of clinical psychology next.

## THE COSTS OF HEALTH CARE

Health care costs continue to rise. According to the World Health Organization ([http://www.who.int/whosis/database/core/core\\_select\\_process.cfm?countries=all&indicators=nha](http://www.who.int/whosis/database/core/core_select_process.cfm?countries=all&indicators=nha)), the United States spends more money on health care, both as a percentage of its gross domestic product (GDP) as well as per capita, than any other nation in the world. It is estimated that the United States spent \$2.5 trillion dollars on health care in 2009, approximately \$8,086 per person (<http://www.cms.hhs.gov/NationalHealthExpendData/>). This represented about 17.6% of the GDP in 2009. However, from 2009 to 2019, it is predicted that the proportion of the GDP devoted to health care costs will rise to 19.6%.

How do these projections affect services for mental health? The initial attempt to address high costs for health care in general and mental health care in particular was termed *managed care*. The old, traditional, fee-for-service mental health care system was “unmanaged” in the sense that there was little control over which doctoral-level practitioners could be used, the amount paid for services, the quality of services, and the frequency of service utilization. Insurance plans become “more managed” as provider networks become more selective, as utilization of services is evaluated with regard to appropriateness and effectiveness, and as managed care organizations institute quality improvement programs (Bobbitt et al., 1998).

Therefore, the managed care approach shifted economic control from practitioners to those that ultimately pay the bills (e.g., employers). The focus became cost containment, with corporations expanding into a kind of medical-industrial complex and emphasizing a marketplace mentality (Kiesler & Morton, 1988). These and other features of managed behavioral health care are summarized in Table 3-3.

There are several models of managed care, all of which attempt to control costs and reduce use of services while at the same time ensuring their quality. We will briefly mention three major types of managed care systems: HMOs, PPOs, and POSs. A *health maintenance organization (HMO)* employs a

**TABLE 3-3 Common Features of a Managed Behavioral Health Care Organization**

- 
- Identified as a business entity or corporate structure
  - Full range of clinical services is provided (or arranged)
  - Credentialed provider network or staff delivery system
  - Utilization and care management
  - Management information systems (track membership, eligibility, and aggregate population data)
  - Systematic quality management and improvement mechanisms
  - Ability to assume financial risk, including the payment of insurance claims
- 

SOURCE: Adapted with permission from Bobbitt, B. L., Marques, C. C., & Trout, D. L. (1988). Managed behavioral health care: Current status, recent trends, and the role of psychology. *Clinical Psychology: Science and Practice*, 5, 53–66. Copyright © 1988, Oxford University Press.

restricted number of providers to serve those who enroll in the plan; costs for all services are fixed. A *preferred provider organization (PPO)* has contracts with outside providers (at a discounted rate) to meet the needs of its membership; in exchange for the discounted rate, the providers theoretically receive an increased number of referrals. A point of service (POS) plan combines features of HMOs and PPOs in that members have more options regarding how “managed” their health care choices are but pay more for these non-managed features. For example, members of POS plans pay more if they choose to use providers that are outside the defined provided network/list but less if the provider is within network.

In response to increased demands from consumers for more freedom in choosing providers, an increasing number of companies and institutions are offering high-deductible plans that allow more choices but effectively shift the majority of the costs to consumers (Bobbitt, 2006). These consumer-driven health plans are seen as a way to reduce overall costs to institutions—much the same reason that prompted the development of HMOs in the first place. Some, however, believe that this first iteration of managed care, especially as applied

to mental health—called behavioral health care—has failed (Cummings, 2006). As Cummings notes, costs have continued to increase, clinicians are receiving less money for their services, and clinicians spend an increasing proportion of their time on paperwork and getting reimbursed than on direct care.

What is the next stage of behavioral health care likely to involve? Cummings (2006) predicts two major models that are likely to be implemented: *consumer-directed health care plans* and *pay-for-performance disease management models*. As we noted above, consumer-directed health care plans shift the cost and responsibility of behavioral health care services to the consumer. Individuals will be spending more out-of-pocket (even if they are ultimately reimbursed from their tax-exempt health savings accounts) and are likely to shop around to find the highest quality services for the best prices. The second model, the disease management model, provides pay-for-performance incentives to clinicians to provide high-quality, effective services. In this way, clinicians will be able to share in the health care savings if they are able to achieve the same results with less intensive treatment (for example, fewer sessions).

What are all these changes in behavioral health care management likely to mean for clinical psychologists? As has been true for the last decade, clients are likely to be seen for fewer sessions and the psychological treatments administered are likely to be from a list of evidence-based treatments. We discuss evidence-based treatments (Kazdin, 2008) in more detail in Chapter 11.

Second, some predict that self-care or self-help methods will be used more (Clarke, Lynch, Spofford, & DeBar, 2006). For example, clinicians may utilize books, pamphlets, and handouts (i.e., bibliotherapy) as a first line of treatment or as an adjunct to traditional face-to-face sessions. In addition, as we discuss below, computer- or Internet-assisted therapy is more likely to be used in the future. This is possible because many of the most effective treatments for psychological problems are structured and based on manualized therapies (e.g., cognitive therapy of depression). Self-help methods are attractive as a first line of treatment because they

are inexpensive, widely available, and can be disseminated in a wide variety of settings (e.g., primary care physicians' offices).

Third, and in a related vein, it is predicted that more and more behavioral health services will occur in primary care and other less traditional settings like schools and the workplace (Clarke et al., 2006). This shift in delivery settings is driven by a number of factors, including the availability of self-help modalities, the increased use of medications to manage psychological problems, and the stigma still associated with presenting to a psychologist's or psychiatrist's office.

These trends in managed care and the delivery of behavioral health services will directly affect the employment outlook for doctoral-level clinical psychologists who plan to make a career of clinical practice. Master's-level practitioners and paraprofessionals are much "cheaper" to use for the same services and, therefore, will be seen as more economically attractive to managed care companies (Baker et al., 2009; McFall, 2002, 2006).

But the training of the scientist-practitioner or clinical scientist does offer some opportunities in this environment (Baker et al., 2009; Barlow, 2004a, 2004b; McFall, 2006). For example, clinical psychologists are likely to be the primary providers of psychological treatment that is based in psychological science. By virtue of the rigorous training in both the evaluation and administration of empirically supported treatments, clinical psychologists from clinical science or scientist-practitioner programs are uniquely positioned to serve as consultants and overseers of psychological treatment in an environment that emphasizes quality and cost-effectiveness. Ironically, as we discuss below, gaining prescription privileges may have the unintended consequence of diverting clinical psychologists away from what makes them unique among mental health professionals—the "complete package" of a clinician who can both conduct assessment and treatment research as well as administer and disseminate effective psychological treatments. An increased focus on accountability and patient outcomes will open the doors for clinical psychologists who have expertise in clinical and psychometric research.

These individuals will be called upon to design and evaluate studies of patient outcome, patient satisfaction, and the effectiveness of various psychological interventions.

These observations about behavioral health care highlight a number of implications for the training and careers of psychologists (see Table 3-4). Training programs in clinical psychology need to place more

**TABLE 3-4 Recent Developments Relevant to Behavioral Health Care**

1. *Costs of health care are expected to rise again.* In 2007, it is estimated that the United States spent \$2.26 trillion dollars on health care, over \$7,000.00 per resident. This represents about 16% of the U.S. gross domestic product (GDP). By 2017, it is expected that health care costs will rise to 19.5% of the GDP. Clearly, the one-time savings involved in shifting most Americans to managed care plans from fee-for-service have been realized. Increased costs in the future will be associated primarily with medical technology, physician services, and prescription drugs.
2. *Psychotherapists are adopting novel approaches to managed care and may expand their roles.* To maintain their autonomy, some psychotherapists are opting for self-review of their own costs. By formally serving as their own "watchdogs" and cost managers, groups of mental health professionals can avoid losing control over service delivery to the case managers of outside managed care organizations. For example, therapists serve as their own "gatekeepers" by critically reviewing the number of sessions allotted to individual patients and evaluating quality of services internally. In addition, it is likely that clinical psychologists in private practice may develop expertise in alternative medicine, telehealth, psychopharmacology, or life coaching in order to preserve their income as reimbursement rates from managed care are likely to remain flat or even decrease.
3. *Consumer-driven health plans are likely to become more popular.* These plans shift the cost and responsibility of behavioral health care to the individual consumer. With rising costs on the horizon, employers and insurance companies are less likely to share the burden and it will be up to each person to save for and manage the health care received. In this way, the consumer will be able to "shop" for services to identify the highest quality treatment for the money. Services will be paid for largely from individual health savings accounts that are tax-exempt.

emphasis on cost-effective psychological interventions, provide clinical training in managed care settings, and incorporate didactic instruction in applied health services research into their curricula. Ideally, these suggestions will be heeded so that future clinical psychologists receive the training necessary to thrive in a managed care environment.

## PRESCRIPTION PRIVILEGES

Over the last two decades, a hotly debated issue concerns the pursuit of *prescription privileges* (sometimes called “prescriptive authority”) for clinical psychologists (McGrath, 2010). Although the American Psychological Association endorsed this pursuit in 1995, many remain either neutral or adamantly opposed to obtaining prescription privileges. The decision to pursue these privileges will have far-reaching implications for the role definition of clinical psychologists, the training they require, and their actual practice.

**Background.** Clinical psychologists have expanded their area of interest from mental health issues to health issues in general. This redefinition of clinical psychology as a field concerned with general health (including mental health) raises a number of interesting issues regarding how best to ensure that clinical psychologists can function autonomously and not be controlled or regulated by medical or other professions. Several advocates have argued that obtaining prescription privileges will ensure the autonomy of clinical psychologists as health service providers and will enable a continuity of care that is missing when a psychiatrist prescribes the patient’s medications and a psychologist provides the same patient’s psychotherapy (McGrath, 2010). Further, DeLeon (1988) and Norfleet (2002) have argued that it is our professional and ethical duty to improve and broaden the services we offer so that society’s needs can be met. Clinical psychologists with prescription privileges would be available to meet the needs of underserved populations (e.g., rural residents, geriatric patients).

However, the pursuit of prescription privileges has been questioned on philosophical grounds (McGrath, 2010). For example, some have argued that the need for professional boundaries between clinical psychology and psychiatry dictates that we should not incorporate medical interventions (medications) into our treatment repertoire. Further, they assert that it is clinical psychology’s non-medication orientation that identifies it as a unique health profession and that is responsible for the field’s appeal. Following are some of the major arguments for and against prescription privileges.

**Pros.** A number of arguments have been made in favor of seeking prescription privileges; we briefly present several of the most commonly cited reasons. These arguments were discussed in a 1995 interview with the executive director of the Practice Directorate of the American Psychological Association (Nickelson, 1995) and have been emphasized by others advocating prescription privileges (e.g., DeLeon & Wiggins, 1996; McGrath, 2010; Norfleet, 2002).

First, having prescription privileges would enable clinical psychologists to provide a wider variety of treatments and to treat a wider range of clients or patients. Treatment involving medications would now be an option, and this would lead to more involvement by clinical psychologists in the treatment of conditions in which medications are the primary form of intervention (e.g., schizophrenia).

A second advantage of having prescription privileges is the potential increase in efficiency and cost-effectiveness of care for patients who need both psychological treatment and medication. These individuals often enlist more than one mental health professional (a psychiatrist for medications, a clinical psychologist for cognitive-behavioral treatment). A single mental health professional who could provide all forms of treatment might be desirable from both a practical and an economic standpoint.

There is also the belief that prescription privileges will give clinical psychologists a competitive advantage in the health care marketplace. The health care field is becoming increasingly

**BOX 3-3 Clinical Psychologist Perspective: Patrick H. DeLeon, Ph.D., J.D.**

Dr. DeLeon is a prominent clinical psychologist who serves as chief of staff for Senator Daniel K. Inouye (D-HI). Dr. DeLeon has been very active in the American Psychological Association (APA) as well. Over the years, he has served as president of the APA, as APA secretary, as a member of the APA Board of Directors, as chair of the APA Board of Professional Affairs, and as president of the APA Divisions of Clinical Psychology (Division 12), Psychotherapy (Division 29), and Psychology and Law (Division 41). Dr. DeLeon has been perhaps the most outspoken proponent of pursuing prescription privileges for psychologists. We asked him several questions about his background and activities.

**Could you tell us a little about your background and interests?**

I grew up in a family that was very politically active. Both of my parents were attorneys. My mother was one of the first female lawyers in Connecticut and the first elected female alderman in our hometown. I always knew I would become a lawyer. If I had not gone to graduate school first, I would undoubtedly have become an elected official. Working on Capitol Hill seems a “natural fit.” Specifically, I began working for Senator Inouye the day that the Watergate hearings started—slightly over three decades ago. At that time I was enrolled at the University of Hawaii School of Public Health and working for the State of Hawaii Division of Mental Health. The university required an internship, so I took the summer off, came to our nation’s capital, and, except for a brief period to run a congressional campaign, have not left yet. Over the years, I have learned that many senior congressional staff have grown up in families that were very active in

the political process. One learns from an early age to value public service. The political process and the public policy process become “natural”—personally meaningful and, in essence, a way of life.

Prior to working for Senator Inouye, I was a clinical psychologist with the State of Hawaii’s Division of Mental Health. I first worked on an inpatient ward in our state hospital; then, as a result of the community mental health center movement, our inpatient and outpatient responsibilities were combined. I essentially functioned as deputy director of our center, clinically specializing in “dangerous” and “chronic” patients. Prior to that, my wife and I worked as Field Assessment Officers (FAOs) for the Peace Corps, staffing a Fiji and Philippines project. That was really interesting, especially the time we spent in the host countries.

**What is the biggest challenge facing psychology today?**

I think the biggest challenge we face today as a profession is an internal one—collectively appreciating the extent to which we really are one of the “learned professions” and, thus, that we have a societal obligation to provide effective, data-based care and proactive leadership. Too many of us do not seem to appreciate that we really are one family. For example, an individual psychologist will gravitate to a high-level administrative position and then seem to act as if he or she is no longer a psychologist. Unlike organized medicine, which is always looking out for the future of their profession, far too few of us go out of our way to systematically foster “growth” experiences for the next generation. That is why, in my judgment, the establishment of the Committee for the American

competitive, and prescription privileges would provide an advantage to clinical psychologists over other health care professionals (e.g., social workers). Finally, some view obtaining prescription privileges as a natural progression in clinical psychology’s quest to become a “full-fledged” health care profession rather than just a mental health care profession.

Last, many argue that psychologists, due to their unique training, are most qualified to consider psychopharmacological treatment as an adjunctive option to psychosocial treatment. In contrast to the

psychiatric tradition, psychologists typically have longer sessions with clients than do psychiatrists (i.e., 50 vs. 15 minutes), and consequently have developed a more thorough understanding of their client’s psychological symptoms. Psychologists also more frequently use an empirical approach to monitor their client’s symptoms, using repeated evidence-based assessments to track symptoms over different types of treatment or varying doses of medication. Psychologists with prescription privileges also are most likely to be able to offer “combined”

Psychological Association of Graduate Students (APAGS) is so important for the profession. APAGS currently has in excess of 55,000 members and represents the future of our profession. We have to reach out to them, particularly at the State Association level, and institutionally foster an entirely different "mind-set." If we can accomplish this, I am confident that we possess the expertise and creative ability to prosper, notwithstanding whatever might seem to be the daily crisis—managed care, budgetary constraints, and so on. The 21st century will be an era of educated consumers demanding timely access to gold-standard care. The extraordinary advances occurring within the computer and communications fields will result in an entirely new therapeutic paradigm. Together, we will do extraordinarily well; as isolated individuals, it is hard to predict what will evolve.

**In your opinion, why should clinical psychologists seek and obtain prescription privileges?**

Summarized from DeLeon and Wiggins (1996):

- All objective evidence to date concerning the quality of care provided by non-physician practitioners (such as nurses, physician assistants, clinical pharmacists, optometrists) indicates that it is consistently high and cost-effective.
- It has been demonstrated that it is possible to successfully train non-physicians to prescribe medications.
- Psychologists are interested in obtaining the psychopharmacological training and clinical experience necessary to prescribe in a competent manner.

- By obtaining prescription privileges, psychologists will also gain the legal authority to determine whether medications are necessary and appropriate (the ability to not prescribe).

In my view, psychologists will rely less on medication than physicians (this has been found in the pilot projects to date), and this should lead to a higher quality of care than is currently available. Finally, the critical psycho-social-economic-cultural gradient of care will be included in society's definition of "quality" care. Aloha.



Patrick H. DeLeon

Patrick H. DeLeon

(i.e., psychosocial + psychopharmacological) treatment since they would be thoroughly trained in both approaches. Research has strongly suggested that combined treatment is more efficacious than either psychosocial or psychopharmacological alone for a variety of disorders in adults and youth.

**Cons.** Other clinical psychologists have voiced concerns about the possibility of obtaining prescription privileges (Albee, 2002; Hayes & Heiby, 1996; Heiby, 2002). These critics point out that prescription

privileges may lead to a de-emphasis of "psychological" forms of treatment because medications are often faster acting and potentially more profitable than psychotherapy. Many fear that a conceptual shift may occur, with biological explanations of emotional conditions taking precedence over psychological ones.

The pursuit of prescription privileges may also damage clinical psychology's relationship with psychiatry and general medicine. Such conflict may result in financially expensive lawsuits. This new



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Obtaining the authority to prescribe medication for mental health problems is a controversial issue for clinical psychologists.

financial burden, as well as the legal fees necessary to modify current licensing laws, would come at the expense of existing programs. In addition, the granting of prescription privileges would likely lead to increases in malpractice liability costs. In short, it may not be worth it.

Last, many fear that psychologists' ability to prescribe medications would lead to more drug-company-sponsored research. Although many drug companies are strictly regulated to conduct ethically and scientifically sound research, many fear that the introduction of a vested party into the scientific research process may contaminate current scientific practices in psychology.

**Implications for Training.** As more clinical psychologists gain prescription privileges, this change will significantly affect the training of future clinical

psychologists. In 1993, the Ad Hoc Task Force on Psychopharmacology of the American Psychological Association published its recommendations regarding competence criteria for training psychologists to provide services to individuals who receive psychotropic medication (Smyer et al., 1993). This Task Force outlined the following three levels of competence and training in psychopharmacology. Note that, according to the Task Force's recommendations, only those who successfully complete Level 3 training would be qualified to prescribe.

*Level 1: Basic Pharmacology Training.* Competence at this level would include knowledge of the biological basis of neuropsychopharmacology and a mastery of the classes of medication used for treatment as well as knowledge of substances that are abused (e.g., alcohol or cocaine). To achieve this level of training, a one-semester survey course in psychopharmacology is recommended.

*Level 2: Collaborative Practice.* Competence at this level, essentially enabling one to serve as a psychopharmacology consultant, would involve a more in-depth knowledge of psychopharmacology and drugs of abuse; competence in diagnostic assessment, physical assessment, drug interactions, and drug side effects; and practical (hands-on) training in psychopharmacology. Specifically, the committee recommended coursework in the areas just mentioned as well as supervised practical experience.

*Level 3: Prescription Privileges.* Competence must be demonstrated at this level to practice independently as a prescribing psychologist. The committee recommended a strong undergraduate background in biological sciences (including multiple courses in biology, chemistry, mathematics, and pharmacology), 2 years of graduate training in psychopharmacology (26 credit hours), and a postdoctoral psychopharmacology residency.

The 1993 recommendations for Levels 2 and 3 have since been modified and updated (American Psychological Association, 2009), and a summary of the model curriculum for Level 3 training as well as practice guidelines for psychologists' involvement

**BOX 3-4 Clinical Psychologist Perspective: Elaine M. Heiby, Ph.D.**

Dr. Heiby is a Professor of Psychology at the University of Hawaii. Her research interests include theories of self-control, emotional disorders, and adherence to health behaviors, and she has published extensively in these areas. Dr. Heiby is also known for her leadership among those who oppose seeking prescription privileges for psychologists. We had a chance to ask Dr. Heiby about her own background as well as her views regarding prescription privileges.

**What originally got you interested in the field of clinical psychology?**

When I entered graduate school in 1974, I intended to become an academic in a behavioral psychology program. This was an exciting time in behavioral psychology when the works of scientists like Wolpe, Staats, and Skinner were demonstrating the generalizability of basic laboratory principles to the understanding of complex human behavior and the alleviation of human suffering. I realized I wanted to contribute to the synthesis of behavioral principles and applied psychology. I also understood that clinical psychology was a growing profession with frighteningly few scientifically based guidelines for the selection of effective prevention and treatment programming. So I chose to complete doctoral training in both clinical and behavioral psychology, knowing that clinical training was essential to being able to concentrate my career on the integration of psychological science and practice.

**Describe what activities you are involved in as a clinical psychologist.**

I'm a professor in the Department of Psychology at the University of Hawaii at Manoa and am licensed. I teach two psychological assessment courses in our clinical program and an undergraduate abnormal psychology course, supervise graduate and undergraduate clinical research, conduct several of my own research programs, serve on the State of Hawaii Board of Psychology, and am a member of the Board of Advisors for the organization Psychologists Opposed to Prescription Privileges for Psychologists ([www.popp.org](http://www.popp.org)). I had a small part-time psychotherapy practice for about ten years. Now my applied work is limited to consultations and serving as an expert witness. Consultations have included developing assessment and treatment protocols for behavioral health providers, conducting treatment outcome evaluations in mental health settings, and providing psychological assessments for family and criminal courts.

**What are your particular areas of expertise or interest?**

My interests include (a) developing integrative theories of self-control, emotional disorders (depression, anxiety, anger, and mania), and adherence to health behaviors; (b) construction of assessment devices that measure not only problem behaviors but also vulnerability and resilience factors that can guide the selection of empirically supported treatments, and (c) applying chaos theory to the understanding of fitful and transitional emotional states.

**What future trends do you see for clinical psychology?**

I find this to be a very exciting time for clinical science and scientist-practitioners. The health care environment now requires evidence of cost-effective services. These market demands are congruent with the basic tenets of science that involve pursuit of parsimony and empirical support for predictions. Managed care can be rewarding for the scientist-practitioner whose approach involves the value that scientifically supported services are the most humane ones. Applied psychologists will be needed to train therapists in the most effective procedures, conduct prevention program and treatment outcome evaluations, provide direct services for the more difficult cases, and consult with medical providers, government agencies, businesses, and other organizations. Clinical scientists will find more grant monies to support research on the development of cost-effective assessment devices and treatment procedures. So I think that in the future, the scientifically trained clinical psychologists will find the most job opportunities and be the most satisfied with their work.

**You have been an outspoken critic of the movement to seek and obtain prescription privileges for clinical psychologists. Why?**

I believe psychology's plate is full. There are many unmet societal needs for effective psychological services. Psychologists are the only mental health service providers trained in the science of human behavior and positioned to make the most informed clinical decisions. Researchers have barely scraped the surface in understanding the psychological level of human adjustment and suffering. For psychology to take on the task of medical training and practice, something else will have to give. At the training level, the undergraduate psychology major will include premedical courses that will probably not draw many of the

*(Continued)*

**BOX 3-4 Clinical Psychologist Perspective: Elaine M. Heiby, Ph.D. (Continued)**

students currently interested in the discipline. The graduate training would also be overhauled. Adding several years of medical training to clinical programs would necessarily have to come at the expense of psychology training. Applied psychologists would be less expert in the science of behavior, and there would be fewer psychology faculty conducting both basic and applied research.

Nevertheless, I believe there have been some positive effects of the prescription privileges proposal. Applied psychologists are being encouraged to become more competent in making recommendations to physicians and in evaluating the effectiveness of medical treatment. Researchers are being encouraged to synthesize clinical psychology and behavioral neuroscience. Greater collaboration and integrative research undoubtedly will promote comprehensive services and advance the science of psychology. In the long term, these changes may result in a hybrid discipline and profession that involves the current domains of psychological and medical sciences. At this point in time, however, I believe the attempt to legislatively transform psychology into a medical specialty is premature. Psychologists who want prescription privileges are free to seek training

that is already available, such as in nursing, without reallocating resources away from psychology.



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in “pharmacological issues” appear in McGrath (2010).

These recommendations for training, if implemented, would affect graduate training in clinical psychology in a number of ways. First, because of additional course requirements (for Levels 2 and 3), it would take longer to complete graduate school. In many cases, additional faculty would need to be hired to teach the new required courses; most of these courses are not currently offered in clinical psychology graduate programs. For this reason, most training to obtain prescription privileges will likely be offered at the postdoctoral level. Finally, the average graduate student of clinical psychology has completed significantly less coursework in the physical sciences (e.g., neuroanatomy, biochemistry, biology, or pharmacology) than psychiatric residents (Robiner et al., 2003). Therefore, in order to close this gap, programs that seek to prepare psychologists for prescribing at a later point in their

career may screen out applicants who do not have a good foundation in undergraduate courses in the physical sciences.

The levels of training outlined by the Task Force seem reasonable and, if followed, help to ensure some degree of quality control. Further, to date, some psychologists who have completed the training necessary to obtain prescription privileges in their respective states appear to have undergone a comprehensive and rigorous program of training (e.g., LeVine, 2007). However, many are concerned over an apparent trend to “water down” some of the initially proposed and endorsed requirements, as well as the offering of courses over the Internet or during weekend retreats. Perhaps the major concern over these developments is whether this initiative will change the very nature of the practice of clinical psychology as we know it. As Cummings (2006) noted: “It remains to be seen whether prescribing psychologists will maintain their psychotherapy

expertise or give in to the expediency of the prescription pad and its ready cash flow over the hard work of psychotherapy” (p. 600).

## TECHNOLOGICAL INNOVATIONS

Technology has influenced many fields, and clinical psychology is no exception. In this section, we discuss several recent technological innovations that are likely to have a lasting impact on clinical psychology.

### Telehealth

*Telehealth* refers to the delivery and oversight of health services using telecommunication technologies. For example, Web sites, e-mail, telephones, online videoconferencing, and transmitting medical images for diagnosis are often used as a means to assess, evaluate, and treat psychological and behavioral problems. There are many advantages to telehealth, including increased accessibility to services, more efficiency in service delivery, reducing stigma that might be associated with presenting for treatment at a traditional brick-and-mortar clinic, and the ability to obtain expert consultations in a more expeditious manner. To date, most of the applications of telehealth have focused on rural populations where services are harder to obtain due to distance and number of local providers, as well as on institutionalized populations (e.g., prisoners) who may not have ready access to services outside the institution of interest.

In this section, we will focus on two forms of telehealth that are relevant to the science and practice of clinical psychology. First, we discuss the rapidly growing field termed ambulatory assessment. Next, we discuss computer-assisted treatments of psychological conditions.

### Ambulatory Assessment

As the name implies, *ambulatory assessment* involves assessing the emotions, behaviors, and cognitions of

individuals as they are interacting with the environment in real time (Trull & Ebner-Priemer, 2009). A major impetus for ambulatory assessment is the finding that individuals are deficient in their memory and report of past personal experiences, including moods, events, and behaviors (Fahrenberg, Myrtek, Pawlik, & Perrez, 2007; Solhan, Trull, Jahng, & Wood, 2009). Despite this limitation, clinical psychologists typically rely on questionnaires and interviews that require retrospective assessment of clinical symptoms and conditions. Therefore, one advantage of ambulatory assessment is that very little, if any, retrospection is required of the client. For example, to track a client's mood state, an electronic diary or smart phone might be used to prompt the client to complete mood ratings at various points throughout the day and night. These data will reflect the client's mood as it is



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Electronic diaries can be used to assess clients while they are going about their daily life.

experienced in the moment while interacting with the natural environment.

Indeed, this reflects the second advantage of ambulatory assessment—it is more ecologically valid. That is, ratings and assessments are collected on the client's experiencing in his or her natural environment. Therefore, these assessments are more likely to generalize to the client's typical experience than are retrospective assessments gathered in the clinician's office. A third advantage is that multiple assessments on the same client are possible, enabling the clinician to explore the variability of moods states, for example, within each individual. A number of important psychological constructs involve variability, like variable mood states, levels of cravings, and intrusive thoughts. A one-time, static assessment will not capture the variability inherent in these symptoms.

A fourth advantage for ambulatory assessment is the possibility that multiple forms of ambulatory assessment, focusing on different response domains, can be conducted and combined for the single client. For example, a client with an anxiety disorder could provide ambulatory assessment data in three realms: psychological (self-ratings of her mood state over a 7-day period, multiple times per day); psychophysiological (biosensors recording galvanic skin response [sweating] as well as heart rate); and behavioral (activity level assessed via actometers, self-winding wristwatches that have been modified to measure activity instead of time).

A final advantage is that ambulatory assessment can be easily incorporated with treatment or even computer-assisted therapy, which we discuss next (Clough & Casey, 2011). There are several ways that ambulatory assessment might be combined with treatment. Perhaps the most obvious application is the use of ambulatory assessment to establish baseline (before-treatment) functioning and to monitor progress throughout the course of treatment. For example, a client presenting for treatment of panic disorder might complete ambulatory assessments before treatment to establish the frequency, severity, and typical locations

of panic attacks. After treatment is initiated, ambulatory assessment could be used to see if the frequency and intensity of panic attacks decrease and to see if the client is avoiding certain situations less. Another application of ambulatory assessment to treatment might be for certain responses to an electronic diary or smart phone survey to send an "alert" out to a therapist or to an e-therapist so that some coaching or instruction could be provided to the client. For example, a client who is attempting to abstain from alcohol might receive a phone call from a therapist or peer counselor if he rates his craving for alcohol at that moment to be extremely high. Concerning an e-therapist, in this same situation a text message might automatically be sent with coping instructions if this high level of craving is endorsed. As you see, this application begins to blur the boundaries between ambulatory assessment and treatment. Ultimately, perhaps, treatment itself might be administered and received while clients are in their natural environments. We should remind ourselves that being able to experience emotions and behave adaptively in one's daily life is the ultimate treatment success!

### Computer-Assisted Therapy

As we mentioned in the context of telehealth, computer-assisted therapy has the potential to be less stigmatizing, more efficient, more accessible, and more convenient for clients. Whether treatment is administered through videoconferencing or through e-mail, text messaging, or recent therapy-based "apps," clients who might not present to a mental health professional for face-to-face treatment because of embarrassment or shame seem more likely to be willing to initiate a treatment contact if this can occur in the privacy of the clients' own choosing. Because the fear of stigma is one of the biggest reasons those in need do not seek out mental health treatment, this advantage is quite important.

Further, other reasons commonly cited for not pursuing treatment is lack of accessibility and

inconvenience. To the extent clients are able to access mental health services from any location that has telephone or Internet service, this would mitigate the problem or concern. In addition, with the advent of computer-assisted treatment, the available "hours of operation" are likely to be extended, especially in cases in which immediate response from a clinician is not needed. Finally, there are many efficiencies afforded by computer-assisted treatment. For example, electronic records of all interactions between client and clinician are stored, the viewing of Web pages and completion of homework assignments can be time-stamped, and these interactions can more easily be incorporated into electronic health records. In 2004, President Bush called on the United States health care industry to develop electronic health records and make them available to all patients by the year 2014.

There are now over 100 studies that have examined the effects of computer-assisted therapy for a variety of psychological problems, including mood disorders, eating disorders, anxiety disorders, and substance use disorders (Marks, Cavanagh, & Gega, 2007). Two recent examples of studies comparing computer-assisted and standard treatment of psychological conditions may be instructive.

One of the most effective treatments of depression is cognitive therapy. Wright et al. (2005) developed a computer-assisted form of cognitive therapy and compared its ability to decrease depressive symptoms to that of a standard form of this treatment, therapist-led cognitive therapy. Results indicated that both the computer-assisted and traditional cognitive therapy produced significant reductions in depressive symptoms over the 8 weeks of treatment, and both treatments showed roughly equivalent effects, which were maintained at 3- and 6-month follow-up assessments. These results show promise for a computer-assisted cognitive treatment for depression, especially given that the clients rated the treatment positively in terms of acceptability, relatively low dropout rates occurred, and both time- and cost-savings related to therapists were afforded by this treatment.

Bickel, Marsch, Buchhalter, and Badger (2008) evaluated the efficacy of an interactive, computer-assisted behavior therapy intervention with opioid-dependent outpatients. The effects of a computerized version of the community reinforcement approach were compared to those delivered by a therapist. This treatment includes training in a variety of life skills (e.g., self-management, drug refusal, time management, relapse prevention, etc.) with voucher-based contingency management. The latter involves clients being able to earn voucher points that could be traded in for money at the end of treatment; more voucher points were awarded for longer stretches of sobriety, whereas a relapse resulted in losing all voucher points awarded to that point. At the end of treatment, the average number of continued weeks of sobriety and treatment retention was similar across treatment groups. Despite one-sixth as much contact with a therapist, this much less expensive computer-assisted treatment produced similar results in terms of abstinence and sobriety!

## **CULTURALLY SENSITIVE MENTAL HEALTH SERVICES**

The U.S. Census Bureau projects that the population growth rate for non-Hispanic Whites between the years 1995 and 2050 (7.4%) will be the lowest of all major ethnic/racial groups in the United States. In contrast, it is projected that the Black population will increase 69.5%, the Native American population 83.0%, the Hispanic population 258.3%, and the Asian American population 269.1%.

Data from the 2010 U.S. Census reinforces this changing ethnic landscape. In 2010, 16% of the total U.S. population self-identified as Hispanic or Latino, 13% as Black or African American, 5% as Asian American, 1% as American Indian or Native American, 2% as two or more races, 0.2% as Native Hawaiian of other Pacific Islander, and 72% as White. Of greater interest is that from

2000 to 2010, the percentage of U.S. residents identifying themselves as Hispanic or Latino, Black or African American, Asian American, American Indian or Native American, two or more races, and Native Hawaiian of other Pacific Islander increased by 43%, 12%, 43%, 18%, 32%, and 35%, respectively (compared to an increase of 5% in White Americans).

In an increasingly pluralistic society such as the United States, it is urgent that we develop mental health services that effectively serve the needs of cultural, racial, and ethnic minorities (Nagayama Hall, 2006; Whaley & Davis, 2007). One can argue the point at almost any level—ethical, economic, and so on—but it is essential that we develop training programs that produce therapists who have learned to consider appropriate cultural factors in their clinical work with culturally diverse clients (Miranda et al., 2005). For example, we must find ways to make successful treatments more available to Hispanics—treatments that are sensitive to the characteristic features of Hispanic

culture. Similar comments could be made in the case of Native Americans, African Americans, and Asian Americans.

The American Psychological Association (2003) published guidelines on multicultural education, training, research, practice, and organizational change for psychologists. The goals of these guidelines are to present the rationale and need for addressing multiculturalism in psychology and to suggest ways that psychologists can integrate cultural awareness into their roles as educators, researchers, and clinicians. Briefly, these guidelines urge psychologists to:

- make a commitment to cultural awareness as well as knowledge of self and others as cultural beings;
- recognize the importance of multicultural sensitivity;
- integrate multiculturalism and diversity into education and training; and



Nancy Sheehan/PhotoEdit

Clinical psychologists receive training in the assessment and treatment of diverse and under-served populations.

- recognize the importance of culture in psychological research and clinical work.

The developers designed these guidelines to provide psychologists with a framework for providing services (educational, clinical, etc.) to an increasingly diverse population.

Along these lines, S. Sue (1998) has advocated that clinical psychologists and other mental health professionals must demonstrate *cultural competence*—a knowledge and appreciation of other cultural groups and the skills to be effective with members of these groups. Sue (1998) has identified three major characteristics of cultural competence:

- *Scientific-mindedness.* Clinicians must formulate and test hypotheses regarding the status of their culturally different clients; clinicians must not adhere to the “myth of sameness.”
- *Dynamic sizing.* Clinicians must be skilled in knowing “when to generalize and be inclusive and when to individualize and be exclusive” (p. 446). This allows the clinician to avoid stereotypes but still appreciate the importance and influence of the culture in question.
- *Culture-specific expertise.* Clinicians must understand their own culture and perspectives, have knowledge of the cultural groups with whom they work, and if indicated, be able to use culturally informed interventions.

According to Sue (1998), these characteristics will be present to varying degrees in individual clinicians. Clinical psychologists must actively develop these skills to achieve cultural competence in their work with various groups of clients or patients.

Likewise, issues of gender have become prominent in recent years. There are a number of unique influences that must be considered when providing mental health services to girls and women, for example. First, there is evidence that some diagnostic criteria may be applied in a biased way, depending on the biological sex of the client. For example,

a very impulsive woman is more likely to be diagnosed with borderline or histrionic personality disorder, whereas a man exhibiting the same symptoms might be given a diagnosis of antisocial personality disorder. This likely reflects biases and expectations on the part of the clinician concerning gender. Worldwide, women and girls are more likely to experience a traumatic event (e.g., sexual abuse, partner abuse) and oppression, are more vulnerable to sexually transmitted diseases, and are more likely to be victims of violence than their male counterparts (APA, 2007). These and other unique biological, psychological, and environmental influences suggest the need for sensitivity to the experience of girls and women when providing psychological services.

As for how to integrate these considerations and apply them to the practice of clinical psychology, the American Psychological Association (2007) provides a number of recommendations, including:

- Use treatment interventions that have been shown to be effective with girls and women.
- When providing treatment, promote empowerment and a range of choices.
- Be sensitive to the issue of sex bias when conducting assessment and formulating a diagnosis.
- Become familiar with and utilize community resources for girls and women during treatment.

Guidelines like these remind us that we must be sensitive to the unique experience of each of our clients and to not fall into a one-treatment-fits-all mentality. In the future, we must continue to train clinical psychologists to recognize and understand both gender differences and cultural *diversity* and how these relate to the provision of mental health services. Web sites 3-8 and 3-9 at the end of this chapter provide a link to the American Psychological Association’s Guidelines

for Providers of Psychological Services to Diverse Populations and the American Psychological Association's Guidelines for Practice with Girls and Women.

## ETHICAL STANDARDS

One yardstick by which to measure the maturity of a profession is its commitment to a set of ethical standards. Psychology was a pioneer in the mental health field in establishing a formal code of ethics. The APA published a tentative code as early as 1951; in 1953, it formally published the *Ethical Standards of Psychologists* (American Psychological Association, 1953). Revisions of these standards appeared in 1958, 1963, 1968, 1977, 1979, 1981, 1990, 1992, and most recently, 2002.

The 2002 version of the *Ethical Principles of Psychologists and Code of Conduct* presents five general principles as well as specific ethical standards relevant to various activities of clinical psychologists—assessment, intervention, therapy, research, forensic activities, and so on (American Psychological Association, 2002). Web site 3-7 provides a link to the complete document online with 2010 amendments.

The general principles include the following:

- *Beneficence and non-maleficence*: Psychologists strive to benefit those they serve and to do no harm.
- *Fidelity and responsibility*: Psychologists have professional and scientific responsibilities to society and establish relationships characterized by trust.
- *Integrity*: In all their activities, psychologists strive to be accurate, honest, and truthful.
- *Justice*: All persons are entitled to access to and benefit from the profession of psychology; psychologists should recognize their biases and boundaries of competence.
- *Respect for people's rights and dignity*: Psychologists respect the rights and dignity of all people and

enact safeguards to ensure protection of these rights.

Although these general principles are not technically enforceable rules, they serve to guide psychologists' actions. The specific ethical standards, however, are enforceable rules of conduct. Acceptance of membership in the APA commits the member to adherence to these standards, several of which are discussed in the following sections. Of course, actual clinical practice and its day-to-day demands can generate ethical decisions and dilemmas that would tax the judgment of the wisest in the field. Also, changes in our culture over time can provide a shifting ground that challenges a clinical psychologist's judgment. Take, for instance, the example in Box 3-5.

We now focus our discussion on several key areas of the ethical standards.

### Competence

Issues of *competence* have several important aspects. First, clinicians must always represent their training accurately. Thus, master's-level clinicians must never lead anyone to believe they possess the Ph.D. Simply ignoring the fact that someone keeps referring to such a person as "Doctor" will not suffice. If a clinician is trained as a counseling psychologist, that is how he or she must be presented—not as a clinical psychologist. Clinicians have an obligation to "actively" present themselves correctly with regard to training and all other aspects of competence. This also means that clinicians should not attempt treatment or assessment procedures for which they lack specific training or supervised experience. When there is any doubt about specific competencies, it is wise to seek out supervision from more experienced clinicians.

It is equally important that clinicians be sensitive to treatment or assessment issues that could be influenced by a patient's gender, ethnic or racial background, age, sexual orientation, religion, disability, or socioeconomic status. Finally, to the extent that clinicians have personal problems or

**BOX 3-5 Focus on Professional Issues**  
**Clinicians Who Participate in Radio Call-In Shows, TV Talk Shows, or Internet Groups:**  
**Are They Ethical?**

In 1953, the *Ethical Standards of Psychologists* (American Psychological Association, 1953) stated:

Principle 2.64-1. It is unethical to offer psychological services for the purpose of individual diagnosis, treatment, or advisement, either directly or indirectly, by means of public lectures or demonstrations, newspaper or magazine articles, radio or television programs, or similar media.

This idea, in 1953, was pretty clear and seemed to make good sense. Professional advice is an individual thing. It must be tailored to the individual, and there is no way a clinician can do this on the basis of a 3-minute conversation with a radio caller. But in 1953, there were relatively few radio call-in shows (or TV shows!) hosted by clinicians. Now, as we all know, there are surely many more. As in all professions, some hosts are flip, comedic, and in general, poor clinicians. Others seem quite skilled, concerned, and sincere while advising strongly that the caller seek professional help. Aside from strong media ratings, there are probably valid reasons now for having good call-in shows. For many distressed or disadvantaged people, these shows may be their only route to help or support. The shows can also sensitize and educate other listeners, helping to prevent problems from developing or getting worse. For still others, these shows may provide the caller with that extra courage or understanding necessary to seek out professional services.

The 2002 APA revision of ethical standards reflects these points by permitting “advice or comment”—as opposed to “therapy”—via radio or television

programs, or via the Internet, as long as they take reasonable precautions to ensure that (a) statements are based on appropriate psychological literature and practice, (b) the statements are consistent with this Ethics Code, and (c) the statements do not cause the recipient to infer that a professional relationship (i.e., therapist–client) has been established with them personally.

Although these guidelines seem straightforward, many ambiguities may arise, especially involving Internet-based mental health groups. For example, psychologists may adopt many roles when they participate in Internet-based groups, including that of professional (e.g., “ask the expert,” group leader) or that of peer member (i.e., not identified as a psychologist) (Humphreys, Winzelberg, & Klaw, 2000). Each role may have different implications for APA Ethical Codes related to privacy, confidentiality, and personal relationships (Humphreys et al., 2000). For example, psychologists should not consider confidential or private any e-mail sent to individuals or to the whole group. E-mail is a permanent record that can be redistributed to many, including audiences not targeted for receipt. In addition, there may be a temptation to enter into an “electronic” personal therapeutic relationship because of individual queries from group members. However, this is strongly discouraged because psychologists cannot control the situation enough to ensure that ethical responsibilities are upheld (Humphreys et al., 2000). For example, there may be extreme limitations on what actions can be taken if an individual revealed to the psychologist that he or she is committing child abuse.

sensitive spots in their own personality that could affect performance, they must guard against the adverse influence of these problems on their encounters with patients.

Recently, “toolkits” have been developed to allow for the assessment of competence in the practice of clinical psychology (Kaslow, Grus, Campbell, Fouad, Hatcher, & Rodolfa, 2009). Such tools include: performance reviews, case presentation reviews, client outcome data, consumer surveys, self-assessments, and both oral and written examinations. By using tools such as these to assess

competence to practice clinical psychology in specific domains and with specific subpopulations, this will help ensure that clinicians are expert in areas in which they are providing services.

### **Privacy and Confidentiality**

Clinicians have a clear ethical duty to respect and protect the *confidentiality* of client information. Confidentiality is central to the client–psychologist relationship. When information is released without the client’s consent, the trusting relationship can be

irreparably harmed. Clinicians should be clear and open about matters of confidentiality and the conditions under which it could be breached. In today's climate, not all information is deemed "privileged." For example, third parties (e.g., insurance companies) may be paying for a client's therapy. They may demand periodic access to records for purposes of review. Sometimes school records that involve assessment data may be accessible to others outside the school system under certain conditions (e.g., if they are subpoenaed by a court). More and more, clinicians cannot promise absolute confidentiality.

Another question is whether all information *should* be confidential. Take, for example, the famous 1976 *Tarasoff* case. The events leading up to this case began when a client at a university counseling center told his therapist that he planned to kill his girlfriend. The therapist informed the campus police of the client's intentions. The police promptly took the client into custody, but because the girlfriend was away on vacation, they decided to release him. Subsequently, the client did indeed kill his girlfriend. Later, the woman's parents sued the therapist, the police, and the university, arguing that these three parties were negligent in not informing them of the threat. The California Supreme Court eventually ruled in favor of the parents, holding that the therapist was legally remiss in not informing all appropriate persons so that violence could have been avoided. Such a decision surely raises issues that would tax the judgment of nearly every clinician.

What makes all this even more ambiguous is that the legal precedents differ in various states. Not only must clinicians decide when and whom to inform and under what circumstances but they must also try to determine whether the *Tarasoff* decision applies in their state. Although the *Ethical Standards* clearly state that psychologists must disclose confidential information to protect the client/patient, psychologist, or others from harm, the clause "as mandated or permitted by law" still serves as a source of confusion for some. Clearly, this reinforces the idea that psychologists need to update themselves on current laws in their jurisdiction.

Confidentiality involves numerous other complications. For example, what about working with children? Issues of confidentiality can also arise when clinicians are treating patients with HIV, persons with disabilities, or the elderly, for example. Apparently, the lay public believes in the principle and importance of confidentiality. But they also understand that confidences may be broken in cases of suspected child abuse, potential suicide or murder, and other potentially life-threatening situations. Most clinicians agree. However, only in situations where they have felt the need to consult with a colleague or have had a potentially dangerous client are most clinicians willing to consider disclosure without client consent.

Finally, it is worth noting that a 1996 Supreme Court ruling, *Jaffe v. Redmond*, provides for privileged communication between licensed mental health professionals and individual adult patients in psychotherapy. Therefore, at least in federal courts, a psychotherapy patient's consent is necessary before her or his psychotherapy records, communications, and documents can be disclosed. Essentially, the Supreme Court's decision reinforces the view that privacy in psychotherapy is important. However, because this decision does not necessarily supersede state laws or state court decisions, clinical psychologists should become well acquainted with their state laws regarding confidentiality and privileged communication in psychotherapy.

## Human Relations

Dual relationships pose many ethical questions regarding *client welfare*. Sexual activities with clients, employing a client, selling a product to a client, or even becoming friends with a client after the termination of therapy are all behaviors that can easily lead to exploitation of and harm to the client. Although perhaps not very common, such events are clearly troublesome to the profession. Sexual liaisons can be equally damaging in supervisory relationships.

The worst of these dual relationships are sexual harassment and sexual intimacies between psychologists and current clients. Make no mistake, ethical

principles condemn such behaviors in no uncertain terms. What is alarming here is the apparent increase in the number of complaints filed against psychologists for sexual improprieties. Further, data on the impact of therapist–client sexual intimacies indicate that only a small percentage of clients reported any kind of positive effect from these intimacies (Pope, 2001).

Another aspect of client welfare involves the clinician’s willingness to terminate therapy when it is no longer helping the client. For example, in one case referred to an ethics committee, a clinical psychologist had been treating a child continuously for more than 2 years and had informed the parent that 2 more years of therapy would be necessary. A review committee decided that the treatment was not consistent with the diagnosis and that there was no evidence of reasonable progress (American Psychological Association, 1981).

What types of ethical dilemmas do psychologists most frequently face? This question was addressed in a study by Pope and Vetter (1992). To assess the most commonly encountered “ethically troubling incidents,” the authors surveyed a randomly selected sample of APA members. Approximately 80% of the respondents indicated that they had encountered at least one such incident

in the previous 1 or 2 years. The most frequently reported type of ethical dilemma involved confidentiality (breaching confidentiality because of actual or potential risks to third parties, suspected child abuse, or other reasons). Incidents involving blurred, dual, or conflicted relationships were the second most frequently reported (maintaining therapeutic boundaries with clients, personal vs. professional relationships with clients). The third most frequently cited category of ethically troubling incidents involved payment sources, plans, settings, and methods (e.g., inadequate insurance coverage for clients with urgent needs). Other areas in which ethically troubling incidents arose included training and teaching dilemmas, forensic psychology, research, conduct of colleagues, sexual issues, assessment, questionable or harmful interventions, and competence.

Psychologists, whether laboratory researchers or practicing clinicians, are being increasingly scrutinized for evidence of ethical violations. Ethical issues in research or in practice are not always easy to resolve, nor are violations easy to monitor. But if clinical psychology is going to survive as a profession, it must find ways of ensuring adherence to the highest standards of conduct.

## CHAPTER SUMMARY

Many contemporary issues challenge the field of clinical psychology. First, several training models are available, each with different emphases and outcomes. The scientist–practitioner model is clearly the most popular one, but some have become disenchanted with this model and question whether a true integration of science and practice can be achieved. Several training models that emphasize the practice of clinical psychology (Psy.D. degree, professional schools) have become increasingly popular in recent years. Finally, the clinical scientist model of training represents an alternative that emphasizes research and empirically supported approaches to assessment and intervention.

The professional regulation of clinical psychologists involves methods aimed at protecting the public interest and assuring competence. Certification and licensure occur at the state level and are attempts to make the public aware of those who are deemed to be well-trained and competent clinical psychologists. ABPP and membership in the *National Register* are more advanced forms of certification pursued by some clinical psychologists.

Although a large percentage of clinical psychologists work in private practice settings, changes in health care suggest that private practice, as we once knew it, will never be the same. Specifically, most Americans subscribe to managed care plans that, in

general, limit the number of sessions, the rates of reimbursement, and the conditions that can receive (reimbursable) treatment. This “revolution” will affect the roles and activities of clinical psychologists in the future. Telehealth will also likely influence the activities of the clinical psychologist in the future. Ambulatory assessment will be more common, as will computer-assisted assessment and treatment. Another hotly contested issue that is likely to affect clinical training in the future is the pursuit of prescription privileges. Achievement of this goal

may redefine the field and require a major overhaul of the doctoral training curriculum.

In this chapter, we have also explored the topics of cultural competence and cultural and gender sensitivity. In an increasingly pluralistic society, clinical psychologists must be trained to develop mental health services that are appropriate and effective for various cultural groups. Finally, we have presented an overview of the ethical standards to which clinical psychologists are held accountable, including issues of competence, confidentiality, and human relations.

## KEY TERMS

### **Academy of Psychological Clinical Science**

An organization of clinical psychology programs and clinical psychology internship sites committed to the clinical scientist model of training. The academy is affiliated with the Association for Psychological Science (APS).

**ambulatory assessment** Assessing the emotions, behaviors, and cognitions of individuals as they are interacting with the environment in real time.

### **American Board of Professional Psychology (ABPP)**

An organization that offers certification of professional competence in many psychology specialties. ABPP certification may be sought after 5 years of postdoctoral experience and is granted on the basis of an oral examination, the observed handling of a case, and records from past cases.

**certification** A professional regulation that prohibits people from calling themselves psychologists while offering services to the public for a fee unless they have been certified by a state board of examiners.

**client welfare** An ethical principle that calls upon psychologists to respect the integrity of their clients and to guard the relationship from exploitation. This principle encompasses ethical standards such as avoiding dual relationships with clients and discontinuing treatment when it is clearly no longer beneficial.

**clinical scientist model** A training model that encourages rigorous training in empirical research methods and the integration of scientific principles into clinical practice.

**combined professional-scientific training program** A training model that offers a combined specialty in clinical, counseling, and school psychology.

**competence** An ethical principle that calls upon psychologists to recognize the boundaries of their professional expertise and to keep up-to-date on information relevant to the services they provide.

**confidentiality** An ethical principle that calls upon psychologists to respect and protect the information shared with them by clients, disclosing this information only when they have obtained the client’s consent (except in extraordinary cases in which failing to disclose the information would place the client or others at clear risk for harm).

**cultural competence** A knowledge and appreciation of other cultural groups and the skills to be effective with members of these groups.

**diversity** The presence of differences, or variety (as in “cultural diversity”).

**Doctor of Psychology (Psy.D.) degree** An advanced degree in psychology with a relative emphasis on clinical and assessment skills and less emphasis on research competence.

**ethical standards** As pertains to psychologists, enforceable rules of professional conduct identified by the APA.

**health maintenance organization (HMO)** A managed care system that employs a restricted number of providers to serve enrollees. In an HMO, costs for all services are fixed.

**licensing** A professional regulation that is more stringent than certification. It specifies not only the nature of the title and training required for licensure but also the professional activities that may be offered for a fee.

**managed care** A profit-driven, corporate approach to health (and mental health) care that attempts to contain costs by controlling the length and frequency of service utilization, restricting the types of service provided and requiring documentation of treatment necessity and efficacy.

**preferred provider organization (PPO)** A managed care system that contracts with outside providers to supply services to members. These outside providers are reimbursed for their services at a discounted rate in return for an increased number of member referrals.

**prescription privileges** The legal ability to prescribe medication. There is currently a heated debate among clinical psychologists as to the desirability of obtaining this privilege.

**professional schools** Schools offering advanced training in psychology that differs from training offered by traditional doctoral programs. In general, professional schools offer relatively little training in research, emphasizing instead training in assessment and psychotherapy.

**scientist-practitioner model** The predominant training model for clinical psychologists (also known as the Boulder model). This model strives to produce professionals who integrate the roles of scientist and practitioner (i.e., who practice psychotherapy with skill and sensitivity and conduct research on the hypotheses they have generated from their clinical observations).

**Tarasoff case** A landmark 1976 case in which the California Supreme Court ruled that a therapist was legally remiss for not informing all appropriate parties of a client's intention to harm. This case legally established a therapist's "duty to protect."

**Telehealth** The delivery and oversight of health services using telecommunication technologies (e.g., Web sites, e-mail, telephones, online videoconferencing, and transmitting medical images for diagnosis) that are often used as a means to assess, evaluate, and treat psychological and behavioral problems.

## WEB SITES OF INTEREST

To visit any of the following Web sites, go to [www.wadsworth.com](http://www.wadsworth.com) and click Links.

3-1 American Board of Professional Psychology  
<http://www.abpp.org/>

3-2 Association of State and Provincial Psychology Boards  
<http://www.asppb.org/>

3-3 National Council of Schools and Programs of Professional Psychology  
<http://www.ncspp.info>

3-4 Academy of Psychological Clinical Science  
<http://acadpsychclinicalscience.org>

3-5 National Register of Health Service Providers in Psychology  
<http://www.nationalregister.org/>

3-6 Example of Licensure Requirements: Missouri  
<http://www.sos.mo.gov/adrules/csr/current/20csr/20c2235-2.pdf>

- 3-7 American Psychological Association Ethical Principles of Psychologists and Code of Conduct  
<http://www.apa.org/ethics/code/>
- 3-8 APA Guidelines for Providers of Psychological Services to Ethnic, Linguistic, and Culturally Diverse Populations  
<http://www.apa.org/pi/oema/resources/policy/provider-guidelines.aspx>
- 3-9 APA Guidelines for Psychological Practice with Girls and Women  
<http://www.apa.org/practice/guidelines/girls-and-women.pdf>
- 3-10 Consortium of Combined-Integrated Doctoral Programs in Psychology (CCIDPIP)  
<http://www.jmu.edu/ccidpip/index.htm>
- 3-11 Therapy, ethics, malpractice, forensics, critical thinking (Ken Pope's Web site)  
<http://kspope.com/index.php>

# 4

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## Research Methods in Clinical Psychology

### FOCUS QUESTIONS

1. What are the advantages and limitations of the case study method?
2. What are the advantages and limitations of the correlational method?
3. What are the advantages and limitations of longitudinal studies?
4. What are the basic components of the experimental method?
5. What are the major ethical issues to consider when conducting clinical research?

### CHAPTER OUTLINE

#### Introduction to Research

#### Methods

Observation

BOX 4-1: *Clinical Applications: What Case Studies Can Tell Us About Phobias and Early Trauma*

BOX 4-2: *Clinical Applications: Generating Hypotheses from Therapy*

Epidemiological Methods

Correlational Methods

Cross-Sectional Versus Longitudinal Approaches

The Experimental Method

BOX 4-3: *Clinical Psychologist Perspective: Scott O. Lilienfeld, Ph.D.*

Single-Case Designs

BOX 4-4: *Clinical Applications: The Treatment of Mixed Anxiety and Depression*

Mixed Designs

Strengths and Weaknesses of Research Methods

#### Statistical Versus Practical Significance

BOX 4-5: *Graduate Student Perspective: Elizabeth A. Martin*

#### Research and Ethics

BOX 4-6: *Who Should Be Studied?*

BOX 4-7: *Sample Consent form*

#### CHAPTER SUMMARY

#### KEY TERMS

#### WEB SITES OF INTEREST

When clinical psychologists are depicted on TV, it often seems that the field is based largely on intuition and therapy is similar to an emotional conversation with a close friend. Sometimes old-fashioned approaches to practice, such as dream interpretation, hypnosis, or projective testing are depicted. Although some of these approaches still exist today, contemporary clinical psychology is clearly defined as a science. Our understanding of why individuals develop symptoms, how these symptoms exacerbate or ameliorate, and our practices for best treating psychological symptoms is based on rigorous scientific study and the accumulation of empirical findings over the past several decades. For this reason, the scientist-practitioner and clinical science models remain the pre-eminent philosophy in training clinical psychologists. To be a successful clinical psychologist, most believe that it is essential to be skilled both in research methods and evidenced-based clinical practice skills. Indeed, each of these areas of competency informs one another. Even clinical psychologists who see clients full-time in a private practice must have a knowledge and mastery of research methods. These skills enable them to critically evaluate different approaches to assessment and intervention and ultimately choose the approaches that are most likely to be useful and effective.

In this chapter, we present a brief overview of some of the principal methods, strategies, and issues in clinical research. Specific research questions (e.g., therapy outcome studies) will be addressed at appropriate points later in the book. More comprehensive and technical discussions of research methods in clinical psychology may be found elsewhere (e.g., Kazdin, 2003).

## INTRODUCTION TO RESEARCH

Someone once remarked that a major portion of clinical training consists of erasing students' misconceptions about the reasons people behave the way

they do. For example, are the following statements true?

1. If patients talk about suicide, this means that they will not try it.
2. Ridding patients of symptoms without providing insight means that those symptoms will return later in another guise.
3. Projective tests prevent patients from successfully managing the impressions they wish to convey.
4. All a person needs to become a good therapist is a caring, empathic attitude.

All of these are common beliefs once held—and for that matter, still held—by some people, clinicians, and laypeople alike. Are they true? Probably not. Research employing the methods described in this chapter can shed light on these and many other issues. Human behavior is terribly complex—so complex that theories to explain it abound. So many factors affect a given behavior at a given time in a given place that we must be skeptical about explanations that appear simple or inevitable. In fact, a healthy skepticism is a directing force behind the scientist's quest for knowledge or the clinician's search for increasingly effective ways of serving clients.

Because easy, simple, or traditional explanations are so often wrong or incomplete, increasingly sophisticated methods of generating satisfactory explanations for behavior have evolved. We now use better methods to make the kinds of systematic observations about behavior that can be publicly verified. These methods have changed over the years and will continue to change; there are no perfect scientific methods. However, all ideas, hypotheses, or even clinical hunches must be stated clearly and precisely so that they can be tested by other observers. Only ideas that are stated in a manner that offers a clear opportunity for disproof are satisfactory ones.

Research has several purposes. First, it allows us to escape the realm of pure speculation or appeal to authority. For example, we do not just argue whether cognitive-behavior therapy works; we

conduct the kind of research that will demonstrate its effectiveness or lack of it. Questions are settled in the forum of publicly verifiable and objective observation. Over the long haul, such procedures are better vehicles for settling issues than simple appeals to reason. These research procedures enable us to accumulate facts, establish the existence of relationships, identify causes and effects, and generate the principles behind those facts and relationships.

Research also helps us extend and modify our theories as well as establish their parsimony and utility. There is an intimate relationship between theory and research. Theory stimulates and guides the research we do, but theories are also modified by the outcomes of research. For example, Aaron Beck, a pioneer in the study of depression, observed many years ago that depressed patients often exhibit personality features that could be categorized into one of two types: sociotropic (excessively socially dependent) and autonomous (excessively achievement oriented). Initially, Beck proposed that extreme sociotropy or extreme autonomy traits predispose a person to depression. However, subsequent research did not support this proposition. Investigators found that there were individuals who presented with rather extreme sociotropy or extreme autonomy but who were not depressed.

These results challenged Beck's initial theory and led to a reformulation of how personality and depression may be related. The revised theory, labeled the congruency hypothesis, proposes that it is the interaction between personality style (sociotropic or autonomous) and the experience of thematically related negative life events that leads to depression (Beck, 1983). Specifically, this theory predicts that a highly sociotropic person who experiences relationship failures (negative events quite salient to a highly dependent person) will become depressed, whereas this is not necessarily true for a highly autonomous person (for whom these particular kinds of negative events are less relevant). In other words, negative life events must be *congruent* with one's personality style for depression to develop. In general, research results have been more supportive of Beck's revised theory

(e.g., Bartelstone & Trull, 1995; Husky, Mazure, Maciejewski, & Swendsen, 2007; C. J. Robins, 1990).

This example illustrates how research can inform our theories in a type of feedback-loop system. Of course, the ultimate reason for research is the enhancement of our ability to predict and understand the behavior, feelings, and thoughts of the people served by clinical psychologists. In the final analysis, only better research will enable us to intervene wisely and effectively on their behalf.

## METHODS

As noted earlier, there are many methods of research, each with its own advantages and limitations. Therefore, no method by itself will answer every question definitively. But together, a variety of methods can significantly extend our ability to understand and predict. We begin with an overview of the many forms of observation used by clinical scientists. We then summarize epidemiological and correlational approaches, longitudinal versus cross-sectional approaches, the classic experimental method, single-case designs, and finally, mixed designs.

### Observation

The most basic and pervasive of all research methods is observation. Experimental, case study, and naturalistic approaches all involve making observations of what someone is doing or has done.

**Unsystematic Observation.** Casual observation does little by itself to establish a strong base of knowledge. In fact, unsystematic observation can lead people to erroneous conclusions. However, it is through such observation that we develop hypotheses that can eventually be tested more systematically. For example, suppose a clinician notes on several different occasions that when a patient struggles or has difficulty with a specific item on an achievement test, the effect seems to carry over to the next item and adversely affect performance. This observation leads the clinician to formulate

the hypothesis that performance might be enhanced by making sure each failure item is followed by an easy item on which the patient will likely succeed. This should help build the patient's confidence and thus improve performance. To test this prediction, the clinician might administer an experimental version of the achievement test in which difficult items are followed by easy items. It would then be relatively easy to develop a study that would test this hypothesis in a representative sample of clients.

**Naturalistic Observation.** Although carried out in real-life settings, *naturalistic observation* is more systematic and rigorous than unsystematic observation. It is neither casual nor freewheeling but is carefully planned in advance. However, there is no real control exerted by the observer, who is pretty much at the mercy of freely flowing events. Frequently, observations are limited to a relatively few individuals or situations. Thus, it may be uncertain how far one can generalize to other people or other situations. It is also possible that in the midst of observing or recording responses, the observer

may unwittingly interfere with or influence the events under study.

An example of a study using the naturalistic observation method might be an investigation of children's playground behavior to understand the association between aggression and friendship. Trained observers would stand unobtrusively on a playground watching youth whose parents have consented to be part of a research study. At regular time intervals (e.g., every 90 seconds), the observer would locate a specific child and record the type of play that the child engages in, the number of children with whom the child is interacting, and whether the child is engaging in any type of aggressive behavior. Over multiple observations, perhaps every week over an entire academic year, data will be available to understanding whether children who behave aggressively with their peers evidence a declining number of peer interactions over time. This observational study might yield interesting data about the association between aggression and friendship. But with only a few child patients from this particular playground, can wide generalizations



Bill Aron/PhotoEdit

Observation is the most basic of all research methods.

be made? Are these children's behaviors similar to those in other communities or schools where the overall atmosphere may be very different? Or were the children aware of the observer's presence, and could they have altered their play behavior to somehow "impress" the observer?

Investigators committed to more rigorous experimental methods sometimes condemn naturalistic observation as too uncontrolled. However, this judgment may be too harsh. As with unsystematic observation, this method can serve as a rich source of hypotheses that can be subjected to careful scrutiny later. Naturalistic observations do bring investigators closer to the real phenomena that interest them. Such observations avoid the artificiality and contrived nature of many experimental settings. For example, regardless of psychologists' feelings about psychodynamic theory, most acknowledge that Freud's clinical observation skills were extraordinary. Freud used his own powers of observation to construct one of the most influential and sweeping theories in the history of clinical psychology. It is important to recall that Freud had

available no objective tests, no computer printouts, and no sophisticated experimental methods. What he did possess was the ability to observe, interpret, and generalize in an impressive fashion.

**Controlled Observation.** To deal in part with the foregoing criticisms of unsystematic and naturalistic observation, some clinical investigators employ *controlled observation*. While the research may be carried out in the field or in relatively natural settings, the investigator exerts some degree of control over the events. Controlled observation has a long history in clinical psychology. For example, it is one thing to have patients tell clinicians about their fears or check off items on a questionnaire. However, observing the ability of a flight-phobic client to successively approach and ultimately board and fly on an airplane under controlled conditions provides a rich, more complete assessment of the extent of the fear. This controlled observation would allow a clinician to gain some real insight into the nature of the client's emotions and behavior.



Michael Newman/PhotoEdit

Controlled observation can be used to assess behavior in infrequently encountered circumstances.

Controlled observation can also be used to assess communication patterns between couples or spouses. Instead of relying on distressed couples' self-reports of their communication problems, researchers may choose to actually observe communication styles in a controlled setting. Specifically, partners can be asked to discuss and attempt to resolve a moderate relationship problem of their choosing (e.g., partner spends too much money on unnecessary things) while researchers observe or videotape the interaction behind a one-way mirror. Although not a substitute for naturalistic observation of conflict and problem solving in the home, researchers have found this controlled observation method to be a useful and cost-effective means of assessing couples' interaction patterns.

**Case Studies.** The *case study method* involves the intensive study of a client or patient who is in treatment. Under the heading of case studies we include material from interviews, test responses, and treatment accounts. Such material might also include

biographical and autobiographical data, letters, diaries, life-course information, medical histories, and so on. Case studies, then, involve the intensive study and description of one person. Such studies have long been prominent in the study of psychological problems and in the description of treatment methods. The great value of case studies resides in their richness as potential sources of understanding and as hypothesis generators. They can serve as excellent preludes to scientific investigation (see Box 4-1).

Over the years, many case studies have been influential in establishing our understanding of clinical phenomena. Following are some classic examples:

*The Case of Dora* (Freud, 1905/1953a) taught us about the concept of resistance in therapy.

*The Case of Little Hans* (Freud, 1909/1955) extended our understanding of phobias.

*The Three Faces of Eve* (Thigpen & Cleckley, 1957) outlined the anatomy of multiple personalities.

#### BOX 4-1 Clinical Applications: What Case Studies Can Tell Us About Phobias and Early Trauma

1. Specific phobias are unreasonable fears that are out of proportion to any real danger to the individual. Many learning theorists believe specific phobias are acquired through classical conditioning. As a prototypic experiment, these theorists often cite the classic Watson and Rayner (1920) study of Little Albert. Albert was conditioned to fear white rats by discovering that each time he began to play with one, a loud and unpleasant noise occurred. Over trials, Albert developed what appeared to be a full-blown phobia of rats and similar furry objects.

However, Davison, Neale, and Kring (2004) have noted that despite what learning theory seems to teach us, clinical reports and histories fail to support the Little Albert model. Although some specific phobias could develop in that manner, they usually occur without any prior frightening experiences in the situation. Individuals who fear elevators, snakes, or high places rarely report an early bad experience with such places or things. It is not clear that laboratory research on specific phobias is carried out in real-enough settings for researchers to say that the laboratory imitates real life.

2. Everybody "knows" that early childhood trauma is likely to predispose us to unhappiness and failure. Take the following example:

A girl who is plain and lacks grace; whose mother favors her two younger brothers; whose mother nagged her, creating constant feelings of shame and estrangement; whose father left home when she was young; whose mother died when the girl was only 9, leaving her in the care of a grandmother; whose grandmother kept her away from other children and deprived her of most of her childhood; who was so lonely that her only pursuits were reading, daydreaming, and walking.

Such a person must be ripe for failure, emotional problems, or perhaps destined to become a social misfit (White, 1976). But as White asks wryly, who is it we are describing? It is none other than Eleanor Roosevelt, depicted by White (1976) as "the champion of the poor and the oppressed; ultimately [becoming] chairman [sic] of the committee which drew up the United Nations Declaration of Human Rights" (p. 522).

*The Mask of Sanity* (Cleckley, 1964) provided detailed accounts of the lives of psychopaths.

*Cases in Behavior Modification* (Ullman & Krasner, 1965) demonstrated the efficacy of behavioral treatments with single cases.

Nothing will ever likely supplant the case study as a way of helping clinicians to understand that unique patient who sits there before them. As Allport (1961) so compellingly argued, individuals must be studied individually. Case studies have been especially useful for (a) providing descriptions of rare or unusual phenomena or novel, distinctive methods of interviewing,

assessing, or treating patients; (b) disconfirming “universally” known or accepted information; and (c) generating testable hypotheses (Kazdin, 2003) (see Box 4-2).

There is, of course, a downside to case study methods. For example, it is difficult to use individual cases to develop universal laws or behavioral principles that apply to everyone. Likewise, one case study cannot lead to cause–effect conclusions because clinicians are not able to control important variables that have operated in that case. For example, one patient may benefit enormously from psychodynamic therapy for reasons that have less to do with the therapy method than with the personality

#### BOX 4-2 Clinical Applications: Generating Hypotheses from Therapy

Karl was an unmarried veteran referred to a Veterans Administration outpatient clinic. It did not take long for the therapist to realize that Karl's problems were not of the typical variety. Karl was a bit anxious or, at times, depressed, but his main problem seemed to be a near total lack of interpersonal and social skills. He had no job, and he lived off his small government pension along with whatever support his mother could provide. Aside from his mother, with whom he lived, he rarely interacted with anyone except perhaps to buy cigarettes or get change from a disinterested bus driver. He certainly had no friends.

Therapy, then, became not an insight-oriented, uncovering process but a teaching process. The goals became teaching Karl to find work, enabling him to attend night school to learn a trade, and inculcating at least a few basic social skills. The focus was on how to find a job, keep a job, talk with others, and gain their interest. Hour after hour was spent on these tasks during the therapy.

But progress was slow. It was not that Karl failed to understand or was totally disinterested or even loath to try out newly learned skills. The difficulty was that even when Karl attempted a new behavior and was successful, that success seemed to have little effect on his subsequent behavior. This was strange indeed. Psychologists quickly learn that reinforcement strengthens the likelihood of the reinforced behavior in the future, given similar conditions. But not so with Karl. Reinforcement seemed to do little to raise his expectancies that the behavior would work again.

Karl almost seemed to want to be the singular exception to a prime rule of learning theory—that reinforcement enhances habit strength!

The therapist and his consultants puzzled over this for months. For example, after applying for a job and getting it, Karl's confidence did not increase at all. Instead, he attributed his success to luck, not to his own efforts. Several other similar episodes followed. After much urging by the therapist, Karl asked a female coworker for a date. She accepted. But again, Karl merely remarked on his good luck.

Eventually, the therapist decided that perhaps Karl believed that the occurrence of reinforcement was outside his personal control. If so, the inability of success to increase his confidence began to make sense. He was not responding in defiance of learning theory. Instead, the therapist's conceptualization had been incomplete. Reinforcement will “stamp in” a behavior, but only when that behavior is seen as causally related to the subsequent reinforcement. Karl believed chance rather than personal skill was operative. And under chance conditions, reinforcement carries no implications for the future. Thus, the riddle of Karl's behavior seemed to have been solved. Or at the very least, an important hypothesis had been formulated. In fact, a great deal of empirical research lay ahead. Only after several years of empirical research could the utility of the chance-versus-skill hypothesis be verified. This general research field came to be referred to as *internal–external control* (Rotter, 1966), or *locus of control*.

characteristics of that patient. Only subsequent controlled research can pin down the exact causes of, or factors influencing, change.

### Epidemiological Methods

*Epidemiology* is the study of the incidence, prevalence, and distribution of illness or disease in a given population. Several terms are commonly used in epidemiology. Incidence refers to the rate of new cases of illness that develop within a given period of time, whereas prevalence refers to the overall rate of cases (old or new) within a given period. *Incidence* gives us some sense of whether the rate of new cases of the illness or disorder is on the increase (e.g., is the rate of newly diagnosed AIDS cases increasing this year compared to last year?). *Prevalence* rates estimate what percentage of the target population is affected by the illness or disorder. For example, the lifetime prevalence rate of schizophrenia is estimated at 1%, suggesting that a member of the general population has 1 chance in 100 of developing this disorder in his or her lifetime.

Historically, epidemiology has been most closely associated with medical research designed to help understand and control the major epidemic diseases, such as cholera and yellow fever. The simple counting of cases is central to this research method. The expectation is that analyzing the distribution of cases in a community or region and uncovering the distinguishing characteristics of the affected individuals or groups will teach us something about the causes of a particular disease and the methods by which it spreads. Epidemiological methods can also be quite important in identifying groups of individuals who are at risk.

A well-known example of epidemiological research is the study *Smoking and Health* (Surgeon General, 1964). This study linked cigarette smoking with lung cancer by the simple methods of counting and correlating. Although there was great debate as to whether smoking *caused* lung cancer, there were definite relationships and associations between smoking and lung cancer (e.g., about 90% of lung cancer in males was associated with

cigarette smoking, and the amount and duration of smoking were positively correlated with the probability of cancer). It is true that epidemiological research frequently suggests the possibility of multiple causation (several factors must be present before the disease occurs, or the greater the number of associated factors that are present, the greater the risk of the disease). It is equally true that obtained correlations *suggest* causes rather than definitively prove causation. However, the entire story of causation need not be known before preventive steps can be taken. Thus, we may not be sure that smoking causes lung cancer, or we may believe that some inherited predisposition interacts with smoking to produce cancer. Nevertheless, we know that groups of males who quit smoking reduce their risk of lung cancer.

As another example, in the field of mental illness, a number of studies have pointed out the relationship between schizophrenia and either socioeconomic class or factors of social disorganization (Faris & Dunham, 1939; Hollingshead & Redlich, 1958). Again, though such results hardly convey the essence of schizophrenia, they do tell us about major demographic factors that are associated with its prevalence. Armed with this information, clinicians can identify people whose potential vulnerability to schizophrenia is high. They can then establish special programs that will provide early diagnostic evidence of its onset in such people, or they can establish treatment programs that will be readily available to those at risk of developing schizophrenia.

Much epidemiological research is based on surveys or interviews. However, survey and interview data present a number of issues and potential problems. For example, how do we define a mental health problem, and having done so, where do we locate cases for counting? Checking only clinics and hospitals means ignoring other possible locales. These difficulties are magnified when we become interested in milder forms of dysfunction. In effect, we need objective methods of defining and measuring a problem. Further, we need survey procedures that will enable us to estimate the problem's true incidence or prevalence and not just to locate

those cases that are already under treatment or that have identified themselves by seeking treatment. We need to sample residences (block by block or area by area), not just clinics, hospitals, and agencies. Another potential problem with survey data is that respondents may get caught up in the need to say “the right thing.” They may want to report only socially desirable things and deny other, less socially desirable experiences. For example, respondents may be unwilling to admit to having experienced serious symptoms of psychopathology (e.g., auditory hallucinations) because they may be embarrassed.

In addition, some respondents may be asked to remember things from several years ago. Such retrospective data can be subject to all sorts of distortions, omissions, or embellishments. For example, one study (Henry, Moffitt, Caspi, Langley, & Silva, 1994) found that 18-year-olds who had been assessed on a regular basis from birth were not particularly accurate in their retrospective reports of certain types of childhood experiences (e.g., family conflict, their own depressive or anxious symptoms, or their own level of hyperactivity). These findings are noteworthy because clinical psychologists often request this type of retrospective information from clients or research participants. The point here is that we should attempt to assess our clients and research participants *at the time of interest* and not rely exclusively on retrospective reports.

Recently, several large-scale, methodologically sound epidemiological studies of mental disorder have been conducted (e.g., the National Comorbidity Study, Kessler 2005a, 2005b; the Great Smoky Mountains Study of Youth, Costello et al., 1996). For example, Kessler et al. (2005a, 2005b) administered a structured diagnostic interview to a national probability sample in the United States to obtain estimates of the 12-month and lifetime prevalence of a variety of mental disorders. Further, information was obtained so that the typical age of onset for each disorder could be estimated. Some of these results appear in Table 4-1. Of particular interest are the differences in age of onset among disorders. In particular, impulse-control and anxiety disorders had a

younger median age of onset (approximately 11 years old), whereas substance use disorders and mood disorders typically occurred in late adolescence or early adulthood (20 years old and 30 years old, respectively). Although not presented in Table 4-1, Kessler et al. (2005a, 2005b) reported that women were at greater risk for developing both anxiety and mood disorders, whereas men were at greater risk for developing impulse-control and substance use disorders. Therefore, being a man is a *risk factor* for impulse-control and substance use disorders. Risk factors need not be limited to gender but can involve other sociodemographic features as well (socioeconomic status, age, urban vs. rural residence, etc.).

### Correlational Methods

We have seen that epidemiology often relies on correlational methods; that is, it assesses the correlates (risk factors) of an illness or disorder. We now focus more specifically on *correlational methods*. These techniques enable us to determine whether variable X is related to variable Y. For example, is a certain pattern of scores on an intelligence test related to specific psychiatric diagnostic categories? Are particular patient characteristics related to therapy outcomes? Is depression related to gender?

**The Technique.** To correlate two variables, we first obtain two sets of observations. For example, suppose we administer two tests to 10 study participants. One test measures anxiety and the other measures a belief in external (rather than internal) control. These hypothetical data are shown in Table 4-2. When these data are correlated, the result is a correlation coefficient; in this case, it is  $+0.76$ , indicating a strong positive relationship. As anxiety scores increase, so do scores on belief in external control, which means that anxiety and feelings of lack of control are positively related.

The Pearson product-moment *correlation coefficient* is a commonly used index to determine the degree of relationship between two variables. This is symbolized by  $r$ , which may vary anywhere from  $-1.00$  to  $+1.00$ . An  $r$  of  $+1.00$  denotes that the two

**TABLE 4-1 Lifetime and 12-month Prevalence of DSM-IV Psychological Disorders and Median Age of Onset**

	Lifetime	12-Month	Age of Onset
<b>Anxiety Disorders</b>			
Panic Disorder	4.7	2.7	24
Agoraphobia without panic	1.4	0.8	20
Specific Phobia	12.5	8.7	7
Social Phobia	12.1	6.8	13
Generalized Anxiety Disorder	5.7	3.1	31
Posttraumatic Stress Disorder	6.8	3.5	23
Obsessive-compulsive Disorder	1.6	1.0	19
Separation Anxiety Disorder	5.2	0.9	7
<b>Any Anxiety Disorder</b>	<b>28.8</b>	<b>18.1</b>	<b>11</b>
<b>Mood Disorder</b>			
Major Depressive Disorder	16.6	6.7	32
Dysthymia	2.5	1.5	31
Bipolar I and II disorders	3.9	2.6	25
<b>Any Mood Disorder</b>	<b>20.8</b>	<b>9.5</b>	<b>30</b>
<b>Impulse-Control Disorders</b>			
Oppositional Defiant Disorder	8.5	1.0	13
Conduct Disorder	9.5	1.0	13
Attention-deficit/Hyperactivity Disorder	8.1	4.1	7
Intermittent Explosive Disorder	5.2	2.6	15
<b>Any Impulse-Control Disorder</b>	<b>24.8</b>	<b>8.9</b>	<b>11</b>
<b>Substance Use Disorders</b>			
Alcohol Abuse	13.2	3.1	21
Alcohol Dependence	5.4	1.3	23
Drug Abuse	7.9	1.4	19
Drug Dependence	3.0	0.4	21
<b>Any Substance Use Disorder</b>	<b>14.6</b>	<b>3.8</b>	<b>20</b>
<b>Any DSM-IV Disorder</b>	<b>46.4</b>	<b>26.2</b>	<b>14</b>

SOURCE: *Lifetime and 12-month rates* represent the proportion of United States residents with the psychological disorder.

Adapted from: Kessler, Berglund et al. (2005); Kessler, Chiu et al. (2005).

variables are perfectly and positively related. An  $r$  of  $-1.00$  indicates a perfect negative relationship. The  $r$  of  $+.76$  from the data of Table 4-2 signifies a high but less than perfect relationship.

A *scatterplot* of the data points for the two variables from Table 4-2 is shown in Figure 4-1. Each data point corresponds to one participant's scores on both anxiety and control. For example, the data point nearest the lower left corner represents Ralph's scores of 4 on anxiety and 2 on control. Figure 4-2 presents scatterplots for several correlations.

The more nearly perfect a relationship, the closer to a straight line the data points will be. As  $r$  approaches zero (no relationship), the data points are scattered in a nearly random fashion throughout the scatterplot.

**The Question of Causality.** As noted previously in the case of epidemiological research, correlational methods cannot answer the question of cause and effect. No matter how logical it may appear, we cannot, on the basis of a correlation

**TABLE 4-2 Hypothetical Data for the Correlation Between Anxiety and Control**

Subject	Anxiety Score	Control Score
Ann	26	22
Jane	24	28
Tom	20	22
Juan	20	14
Esther	16	18
Indira	12	22
Roberto	12	6
Kevin	10	14
Jasmine	6	12
Ralph	4	2

alone, assert that one variable has caused another. For example, suppose that an investigator discovers a correlation between being diagnosed with schizophrenia and indices suggesting high levels of the neurotransmitter dopamine in the central nervous system. Does this mean that schizophrenia is caused by excessive levels of dopamine or, alternatively, that the experience of an episode of schizophrenia

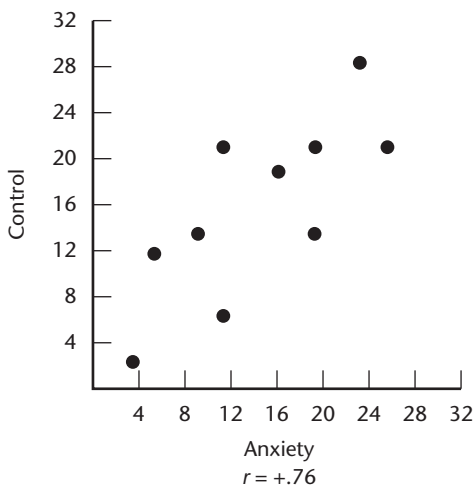
results in changes in dopamine levels? Maybe the real culprit is a third variable. For example, many patients with schizophrenia have a long history of taking psychoactive drugs (e.g., amphetamines); such long-term use could conceivably affect neurotransmitter levels. Therefore, the investigator must avoid assuming that one variable causes the other because there is always the possibility that a third (unmeasured) variable is involved.

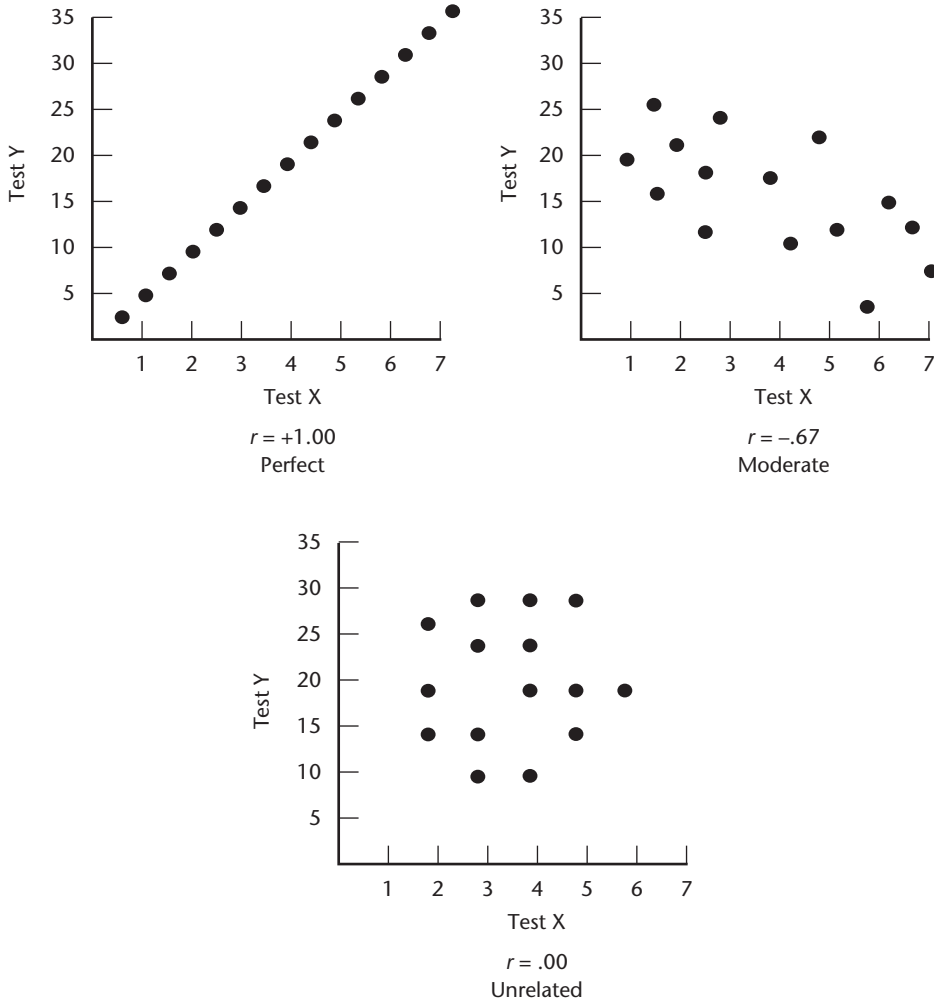
A classic example of the *third-variable problem* is the observation that the number of crimes is significantly correlated with the number of churches and synagogues in a community. Does this mean that religion *causes* crime? No. The third variable that has been neglected in this example is population. Both the crime rate and the number of churches and synagogues are positively correlated with population, and they are correlated with each other because both increase as the population increases.

Correlational methods *can* demonstrate that a cause–effect hypothesis is not valid. If the expectation is that variable A causes variable B, we should at least be able to show they are correlated. Failure to find a significant relationship most certainly contradicts the hypothesis. Also, although causal inferences are not possible from correlation coefficients, this is not to say that cause–effect relationships do not in fact exist.

However, such relationships must be demonstrated through experimental methods (to be discussed later). There are research methods that can help vitiate the causation problem, such as matching participants on other variables that might be contributing to the obtained relationship or using longitudinal methods that study variables before a given disorder develops. But these are often cumbersome and expensive procedures and thus are less frequently employed.

Sometimes we are forced to use correlational methods because we cannot either ethically or practically manipulate certain variables, such as age, sex, marital status, or birth order. For example, we cannot ethically train someone to abuse a child in order to study the effects of maltreatment on PTSD. Certain

**FIGURE 4-1** Scatterplot of data from Table 4-2.



**FIGURE 4-2** Scatterplots showing several different magnitudes of relationships.

things can only be studied by observing their occurrences; creating them is not an acceptable alternative.

**Factor Analysis.** Derived from the correlational strategy, *factor analysis* is a way of examining the interrelationships among a number of variables at the same time. This statistical method uses many separate correlations to determine which variables change in concert and, thus, can be considered

functionally related. The idea is that when variables change together, they must have some element in common that underlies their relationship.

Consider the following example. Suppose we are trying to identify the basic elements of what is called “clinical skill.” First, we ask a panel of judges to select 100 clinicians who are known to have excellent records in providing skilled services. Then, we administer a large number of tests that

are believed to assess a variety of clinical skills and achievements. Let us suppose that we use the following seven tests:

- A = IQ test
- B = Mathematical achievement test
- C = Test of spatial reasoning
- D = Test of analytical reasoning
- E = Measure of empathy
- F = Measure of personal adjustment
- G = Measure of altruism

Next, we correlate each of these tests with every other test. This gives us a correlation matrix in which the correlations between all possible pairs of tests are displayed. Such a matrix, with hypothetical correlations entered, is shown in Table 4-3.

When we look at the correlation matrix, an interesting pattern emerges. Measures A, B, C, and D all show a strong positive relationship (correlations range from .70 to .80). At the same time, E, F, and G also correlate highly with one another (correlations range from .75 to .85). But there is virtually no relationship between the group E, F, G and the group A, B, C, D (e.g., the correlation between A and E is .15, between B and F is .10, and between D and G is .12). These patterns indicate that A, B, C, and D appear to be measuring a

similar underlying dimension, or *factor*. Similarly, E, F, and G belong together, suggesting a second underlying dimension. In effect, factor analysis does statistically with large correlation matrices what was done here by inspection with correlations from seven measures. If we had 200 measures, simple inspection would have been an impossible task.

From the previous example, it would appear that two factors or dimensions are involved. Let us call them Factor 1 (derived from the correlations among A, B, C, and D) and Factor 2 (derived from E, F, and G). Together, these two factors account for the significant relationships in the matrix. Usually, these factors are then named. This is a highly inferential phase that can occasionally lead to communication problems. Sometimes the names chosen convey information different from what was intended. However, in our example, where Factor 1 involves A, B, C, and D, perhaps we could choose the name Intellectual Ability. Factor 2 is more difficult to name because it includes measures of empathy, adjustment, and altruism. Perhaps Healthy Altruism would be appropriate.

Factor analysis is an especially good way of helping organize in a coherent fashion the relationships that emerge from large arrays of data. As a way of identifying the basic elements of clinical skill (as in the example) or those of personality, factor analysis is not the ultimate answer. After all, what emerges from a factor analysis is determined by the nature of the measures included in the first place. What was not included in the sample battery of tests to study clinical skill could hardly be expected to turn up as factors!

### Cross-Sectional Versus Longitudinal Approaches

Another way of classifying research studies is by considering whether the studies are cross-sectional or longitudinal in nature. A *cross-sectional design* is one that evaluates or compares individuals, perhaps

**TABLE 4-3 Hypothetical Correlation Matrix for Seven Tests**

Test	A	B	C	D	E	F	G
A		.70	.80	.75	.15	.20	.10
B			.75	.70	.12	.10	.10
C				.70	.18	.15	.11
D					.12	.14	.12
E						.80	.85
F							.75

SOURCE: From *Introduction to Personality*, 3rd ed., by E. J. Phares. Copyright © 1991 by HarperCollins. Reprinted by permission.

of different age groups, at the same point in time. A *longitudinal design* follows the same subjects over time. The basic format of these two approaches is shown in Figure 4-3. In this example, *row a* illustrates the longitudinal design and *column b* shows the cross-sectional design.

Cross-sectional approaches are correlational because the investigator cannot manipulate age nor can participants be assigned to different age groups. Because there are different participants in each age group, we cannot assume that the outcome of the study reflects age changes; it only reflects differences among the age groups employed. These differences could be due to the eras in which participants were raised rather than age per se. For example, a group of 65-year-olds might show up as more frugal than a group of 35-year-olds. Does this mean that advancing age promotes frugality? Perhaps. But it might simply reflect the historical circumstance that the 65-year-olds were raised during a different time when money was very hard to come by.

Longitudinal studies are those in which we collect data on the same people over time. Such designs allow us to gain insight into how behavior or mental processes change with age. In the interpretive sense, longitudinal studies enable investigators to better speculate about time-order relationships among

factors that vary together. They also help reduce the third-variable problem that so often arises in correlational studies. For example, suppose we know that states of depression come and go over the years. If depression is responsible for the correlation between significant weight loss and decreased self-confidence, then both weight loss and decline in self-confidence should vary along with depressive states.

There are, of course, many variations in cross-sectional and longitudinal designs. In the case of longitudinal studies, however, the main problems are practical ones. Such studies are costly to carry out, and they require great patience and continuity of leadership in the research program. Sometimes, too, researchers must live with design mistakes made years earlier or put up with outmoded research and assessment methods. Finally, participants sometimes drop out of longitudinal studies, and one must demonstrate that the retained participants are representative of those that started the study.

### The Experimental Method

To determine cause-effect relationships among events, we must use experimental methods. Consider the following hypothetical study, an expansion of a pilot study by Naylor et al. (2007), that examined

Birth date	Age				
1890	65	70	<sup>b</sup> 75	80	85
1895	60	65	70	75	80
1900	55	60	65	70	75
1905	50	55	60	65	70
1910	<sup>a</sup> 45	50	55	60	65
1915	40	45	50	55	60
1920	35	40	45	50	55
1925	30	35	40	45	50
Time of measurement	1955	1960	1965	1970	1975

**FIGURE 4-3** Cross-sectional and longitudinal designs.

SOURCE: From Woodruff-Pak, *Psychology and Aging* (p. 32). Copyright © 1988. Reprinted by permission of Diana S. Woodruff-Pak.

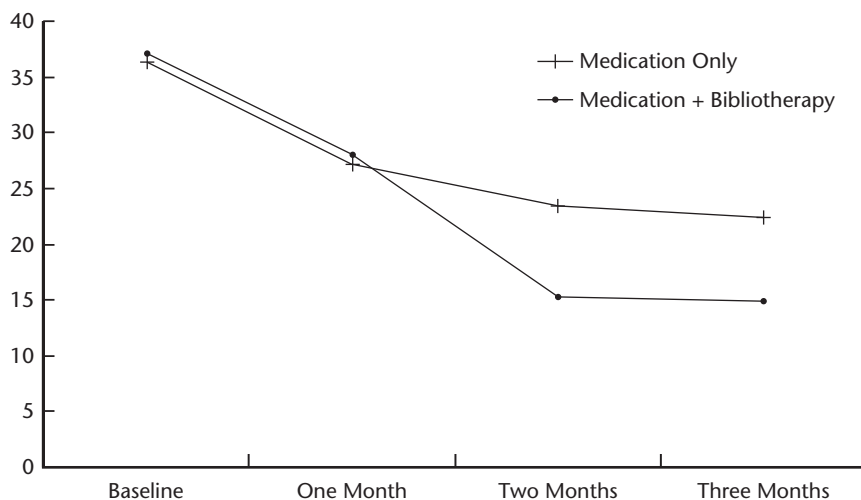
whether the addition of bibliotherapy, reading educational books about psychological conditions, would improve outcome in patients receiving medication for depression. The design of the research illustrates important features of the *experimental method*.

The study was carried out in a primary care clinic with participants ranging in age from 21 to 50. The *experimental group* contained 50 participants who within the last month had started taking an antidepressant medication. In addition to taking medication, the experimental group was instructed to read a popular self-help book on depression, *Feeling Good* (Burns, 1999). To ensure compliance, those in the experimental group were instructed to call in once per week to report which chapters of the book they finished that week as well as their medication compliance. The *control group* consisted of 50 participants who, like the experimental group, had started taking antidepressant medication within the last month. Unlike the experimental group, these participants did not receive a reading assignment, but simply called in once a week to report medication compliance.

The two groups were matched initially on several variables, including level of depression before medication, gender, age, socioeconomic level, and

overall level of emotional and physical distress. However, their assignment into the bibliotherapy or medication-only conditions was determined randomly. The primary measure of interest was the level of depression reported at baseline, after 1 month on medication, 2 months after starting medication (and following bibliotherapy for the experimental group), and at 3-month follow-up. Figure 4-4 shows the findings for self-reports of depression for the two groups. As can be seen, depression scores for the experimental group were clearly lower following the bibliotherapy intervention as well as at follow-up. These results suggest that bibliotherapy may help alleviate depression above and beyond the effects of antidepressant medication.

This study illustrates several features of a typical experimental study. The *experimental hypothesis* bibliotherapy may be a useful adjunct to antidepressant medication in primary care settings was developed both from observation of similar populations and from prior published research. An *independent variable* is one that is supposed to be under the control of the investigator. It is expected to have a causal effect on participants' behavior, which is referred to as the *dependent variable*. In this study, bibliotherapy was the independent variable, and it was



**FIGURE 4-4** Depression scores at baseline, after starting medication (one month), after intervention (two months), and at follow-up (three months).

**BOX 4-3 Clinical Psychologist Perspective: Scott O. Lilienfeld, Ph.D.**

Scott O. Lilienfeld is Professor of Psychology at Emory University in Atlanta, where he has been a faculty member since 1994. He received his B.A. in psychology at Cornell University in 1982 and his Ph.D. in psychology (clinical) from the University of Minnesota in 1990. Dr. Lilienfeld is associate editor of the *Journal of Abnormal Psychology*, past president of the Society for a Science of Clinical Psychology, and president-elect of the Society for the Scientific Study of Psychopathy. His primary areas of study are psychopathic personality, psychiatric classification and diagnosis, evidence-based clinical practice, and the distinction between science and pseudoscience in psychology. Dr. Lilienfeld's work on psychological science and pseudoscience has been featured in the *New York Times*, *Los Angeles Times*, *Wall Street Journal*, *Newsweek*, *Time*, *Boston Globe*, *Washington Post*, *USA Today*, *New Yorker*, *U.S. News and World Report*, and *Scientific American*. In addition, he has appeared on ABC's 20/20, CNN, the CBS Evening News, and National Public Radio. In 1998, Dr. Lilienfeld received the David Shakow Award for Outstanding Early Career Contributions to Clinical Psychology from APA Division 12, and in 2007 he was elected as a Fellow of the Association for Psychological Science. He is also a Fellow of the Committee for Skeptical Inquiry and the Institute of Science in Medicine, and (along with Dr. Hal Arkowitz) a regular columnist for *Scientific American Mind* magazine.

We asked Dr. Lilienfeld about his background, areas of expertise, and his evaluation of the field of clinical psychology.

**What originally got you interested in the field of clinical psychology?**

In junior high school, I came upon a Time-Life book with a simple title: *The Mind*. I read it and was immediately hooked; after consuming it, I wanted to learn everything I could about psychology. I was fascinated by psychology's unresolved mysteries: Why do we dream? Why do we fall in love? Why do we misremember many things, yet remember other things so well? Why do some people develop schizophrenia? But it was not until my junior year in college, at Cornell University, that I decided to go into clinical psychology. Prior to that, I found the study of mental illness to be utterly fascinating, yet I assumed that most of the field was rather "mushy" and unscientific. But after I enrolled in a course on advanced issues in experimental psychopathology, taught by Bob Dworkin, I came to realize just how mistaken I was. Dworkin's course

(which in retrospect I wish I had appreciated more at the time) taught me that one can approach the study of psychopathology in a methodologically exacting and rigorous way that allows one to address deeply important questions about the causes of mental disorders. From that point on, I have always found the field of clinical psychology to be enormously stimulating intellectually; as I began to conduct clinical work as an advanced undergraduate and especially as a graduate student, I came to find it emotionally fulfilling too.

**Describe what activities you are involved in as a clinical psychologist.**

I conduct research, with a particular focus on the assessment and causes of psychopathic personality (psychopathy) and related personality disorders. I write both empirical journal articles and conceptual/theoretical articles on such topics as personality disorders, psychiatric classification and diagnosis, evidence-based practice in clinical psychology, the distinction between science and pseudoscience in clinical psychology. I also do a great deal of writing for the general public, especially on correcting myths and misconceptions about psychology. One of my other great passions is teaching; I teach introductory psychology at the undergraduate level and personality assessment and psychiatric interviewing at the graduate level. From time to time, I also teach an undergraduate seminar on science and pseudoscience in psychology, which tends to be a lot of fun. On occasion, I also conduct diagnostic interviews of psychiatric patients, partly because I find it immensely rewarding to help patients, and partly because I believe that it is important for clinical psychologists not to lose touch with their subject matter.

**What are your particular areas of expertise or interest?**

I love clinical psychology, so I've always found it challenging to pick only one or two areas of expertise. But because there are only 24 hours in the day, I've found it necessary to specialize. My major research focus is psychopathic personality (psychopathy); in recent years, I've become especially interested in the controversial possibility that psychopathy may be associated with successful or adaptive functioning in some interpersonal domains, like leadership or heroism. I maintain several active secondary areas of research interest, including dissociation and dissociative disorders, psychiatric classification and the concept of mental

disorder, and evidence-based practices in psychotherapy and clinical assessment. In recent years, I've also become quite interested in psychology education, especially in the question of how best to teach scientific thinking to nonscientists.

### What are the future trends you see for clinical psychology?

I see the field of clinical psychology as moving toward more integration of diverse levels of vertical analysis, spanning the molecular, physiological, psychological, social, and cultural. I see that as a positive development, as I suspect it will foster progress toward understanding the causes and perhaps treatments of many mental disorders. This trend will mean that clinical researchers and practitioners will need to become well versed—or at least broadly familiar—with levels of analysis other than the strictly psychological. My one worry in this regard is that the field has recently been moving toward an undue emphasis on the “lower” (more biological) levels of analysis in the hierarchy of explanation. In some research areas, it's awfully hard nowadays to get one's grant funded without a brain imaging component, and many major psychology departments are insisting that new faculty hires possess brain imaging experience. Although I greatly value the biological level of analysis and view brain imaging as an enormously helpful tool, we need to be careful not to fall into the trap of “neurocentrism”—regarding the brain as inherently the most important, or the only important, level of explanation for understanding human behavior. The other levels matter too, and we must be careful not to lose sight of the field of psychology in the process.

I also see a movement toward much greater emphasis on evidence-based practices in clinical psychology and closely related fields. Some leaders in our field have criticized the movement toward evidence-based practice or raised serious questions about it. Although some of the concerns raised have been constructive in pointing to better ways of operationalizing evidence-based practice, others suggest a preference for intuition and subjective clinical experience over scientific evidence in selecting treatments. Yet the histories of medicine and psychology teach us that although intuition and subjective clinical experience often have useful roles to play in generating novel ideas for treatments, they can be quite flawed as a means of evaluating the effectiveness of these treatments. In the long run, our field will be better served by the recognition that carefully collected scientific evidence

is our best ally against human error—and ultimately our best hope of alleviating human suffering.

### What advice would you give to students in the field who want to go into clinical psychology?

Before you decide whether you want to attend a clinical psychology graduate program, ask yourself two questions: (1) Do you enjoy working with people? (2) Do you enjoy learning about science? If the answers to both questions are “Yes,” then the field of clinical psychology may very well be for you. If the answer to either question is “No,” then clinical psychology is almost certainly not for you. Successful clinical psychology graduate students—and successful clinical psychologists—are both (a) empathic, kind, and oriented toward people and (b) good scientific thinkers who can apply rigorous critical thinking skills to everything they do, whether it's research, clinical practice, teaching, or consultation. Clinical psychology requires a distinctive mix of skills and interests possessed by only a marked minority of undergraduates. But students who possess this mix often find the profession immensely gratifying and rewarding, especially if they can find a graduate program that fosters their passions and shapes their thinking.



Scott O. Lilienfeld

Scott O. Lilienfeld

manipulated by the investigators—one group received it, the other group did not. The dependent variable was the participant's self-reported levels of depression. Good experimental procedure was also followed by *matching* subjects on important variables that might have affected the outcome of the research (e.g., gender, age, preexisting levels of depression). Also, participants must be *assigned randomly* to experimental and control groups. The idea is that the only significant feature different for the two groups should be the experience of bibliotherapy. Hence, the lower depression scores in the experimental group can be assumed to be caused by the addition of bibliotherapy to treatment.

**Between- and Within-Group Designs.** Our depression treatment study just described is also an example of the between-group design. In a *between-group design*, we have two separate sets of participants, each of which receives a different kind of treatment or intervention. Take, for example, a traditional study of therapy efficacy. The question to be addressed is whether a particular form of therapy is better than no treatment at all. In its simplest form, an experimental group (receiving some form of treatment) is compared to a control group (receiving no treatment at all). Ideally, patients would be randomly assigned to each group. Some set of measures (e.g., level of anxiety, interview impressions, or test data) is taken from all patients in both groups prior to treatment (or no treatment), after treatment, and perhaps at a follow-up point 6 months or 1 year after treatment is concluded. Any differences between the two groups either at the conclusion of treatment or during the follow-up are assumed to be a function of the treatment that was received by the experimental group.

In a *within-group design*, comparisons might be made on the same patient at different points in time. To illustrate how this procedure works, suppose we are interested in the effects (e.g., level of distress) of being on a waiting list. We might decide to place every patient on a 6-week waiting list but carry out a variety of assessment procedures before doing so (point A). Six weeks later, these patients would be reassessed just prior to beginning

treatment (point B). At the conclusion of treatment (point C), the patients would be assessed for a third time, and they might also be followed up later (point D). Any changes taking place between points A and B (while on the waiting list) could be compared to the changes that take place between point B and point C or D. These more complex analyses of changes would give us a better view of the efficacy of treatment relative to merely being on a waiting list.

There are many variations of the within-group design. However, a major advantage is that it requires fewer participants. Indeed, as we shall see later in the case of single-subject designs, we can determine whether or not a specific intervention has an effect merely by observing one participant.

**Internal Validity.** Sometimes an experiment is not *internally valid*. That is, we are not sure that the obtained outcome is really attributable to our manipulation of the independent variable. Some studies do not even include a control group for comparison with an experimental group. In this case, any observed changes could be the result of some other variable. For example, suppose we did not have a control group in our study of the effects of bibliotherapy on depression in addition to antidepressants. Even though the experimental group showed decreases in depression, perhaps this was not at all due to bibliotherapy. Maybe it was due to being on an antidepressant for a longer period of time. Or maybe it was due to talking to someone on the phone (albeit briefly) once a week. Without a control group that also experienced these other events, one can never be sure. In short, when extraneous variables are not controlled or cannot be shown to exist equally in experimental and control groups, these variables may *confound* the results.

We shall see later that sometimes in studies of therapy effectiveness, one group of patients receives a new form of therapy. A second group of patients is matched with the therapy group (or patients are randomly assigned to the two groups) and then assigned to a waiting list. The assumption is that the only difference between the waiting-list subjects and the therapy subjects is that the latter



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Laboratory experiments often have high internal validity.

received therapy and the former did not. Therefore, the study is internally valid. But is it really? Experience has shown that subjects who go on a waiting list do not always fail to receive help. Instead, they often seek help from a doctor, a minister, wise counsel from a friend, or some other type of support. Thus, any improvement shown by the therapy group may be confounded by the informal help received outside therapy by subjects on the waiting list. Therefore, the fact that the therapy group improved no more than did the waiting-list group does not necessarily mean that the therapy intervention was ineffective. It may only mean that both groups received some form of intervention.

Another factor that detracts from internal validity involves *expectations*. When either the investigator or the participant expects a certain outcome, that very outcome may be produced. It is not the experimental manipulation that causes the outcome; it is the expectations. This phenomenon is called a *placebo effect*. For example, people have been known to behave in a drunken manner when they believe that the situation calls for such behavior

even when they have not been drinking alcohol but only thought they were. Patients have been known to report that therapy has helped them when objectively they did not seem any better. Because the therapist has devoted so much time to them, they feel they must be better!

In other cases, experimenters have been known to unwittingly produce the very responses they expected to get. Perhaps they acted in subtle ways that encouraged their patients to behave in the “proper” fashion. This is especially likely to happen when the experimenter knows who are the experimental subjects and who are the control subjects. Clinicians have been known on occasion to “unconsciously” give a patient a little extra time on a test item simply because they expected the patient to do well.

To avoid the effects of experimenter or participant expectations, studies commonly use a *double-blind procedure*. Here, neither participant nor experimenter knows what treatment or procedure is being used. For example, if an investigator is interested in studying the effects of two drugs, the

person dispensing the drug does not know which is which. Nor can the participant tell because the two kinds of pills are identical in size, shape, color, weight, texture, taste, and so on.

Matching, random assignment of participants to experimental and control groups, use of control groups, and double-blind procedures are all methods of helping ensure that experiments display some degree of internal validity.

**External Validity.** When it is discovered that the results of an experiment cannot be generalized beyond the narrow and exact conditions of the experiment, the research does not show *external validity*. If our depression study results apply only to that specific primary care clinic, there is a problem. In fact, most experimental research is done with the hope of generalizing the results beyond the confines of the immediate setting. Actually, it can be very difficult to determine the external validity of a given study. All too often, results produced in the laboratory cannot be reproduced in real-life settings. The worst mistake is merely to assume that because certain results were produced in situation A, they will automatically occur in situation B. Although laboratory experimental research usually allows better control of variables, its “artificial” nature may prevent wide generalization.

**Analog Research.** The question of generalization of results is particularly salient for *analog studies*—studies that are conducted in the laboratory, where control is easier to exert, but whose conditions are said to be “analogous” to real life. Most often, they are used to highlight the nature of psychopathology or therapy. For example, when Watson and Rayner (1920) tried to show how Little Albert could learn to be phobic for white rats, they were constructing an analog of the way they thought real-life phobias were acquired (see Box 4-1). As another example, some researchers study the correlates and effects of depression by inducing depressive mood in non-depressed participants through the use of traditional mood induction techniques (e.g., reading text that has been shown to increase levels of dysphoria) or of slides and music

that induce certain mood states. These techniques presumably create a depressive state analogous to that seen in clinical depression.

In one sense, almost all experimental studies are analog studies. But when severe practical or ethical constraints prevent us from creating real-life conditions, we must turn to analog situations. The advantage of analog studies is that better internal validity is possible because of the superior control we can exert in the laboratory. The Achilles heel of the method is the degree of similarity between the analog and the real thing. For example, suppose we decide to study the role of failure in creating depression within adolescents. We do not want to study adolescents with genuine depression for several reasons. First, it is difficult to get a large-enough sample who have similar backgrounds and who are equally depressed. Second, would it really be ethical to subject such adolescents to a strong, significant failure experience and thereby risk plunging them even deeper into depression? This, by the way, illustrates a real dilemma with analog research. If our experimental manipulations are truly effective, they may be harmful (and therefore unethical). If they are mild, the research becomes trivial and has little external validity. Given the foregoing ethical constraints and the fact that analog conditions will allow us to control the degree and kind of failure, the nature of the participants, and so on, the use of analog studies can become an attractive alternative.

But when we use analog procedures, we may pay a price. For example, in the previous hypothetical experiment, how do we know that our participants are really the same as participants professionally diagnosed as depressed? Perhaps the adolescents are recruits from a local school district whose only claim to being depressed is a score above some cutoff point on a questionnaire that purports to measure depression. They are not *clinical* cases of depression. In addition, we have no assurance that an experience of failure on a problem in a laboratory setting is at all the same as a “real” failure in the everyday life of a person with depression.

Some have urged the use of animals for research because they do not present some of the methodological problems that exist in research with

humans. We can exert nearly perfect control over animals. We can control their diets, living conditions, and even genetic background. We can be so much more intrusive in the lives of animals. Because animals generally have shorter life spans, phenomena that may take years to study in humans can be studied in a few months with, say, rats. Further, there are a number of “naturally” occurring behavior disorders (e.g., aggression, mood disorders, hyperactivity, eating disorders) commonly seen in veterinary practice that appear to be relevant to the field of psychopathology (Aldelda & Joel, 2011). Some even argue for the relevance of animal research to personality traits (e.g., Canli, 2006; Pawlak, Ho, & Schwarting, 2008). But again, exactly how similar is animal behavior to human behavior? Perhaps similar enough in certain instances, but in others, not at all.

In the final analysis, analog research is important and can be quite enlightening. But we can never afford to completely relinquish our skepticism when we employ it.

**A Closing Note.** In closing this section on experimental methods, it is important to note that not everyone is enamored with these traditional approaches. For example, many years ago, Cattell (1965) critiqued the so-called bivariate research strategy. This is a hallowed method, going all the way back to Pavlov and Wundt, in which only two variables are studied at once. The investigator manipulates an independent variable and then observes its effects on the dependent variable. For example, the experimenter induces in participants the belief that they lack personal control over the onset of electric shock (independent variable). The question is, what happens to the participant’s anxiety level as measured by the galvanic skin response (dependent variable)? If the focus is on anxiety, it may become necessary to carry out thousands of such bivariate studies to determine how people become anxious. The experimenters must vary measures of anxiety, the nature of the stimulus, and the presence of preexisting personality traits that may affect the nature of the participants’ responses. If experimenters vary one condition at

a time in study after study, they are left with a piecemeal view of the human being. Putting the results of all these bivariate studies together can be worse than trying to put Humpty Dumpty together again. And because the study is looking at anxiety in isolation from other variables, such as competence and adjustment, the results offer no sense of how these variables might affect anxiety.

As a consequence, some have advocated the use of a multivariate strategy. Here, the experimenters use a variety of measures on the same person but do not exert much in the way of control. This is a common approach in the study of child and adolescent psychopathology. Researchers may use questionnaire data, life records, observation, and so on. Such data can be correlated and factor analyzed. Because the method can focus on naturally occurring phenomena and can deal with numerous variables simultaneously, many regard it as a superior strategy. However, this method, like other correlational approaches, also has its limitations (e.g., costs, time, and access to participants).

### Single-Case Designs

*Single-case designs* are an outgrowth of behavioral and operant approaches. They bear similarities to both experimental and case study methods. For example, an experimenter measures a subject’s behavior under several conditions and in this sense is employing a method akin to experimental techniques. But the focus is on the responses of *one* participant only. Such research usually begins by establishing a baseline. Here, a record is made of the participant’s behavior prior to any intervention—for example, the number of anxiety attacks per week. After a reliable baseline has been established, an intervention is introduced. The effects of this intervention are then determined by comparing the baseline level of behavior with the postintervention level. Single-case designs are often used to study the effectiveness of a therapeutic method.

Single-case studies allow the experimenter to establish cause–effect relationships. More than that, they provide a method of studying clinical behavior (especially therapy methods) that does not require the

withholding of treatment by assigning certain participants to control groups or waiting lists. Some have argued that studies that withhold treatment from some clients, although representing good science, are potentially unethical because they may deprive people of hope for relief. Even though the therapy to be used may be unproved—and even though some assert that, in the interests of the ultimate good of many people, science must deprive a few of the possibility of improvement—the specter of ethics still lurks in the background. Single-case designs, in contrast, do include periods of treatment for all.

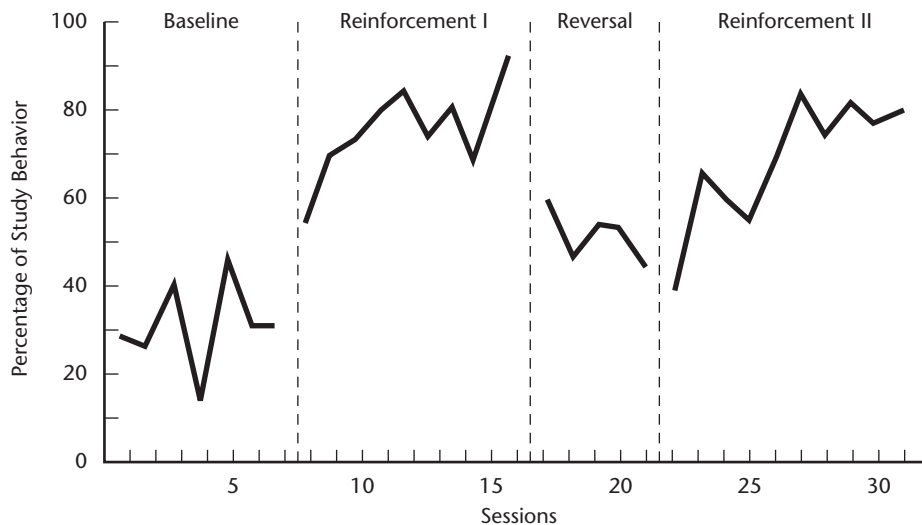
Another practical reason for using single-case designs is that it is often extremely difficult in clinical settings to find enough participants for matching or random assignment to control groups. Single-case studies reduce the numbers needed. Also, some have argued that most research generalizes findings based on mean scores. Consequently, the results may not really apply to or characterize any one case. Single-case designs sidestep such problems.

**The ABAB Design.** The *ABAB design* permits measurement of a treatment's effectiveness by systematic observation of changes in the participant's behavior as treatment and no-treatment conditions alternate. It is called the ABAB design because the

initial baseline period (A) is followed by a treatment period (B), a return to the baseline (A), and then a second treatment period (B).

A good illustration of the ABAB single-case approach is the study of Thomas, a 4-year-old boy diagnosed with autism spectrum disorder (Crozier & Tincani, 2007). The goal of this study was to assess whether a particular intervention, Social Stories, would help Thomas sit at the morning circle, attend to the teacher, and participate in songs and stories each morning at his preschool. Thomas was prone to roam around the classroom and spend little time at the circle each morning. For Thomas, the Social Story procedure involved a researcher reading a tailored script to him while at an empty table on the side of the room before circle time. The script involved Thomas sitting at circle time, attending to the teacher, and participating. The target behavior that was coded was sitting appropriately at the circle and not engaging in activities that were not part of the circle time.

Figure 4-5 shows for each observation session the percentage of time that Thomas exhibited the desired target behavior. As can be seen, at the first baseline before any intervention Thomas spent on average only about 16% of the time sitting appropriately at the circle. Note that the sitting time for



**FIGURE 4-5** Thomas: Using Social Story intervention to improve sitting at circle time appropriately.

SOURCE: Crozier, S., & Tincani, M., "Effects of Social Stories on prosocial behavior of preschool children with autism spectrum disorders," *Journal of Autism and Developmental Disorders*, 37, (fig 1, p. 1809). Copyright © 2007 by Springer. Reprinted with permission.

session six is very high (70%); this day Thomas was taking an asthma medication that was sedating and this likely influenced his behavior. During the first treatment period (Social Story), we see that Thomas's time sitting at circle increased dramatically. During the reversal period (the second baseline period), his percentage of time sitting at circle decreased dramatically. When treatment was reintroduced (Social Story), his behavior once again improved. The reversal period was inserted between the two treatment periods to enable the investigators to demonstrate a causal relationship between the intervention and Thomas's behavior.

One difficulty with the ABAB procedure is that withdrawing treatment could pose some ethical problems. However, the seriousness of this issue depends on the specific targeted behaviors involved. For example, withdrawing a treatment that markedly reduces serious self-harm in a child might be seen as unethical and unnecessary.

**Multiple Baseline Designs.** In some cases, it is impossible to use a reversal period. As we have noted, there may be ethical constraints. Also, in clinical research settings, therapists may be unwilling to have their clients reexperience situations that could reinstate the very behaviors they are seeking to eradicate. In such cases, investigators may use a *multiple baseline design*. Here, two or more behaviors are chosen for analysis. Perhaps an institutionalized patient has severe problems behaving in a responsible manner. He does not take care of his room, fails to follow good personal hygiene, or does not show up on time for work assignments. Baseline data are collected for his behavior in both personal and work settings. Next, immediate rewards are introduced whenever he behaves responsibly in personal settings but not in work settings. Then, after a prescribed period of time, measurements of behavior in both settings are once again collected.

The last phase involves rewards for responsible behavior in both settings. If responsible behavior increases in the personal setting following reward but not in the work setting when there is no reward, it may be possible that some unknown and uncontrolled factor other than reward is

operative. But if reward is then shown to enhance responsible behavior in the work setting also, it seems very unlikely that any factors other than reward are involved. The use of dual baselines gives investigators increased confidence in their manipulations.

A study by Moras, Telfer, and Barlow (1993) exemplifies a variant of the multiple baseline design. Their study is noteworthy for several reasons. First, they applied a single-case methodology to a treatment that is not primarily behavioral (unlike most applications of the single-case methodology). Second, they targeted a clinical condition that is common—coexisting generalized anxiety disorder and major depression—yet complex because of the myriad of presenting symptoms. Finally, they were able to test the hypothesis that each form of treatment used in the combined treatment (anxiety control treatment and interpersonal psychotherapy for depression) would affect specifically those symptoms for which the treatment was originally developed.

Box 4-4 presents Moras et al.'s (1993) descriptions of Case 2, a man in his 30s suffering from both generalized anxiety disorder and major depression, as well as his weekly scores on self-report measures of anxiety and depression throughout the treatment. As can be seen, Case 2's levels of anxiety (BAI scores) and depression (BDI scores) were elevated and clinically significant before treatment was started (at baseline weeks 1 and 2). Anxiety control treatment (ACT) was administered first for six sessions, followed by an assessment interview (Asmt). Next, interpersonal psychotherapy for depression (IDT) was administered for six sessions, followed by another assessment interview.

Several features of the results for Case 2 are noteworthy. First, his anxiety scores did drop significantly over the course of ACT. However, so did his depression scores. Further, both depression and anxiety scores appeared to drop (although not as dramatically) during the IPT phase of treatment. Moras et al. concluded that this combined form of treatment (ACT and IPT) seems potentially efficacious for patients with generalized anxiety disorder and major depression. However, contrary to the

#### BOX 4-4 Clinical Applications: The Treatment of Mixed Anxiety and Depression

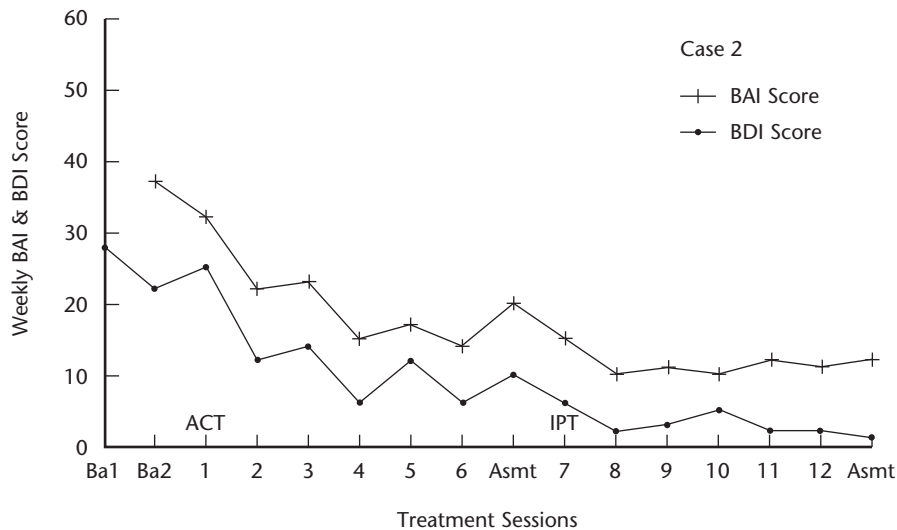
Moras, Telfer, and Barlow (1993, p. 414) provided the following description of Case 2:

The patient was a man in his mid-30s who had three children (ranging in age from 4 to 12). He worked full-time in a semiskilled position. His complaints were “breaking down easy and crying a lot,” a “no care attitude,” feeling nervous, and feeling like running from his job. When asked about relationships in his life, he said that he and his wife “seemed to be going their own separate ways.” However, he then

quickly negated the statement by saying that they didn’t seem to be growing apart; rather they seemed to be closer but more independent.

The diagnosis based on two independent structured diagnostic interviews was co-principal Major Depression Episode (recurrent, moderate) 5 and GAD 5.

Following are the weekly scores produced by Case 2 on the Beck Anxiety Inventory (BAI) and Beck Depression Inventory (BDI).



Weekly changes in Beck Anxiety Inventory (BAI; Beck, Epstein, & Brown, 1988) and Beck Depression Inventory (BDI; Beck, Steer, & Garbin, 1988) scores for Case 2. (Ba1 = Baseline Week 1; Ba2 = Baseline Week 2; ACT = anxiety control treatment; Asmt = assessment week; IPT = Interpersonal Psychotherapy of Depression treatment)

SOURCE: Moras, K., Telfer, L. A., & Barlow, D. H. (1993). Efficacy and specific effects data on new treatments: A case study strategy with mixed anxiety-depression. *Journal of Consulting and Clinical Psychology, 61*, 412-420. Copyright © 1993 by the American Psychological Association. Reprinted with permission.

original hypothesis, no evidence for differential and specific impact of ACT on anxiety symptoms and IPT on depressive symptoms was obtained.

This example is a good illustration of how the single-subject design can be used to document the

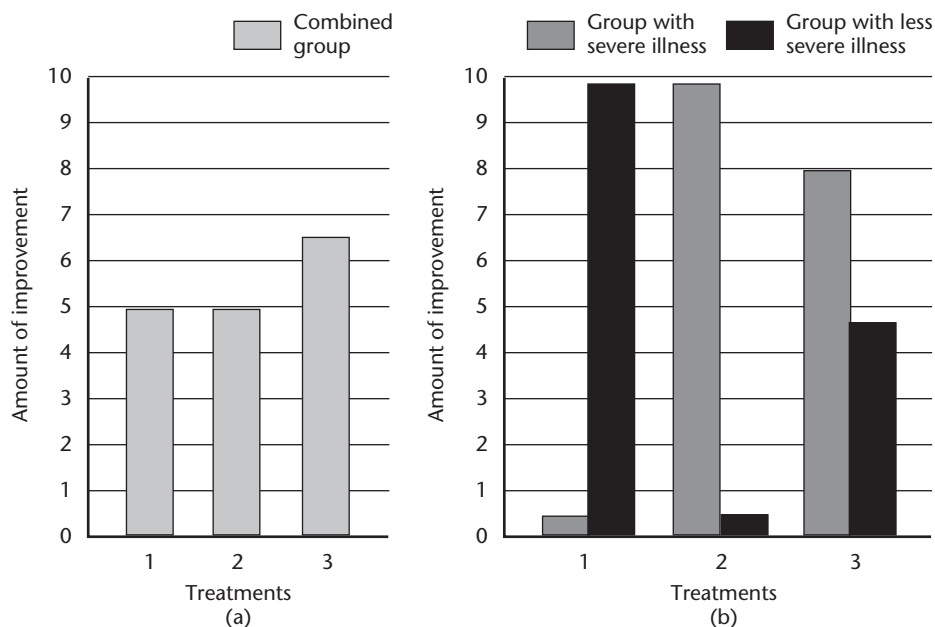
efficacy of treatment (single or combined) for a commonly occurring clinical condition. Further, Moras et al., using a variant of the multiple baseline design, were able to test a hypothesis regarding the specificity of treatment effects.

Of course, all these single-subject designs, by definition, deal with one person. Can we generalize what has been shown true of one person to an entire population? As with case study methods, the external validity of the results or attempts to generalize about them can be problematic. But as long as we are interested in one specific person or are seeking evidence that will encourage us subsequently to initiate a full-blown traditional experimental study, the method has great merit.

### Mixed Designs

Experimental and correlational techniques are sometimes combined into a *mixed design*. Here, participants who can be divided into specific populations (e.g., schizophrenic vs. normal) are assigned as groups to each experimental condition. In this way, variables such as psychosis or normality are not manipulated or induced by the investigator. Instead, they are correlated with the experimental condition.

Davison et al. (2004) provide an excellent hypothetical example of how mixed designs work. Suppose we decide to investigate the efficacy of three forms of therapy (the experimental manipulation). We do this by identifying psychiatric patients who can be divided into two groups on the basis of the severity of their illness (the classificatory variable). Does effectiveness of treatment vary with severity of illness? The results of this hypothetical research are shown in Figure 4-6. Figure 4-6(b) presents data obtained when the patients were divided into two groups according to the severity of their illness. Figure 4-6(a) shows how confused we could become had patients not been divided into two groups. When all patients are combined, we find that treatment 3 produced the largest improvement, and we are mistakenly led to believe that this treatment is the best. But when we analyze the data according to severity of illness, treatment 3 is not the preferred one for either group of patients. Instead, as Figure 4-6(b) shows, for patients with less severe problems, treatment 1 is desirable,



**FIGURE 4-6** Effects of three treatments on patients whose problems vary in degree of severity

SOURCE: From *Abnormal Psychology*, 7th ed., by G. C. Davidson and J. M. Neale, p. 117. Copyright © 1998 by John Wiley & Sons, Inc. Reprinted by permission.

whereas for those with more severe problems, treatment 2 would be preferable.

Later in this book, it will become apparent that there is no “best” therapy for all problems and all people. There are only treatments that vary in their effectiveness for different kinds of psychological problems and different kinds of people. Mixed designs can help us discern what is best for whom. Of course, we must not forget that in mixed designs, one of the factors (e.g., severity of illness) is not manipulated, and this raises the kinds of problems discussed earlier in the case of correlational methods (Davison et al., 2004).

### Strengths and Weaknesses of Research Methods

As we have surveyed the various research methods commonly used by clinical psychologists, a number of strengths and weaknesses have been highlighted for each. Table 4-4 summarizes major features of these approaches, focusing on each method’s ability to provide detailed information about a single case, to exercise control over extraneous factors that might influence the effect of interest (i.e., internal validity), to generalize to other people or other situations, and to make causal inferences. For example, the experimental method, the single-case design, and the mixed design all have high internal validity. However, only the experimental method

and single-case design allow an investigator to make causal inferences.

## STATISTICAL VERSUS PRACTICAL SIGNIFICANCE

After a statistic (e.g., a correlation coefficient) has been calculated, it can be determined whether the obtained number is significant. Traditionally, if it is found that the obtained value (or a more extreme value) could be expected to occur by chance alone less than 5 times out of 100 (i.e., very rarely), it is deemed statistically significant. Such an obtained value is said to be significant at the .05 level, usually written as  $p < .05$ . The larger the correlation, the more likely it is to be significant. But when large numbers of participants are involved, even relatively small correlations can be significant. With 180 participants, a correlation of .19 will be significant; when only 30 participants are involved, a correlation of .30 would fail to be significant.

Therefore, it is important to distinguish between *statistical significance* and *practical significance* when interpreting statistical results. The correlation of .19 may be significant, but the magnitude of the relationship is still quite modest. For example, it might be true that in a study involving 5,000 second-year graduate students in clinical psychology

**TABLE 4-4 Advantages and Limitations of Major Research Methods Used in Clinical Psychology**

	Case Study Methods	Epidemiology/ Correlational Methods	Experimental Methods	Single-Case Designs	Mixed Designs
Detailed information	+				
Internally valid results			+	+	+
Externally valid results		+			+
Can determine causality			+	+	

**BOX 4-5 Graduate Student Perspective: Elizabeth A. Martin**

Elizabeth A. Martin is a 5th-year, doctoral candidate in clinical psychology at the University of Missouri. She received her B.A. from the College of New Jersey and M.A. degrees from the University of Pennsylvania and the University of Missouri. Liz studies emotional and cognitive processing in schizophrenia-spectrum disorders and currently has a fellowship that funds her investigation of controlled affective processing in this population. After graduation, she hopes to earn a tenure-track position at a research-focused academic institution.

She provided the following insights regarding her graduate school experience.

**What has graduate school in clinical psychology been for you?**

I didn't think time could move more quickly than it did in undergraduate school until I experienced graduate school. Days are so full of varied experiences—research, classes, clinical work, teaching—that there is no time to be bored!

**What things have you least expected about graduate school?**

I did not expect that extremely busy, well-known, respected professors would devote as much time into cultivating my research career as they have. I have a supportive group of mentors who have helped me with everything from developing study ideas and running participants to analyzing data and writing manuscripts. I am very grateful to all of these people!

**Has graduate school changed you? If yes, how so?**

Graduate school has really made me a more critical thinker. Now, I try to avoid taking most things at face value. Also, my clinical experiences have made me more aware of the difficulties that people face every day and more empathetic to these plights.

**Are your professional or research interests similar or different now than they were when you started graduate school?**

Although the population and general subject matter has remained the same, my research interests have become refined as I have gone through graduate school. From extensively reading the literature and conducting studies of my own, I have developed a program of research aimed at understanding a construct I was actually unaware of when I started graduate school.

**Looking back, what activities or experiences were the most important for you in your graduate school program?**

Academically, statistics courses have been vitally important. Without the skills needed to organize, analyze, and interpret data, the graduate school process would have been even more difficult. Personally, shared social experiences with fellow students have helped me to survive exceptionally stressful periods of graduate school.

**Any additional hints for those trying to make it through graduate school in clinical psychology?**

I think that a successful graduate student is one who is proactive in pursuing his or her professional goals from the first day in the program. If a student is unsure of his or her professional goals, I suggest actively seeking out opportunities that may help to refine these goals. Waiting around for things to happen or for people to do things for you is not a successful strategy or one that will make others, including yourself, happy.



Elizabeth Martin

Elizabeth Martin

across the nation, there is a correlation of .15 between their GRE scores and faculty ratings of academic competence. Even though the relationship is not a chance one, the actual importance is rather small. Most of the variance in faculty ratings is due to factors other than GRE scores. In some cases, a correlation of .15 may be judged important, but in many instances, it is not. At the same time, we should remember that accepting significance levels of .05 as non-chance represents a kind of scientific tradition, but it is not sacred. Other information may persuade us, in certain cases, that significance levels of .07 or .09, for example, should be taken seriously.

## RESEARCH AND ETHICS

In Chapter 3, we discussed some of the ethical issues involved in the practice of clinical psychology. Research also involves important ethical considerations. Like patients, research participants have rights, and investigators have responsibilities to them. In 2002, the American Psychological Association published an expanded and updated set of ethical standards for research with human participants (American Psychological Association, 2002; and an amended version in 2010). We offer only a brief overview here. These standards require that investigators:

1. Plan and conduct research according to recognized standards of scientific competence and ethical principles. Psychologists must gain approval, if required by institutions, before conducting research.
2. Obtain informed consent from participants in research. Inform them of the research procedures, their right to withdraw, potential risks or discomforts, possible benefits, limits to confidentiality, incentives for participation, and whom to contact for questions about participation and participants' rights.
3. Use deception as part of their procedures only when it is not possible to use alternative methods.
4. Take great care, in offering inducements for research participation, that the nature of the compensation (such as professional services) is made clear and that financial or other types of inducements are not so excessive as to coerce participation.
5. Do not fabricate data and give proper credit to others for their contributions. Discuss publication authorship early in the research process, and base authorship on the relative contributions of the individuals involved.
6. Inform research participants of the anticipated use of the data and of the possibility of sharing the data with other investigators or any unanticipated future uses.
7. Provide participants with information at the close of the research to erase any misconceptions that may have arisen.
8. Treat animal subjects humanely and in accordance with federal, state, and local laws as well as with professional standards.

Several of these points warrant further comment.

**Informed Consent.** Good ethical practice and legal requirements demand that participants give their formal informed consent (usually in writing) prior to their participation in research. Researchers inform the participants of any risks, discomforts, or limitations on confidentiality. Further, researchers inform the participants of any compensation for their participation. In the process, the researcher agrees to guarantee the participant's privacy, safety, and freedom to withdraw. Unless participants know the general purpose of the research and the procedures that will be used, they cannot fully exercise their rights. Box 4-7 presents an example of a consent form that was used in one of the author's research projects. Different consent forms from other investigators and institutions will vary in the language that is used and, possibly, the points that are emphasized. However, most consent forms would be expected to contain the basic features in this example.

**BOX 4-6 Who Should Be Studied?**

For some time, clinical psychologists conducting research have been criticized for primarily using samples of convenience. Typically, the criticism has focused on the use of college undergraduates in analog research. However, over the past few decades, a great deal of concern has been expressed over the relative lack of research using women, youth, and/or ethnic minority participants. Specifically, some feel that too many studies use samples composed predominantly of adult White males. Some feel that the conclusions reached regarding psychological problems and their treatment may not be valid for women, youth, or for people of color.

Not only have these concerns heightened clinical scientists' awareness of these issues but more formal

requirements for those studies supported by U.S. government funds are now in place. The National Institutes of Health (NIH) now has a policy regarding the inclusion of women, youth, and members of minority groups in all studies involving human participants.

Specifically, these groups must be represented in NIH-supported projects unless a clear and compelling rationale establishes that inclusion is inappropriate with respect to participants' health or to the purpose of the study. In this way, major research projects can address whether the general conclusions reached for men, adults, or for White participants also hold for women, youth, and for members of minority groups.

**Confidentiality.** Participants' individual data and responses should be confidential and guarded from public scrutiny. Instead of names, code numbers are typically used to protect anonymity. While the results of the research are usually open to the public, they are presented in such a way that no one can identify a specific participant's data. Finally, clinical psychologists must obtain consent before disclosing any confidential or personally identifiable information in the psychologist's writings, lectures, or presentations in any other public media (e.g., a television interview).

**Deception.** Sometimes the purpose of the research or the meaning of a participant's responses is withheld. Such deception should be used only when the research is important and there is no alternative to the deception (i.e., when study information beforehand might compromise participants' data). Deception should never be used lightly. When it is used, extreme care must be taken that participants do not leave the research setting feeling exploited or disillusioned. It is important that careful debriefing be undertaken so that participants are told exactly why the deception was necessary. We do not want participants' levels of interpersonal trust to be shaken. Clearly, it is very important

how we obtain informed consent when deception is involved.

An example of the need for deception in a study might be an experiment in which it is predicted that the viewing of gun magazines (or other materials associated with potential violence) will lead to increased scores on a questionnaire measuring hostility. All participants are told that the experiment is one focusing on short-term memory, and they will be completing a memory task on two occasions separated by a 15-minute waiting period during which they will be reading magazine articles. All participants first complete baseline measures (including the hostility questionnaire). Next, all participants complete a computer-administered memory task. During the waiting period, the experimental group is told to read selections from a gun magazine that is made available in the lab; the control group is told to read selections from a nature magazine (neutral with regard to violent imagery). All participants later complete the computer-administered memory task again. Finally, all participants complete the battery of self-report instruments a second time.

We are not so much interested in the viability of this hypothesis as we are in the need for some deception in the experiment. As you can see, to tell

**BOX 4-7 Sample Consent Form**

Development of Personality Features  
Consent Form

Code \_\_\_\_\_

***Consent to Serve as a Participant in Research Study***

I consent to participate in the study "Development of Personality Features" sponsored by the Psychology Department at the University of Missouri and conducted under the direction of Timothy J. Trull, Ph.D. This research project is aimed at assessing how personality features develop in young adults.

I understand that the study will involve the following procedures: (1) At Time 1 (study entry), I will be asked a number of questions, some of which may be extremely sensitive or upsetting, concerning various personal problems that I might have experienced as well as personal problems my biological parents may have experienced (e.g., depression, suicidal feelings, child abuse). I understand that I will also complete a computerized interview and will be given two interview questionnaires that allow the researcher to develop a psychological profile. I understand that these interviews will be audiotaped. Only project staff will have access to these audiotapes, and these tapes will be erased at the end of the project. For my participation at Time 1, which should take a total of about 4 hours, I will be compensated \$35.00 for my time and efforts.

(2) At Time 2 (2 years later), I will be asked a number of questions, some of which may be extremely sensitive or upsetting, concerning various personal problems that I might have experienced as well as personal problems my biological parents may have experienced. I understand that I will also complete a computerized interview and will be given two interview questionnaires that allow the researcher to develop a psychological profile. For my participation at Time 2, which should take a total of about 4 hours, I will be compensated \$35.00 for my time and efforts. Therefore, if I participate in all aspects of this study (i.e., at Time 1 and at Time 2), I will receive a total of \$70.00. I also understand that I may be contacted at some point in the future and asked to provide follow-up information. I understand that I am under no obligation to participate at that time and I may at any time withdraw and request that I not be asked to participate in the future.

I understand that all possible steps have been taken to assure my privacy. I understand that the project staff will code the results of this research in such a manner that my identity will not be attached physically to the information I contribute. The key listing my identity and participant code number will be kept separate from the information in a locked file accessible only to the project staff. This key will be destroyed at the conclusion of the research project. Although the researchers do not know at this point when additional follow-ups may be attempted, the project will be concluded within 15 years' time. I also understand that these identifiers will be preserved for the duration of the project unless I request otherwise. I understand that I may contact the project director at any time and request that all identifiers that link my identity to the information I have contributed be destroyed. If requested, all data I have contributed and all identifying information will be destroyed by the project director (Dr. Trull).

I realize that the purpose of this project is to examine the relations between certain variables in groups of individuals and not to evaluate the responses of a particular individual. I also understand that responding to some of the questions about personal problems, feelings, and behavior as well as about problems my biological parents may have experienced may cause discomfort because of their sensitive nature.

I understand that in the unlikely event that I am found to be suicidal or an imminent threat to someone else, the appropriate authorities will be contacted. Also, if I divulge information indicating that I am aware of possible ongoing child abuse or information raising the suspicion of ongoing child abuse, appropriate authorities will have to be notified. I understand that, although remote, it is possible that the information I contribute may be subject to subpoena.

I understand that participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and discontinue my participation before I complete the session. I also understand that I may refuse to answer any individual questions without penalty. In the event that I elect to discontinue participation, I understand that I will not receive any compensation and that any information I have contributed

at any time to the study that is linked to me individually in any way will be destroyed. My name or any other identifiers also will be removed completely from the records.

If at any time I have questions about any procedures in this project, I understand that I may contact the project director, Timothy J. Trull, Ph.D., at 123-456-7890. For additional information regarding human participation in research, please feel free to contact the Campus IRB office at (123) 098-7654.

Name (Print) \_\_\_\_\_

Signature \_\_\_\_\_

Student Number \_\_\_\_\_

Date \_\_\_\_\_

the participants the real purpose of the experiment would likely influence their responses to the questionnaires (especially to the one measuring hostility). Therefore, the investigator might need to introduce the experiment as one that is focusing on short-term memory.

**Debriefing.** Because participants have a right to know why researchers are interested in studying their behavior, a debriefing at the end of the research is mandatory. It should be explained to participants why the research is being carried out, why it is important, and what the results have been. In some cases, it is not possible to discuss results because the research is still in progress. But subjects can be told what kinds of results are expected and that they may return at a later date for a complete briefing if they wish.

**Fraudulent Data.** It hardly seems necessary to mention that investigators are under the strictest standards of honesty in reporting their data. Under no circumstances may they alter obtained data in any way. To do so can bring charges of fraud and create enormous legal, professional, and ethical problems for the investigator. Although the frequency of fraud in psychological research has so far been minimal, we must be on guard. There is no quicker way to lose the trust of the public than through fraudulent practices.

The complete APA Ethical Principles and Code of Conduct (2002), including the principles relevant to conducting research, can be accessed through Web site 4-1 at the end of this chapter.

## CHAPTER SUMMARY

Clinical psychologists use a wide variety of research methods to test theoretical propositions about human behavior. Research also leads to modification of theories in a type of feedback-loop system. Observational methods range from unsystematic and naturalistic observation, where little if any situational control can be exerted by the scientist, to

more controlled forms of observation in which the researcher controls to some degree the situation in which the target behavior will be observed.

The case study method is a form of controlled observation that involves the intensive study and description of one person in treatment. Case studies document rare or unusual conditions or events, help

disconfirm theories or explanations believed to apply to everyone, and facilitate the generation of hypotheses. However, case study methods typically do not result in universal laws or principles applicable to all and cannot lead to cause–effect conclusions.

Epidemiological methods are used to estimate the prevalence and incidence of a disorder or condition in the population. These methods also enable us to identify risk factors.

Correlational methods assess and quantify the relations between variables; this may stimulate ideas or theories about causal relations among variables. However, correlation is a necessary but not sufficient indicator of causation, which can only be established through experimental methods.

Cross-sectional designs involve an examination of participants at one point in time, whereas longitudinal designs evaluate the same participants over a period of time. Longitudinal studies allow scientists to evaluate time–order relationships among factors that vary together and help address third-variable explanations of observed relations. Unfortunately, longitudinal studies are time-intensive and expensive and are conducted less frequently than cross-sectional studies.

The experimental method is powerful because it enables scientists to evaluate cause–effect questions and to exert control over a number of potentially important factors that affect the behavior in question. Internal validity refers to the degree to which, based on the design of the experiment, we can be confident that the manipulation of the independent variable affected the dependent variable. External validity refers to the extent to which the results of the experiment are generalizable to other, preferably “real-world,” conditions. In some instances, for practical or ethical reasons, it is not possible to conduct experiments on real-life problems. In these cases, analog studies may be used.

An important variant of the experimental and case study methods is the single-case design (e.g., ABAB design, multiple baseline design). The mixed design combines features of the correlational and experimental methods and helps us evaluate which interventions are best for whom. Finally, a number of ethical considerations are involved in conducting research, including obtaining informed consent, assuring confidentiality, using deception appropriately, providing debriefing information, and protecting against fraud.

## KEY TERMS

**ABAB designs** Single-case designs that observe systematic changes in the participant’s behavior as the treatment and no-treatment conditions alternate. The initial baseline period is followed by a treatment period, a treatment reversal period, and a second treatment period.

**analog study** A study conducted in the laboratory under conditions that are purportedly analogous to real life.

**between-group designs** Designs in which two or more separate groups of participants each receive a different kind of treatment.

**case study method** A research method consisting of the intensive description or study of one person (usually a client or patient who is in treatment).

**confidentiality** In research on human subjects, the principle of protecting individual participants’ data from public scrutiny.

**confound** A situation in which extraneous variables are not controlled or cannot be shown to exist equally in one’s experimental and control groups. When there is a confound, one cannot attribute changes in the dependent variable to the manipulation of the independent variable.

**control group** The group in an experimental design that does not receive the treatment of interest. In the perfect experimental design, the experimental and control groups are similar on all variables except the treatment variable.

**controlled observation** A research method similar to naturalistic observation in which carefully planned observations are made in real-life settings, except that the investigator exerts a degree of control over the events being observed.

**correlation coefficient** A statistic (usually symbolized by  $r$ ) that describes the relationship between two variables.  $r$  ranges between  $-1.00$  and  $+1.00$ ; its sign indicates the direction of the association, and its absolute value indicates the strength.

**correlation matrix** An array that displays the correlations between all possible pairs of variables in the array.

**correlational methods** Statistical methods that allow us to determine whether one variable is related to another. In general, correlational methods do not allow us to draw inferences about cause and effect.

**cross-sectional design** A research design that compares different groups of individuals at one point in time.

**debriefing** In research on human subjects, the legal requirement that researchers explain to participants the purpose, importance, and results of the research following their participation.

**deception** Deception is sometimes used in research when knowing the true purpose of a study would change the participants' responses or produce non-veridical data.

**dependent variable** The variable in an experimental design that is measured by the investigator.

**double-blind procedure** A procedure for circumventing the effects of experimenter or participant expectations. In a double-blind study, neither the participant nor the experimenter knows what treatment the participant is receiving until the very end of the study.

**epidemiology** The study of the incidence, prevalence, and distribution of illness or disease in a given population.

**expectations** What the investigator or the research participant anticipates about the experimental outcome.

**experimental group** The group in an experimental design that receives the treatment of interest.

**experimental hypothesis** The theory or proposal on which an experimental study is based. Often, the hypothesis predicts the effects of the treatment administered.

**experimental method** A research strategy that allows the researcher to determine cause-and-effect relationships between variables or events.

**external validity** An experiment is considered externally valid to the extent that its results are generalizable beyond the narrow conditions of the study.

**factor** The hypothesized dimension underlying an interrelated set of variables.

**factor analysis** A statistical method for examining the interrelationships among a number of variables at the same time. This method uses many separate correlations to determine which variables change together and thus may have some underlying dimension in common.

**fraudulent data** Data that are fabricated, altered, or otherwise falsified by the experimenter.

**incidence** The rate of new cases of a disease or disorder that develop within a given period of time. Incidence figures allow us to determine whether the rate of new cases is stable or changing from one time period to the next.

**independent variable** The variable in an experimental design that is manipulated by the investigator.

**informed consent** In research on human subjects, the legal requirement that researchers inform potential participants about the general purpose of the study, the procedures that will be used, any risks, discomforts, or limitations on confidentiality, any compensation for participation, and their freedom to withdraw from the study at any point.

**internally valid** An experiment is considered internally valid to the extent that the change in the

dependent variable is attributable to the manipulation of the independent variable.

**longitudinal design** A research design that compares the same group of individuals at two or more points in time.

**matching** A term used when research participants in the experimental and control groups are “matched” or are similar on variables (e.g., age, sex) that may affect the outcome of the research.

**mixed designs** Research designs that combine both experimental and correlational methods. In this design, participants from naturally occurring groups of interest (e.g., people with panic disorder and people with social phobia) are assigned to each experimental treatment, allowing the experimenter to determine whether the effectiveness of the treatments varies by group classification.

**multiple baseline designs** Designs used when it is not possible or ethical to employ a treatment reversal period. In this design, baselines are established for two (or more) behaviors, treatment is introduced for one behavior, and then treatment is introduced for the second behavior as well. By observing changes in each behavior from period to period, one may draw conclusions about the effectiveness of the treatments.

**naturalistic observation** A research method in which carefully planned observations are made in real-life settings.

**placebo effect** The case where the expectations for the experimental manipulation cause the outcome rather than (or in addition to) the manipulation itself.

**prevalence** The overall rate of cases (new or old) within a given period of time. Prevalence figures

allow us to estimate what percentage of the target population is affected by the illness or disorder.

**retrospective data** Data based upon people’s reports of past experiences and events.

**risk factor** A variable (e.g., demographic, environmental) that increases a person’s risk of experiencing a particular disease or disorder over his or her lifetime.

**scatterplot** A visual representation of the relationship between two variables. The scatterplot consists of an *x*-axis (labeled to reflect one variable), a *y*-axis (labeled to reflect the other variable), and a number of data points, each corresponding to one person’s scores on both variables.

**single-case designs** Designs that focus on the responses of only one participant. Usually, an intervention is introduced after a reliable baseline is established, and the effects of the intervention are determined by comparing the baseline and postintervention levels of behavior.

**statistical significance** Statistical values that would not be expected to occur solely on the basis of chance. By convention, a value is considered statistically significant if it would be expected to occur by chance alone fewer than 5 times out of 100.

**third-variable problem** The possibility that a correlation between variables A and B is due to the influence of an unknown third variable rather than to a causal relationship between A and B.

**within-group designs** Designs in which the same group of participants is compared at different points in time (say, before and after a treatment is administered).

## WEB SITES OF INTEREST

To visit any of the following Web sites, go to [www.wadsworth.com](http://www.wadsworth.com) and click Links.

4-1 APA Ethical Principles and Code of Conduct (with 2010 amendments)  
<http://www.apa.org/ethics/code/index.aspx>

4-2 Research with Non-human Animals in Psychology

<http://www.apa.org/science/leadership/care/index.aspx>

- 4-3 Guidelines for Ethical Conduct in the Care and Use of Animals  
<http://www.apa.org/science/leadership/care/guidelines.aspx>
- 4-4 Human Research Protections  
<http://www.apa.org/research/responsible/human/index.aspx>
- 4-5 Lab Animal Welfare  
<http://www.apa.org/research/responsible/animal/index.aspx>
- 4-6 Research Methods Tutorials  
<http://www.socialresearchmethods.net/tutorial/tutorial.htm>

# 5

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## Diagnosis and Classification of Psychological Problems

### FOCUS QUESTIONS

1. What are the advantages and disadvantages of the three major definitions of abnormal behavior?
2. What is mental illness or mental disorder? Why are mental disorder diagnoses important?
3. How was *DSM-IV* developed? Describe the five diagnostic axes used for a *DSM-IV* diagnostic formulation.
4. How are diagnostic classification systems evaluated?
5. What is the diathesis-stress model of psychopathology?

### CHAPTER OUTLINE

#### What Is Abnormal Behavior?

Statistical Infrequency or Violation of Social Norms

*The Case of Dmitri A.*

BOX 5-1: *Clinical Psychologist Perspective:*

*Kenneth J. Sher, Ph.D.*

*The Case of Juanita L.*

Subjective Distress

BOX 5-2: *Focus on Professional Issues:*

*Culture and Diagnosis*

*The Case of Cynthia S.*

*The Case of Kwame G.*

Disability, Dysfunction, or Impairment

*The Case of Richard Z.*

*The Case of Phyllis H.*

Where Does This Leave Us?

#### Mental Illness

The Importance of Diagnosis

BOX 5-3: *Clinical Psychologist Perspective:*

*Elaine Walker, Ph.D.*

Early Classification Systems

#### DSM-IV-TR

*The Case of Michelle M.*

#### General Issues in Classification

Categories Versus Dimensions

#### Causes of Abnormal Behavior and Mental Illness

Major Models of Psychopathology

Diathesis-Stress Model

## The Value of Classification

### CHAPTER SUMMARY

Clinical psychology is usually thought of as an applied science. Clinicians attempt to apply empirically supported psychological principles to problems of adjustment and abnormal behavior. Typically, this involves finding successful ways of changing the behavior, thoughts, and feelings of clients. In this way, clinical psychologists reduce their clients' maladjustment or dysfunction or increase their levels of adjustment.

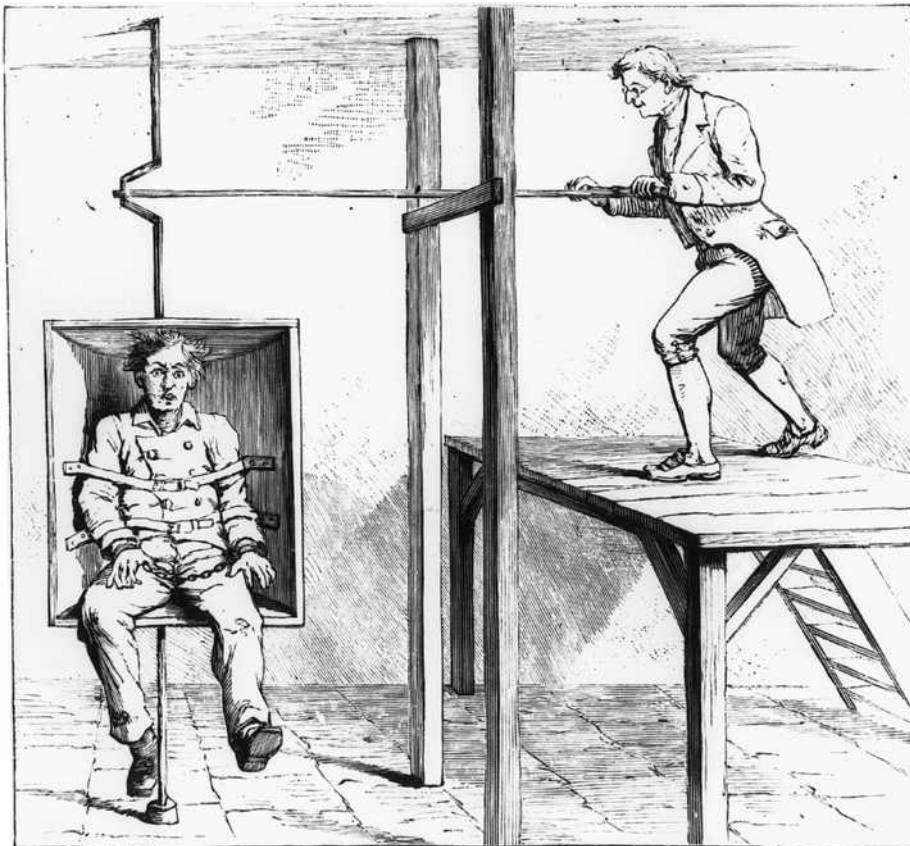
Before clinicians can formulate and administer interventions, however, they must first assess their clients' symptoms of psychopathology and levels

## KEY TERMS

## WEB SITES OF INTEREST

of dysfunction or impairment. Interestingly, the precise definitions of these and related terms can be elusive. Further, the manner in which the terms are applied to clients is sometimes quite unsystematic.

Clinical psychology has moved beyond the primitive views that defined mental illness as possession by demons or spirits. Maladjustment is no longer considered a state of sin. The 18th and 19th centuries ushered in the notion that "insane" individuals are sick and require humane treatment. Even then, however, mental health practices could be bizarre, to say the least (see Figure 5-1). Clearly, clinical psychologists'



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**FIGURE 5-1** In the 19th century, people were treated for depression by spinning them in a rotating chair.

contemporary views are considerably more sophisticated than those of their forebears. Yet many view current treatments such as electroconvulsive therapy (ECT) or transcranial magnetic brain stimulation (TMS) with some skepticism and concern. Still others may see the popularity of treatments using psychotropic medications (e.g., antipsychotic, antidepressant, antimanic, or antianxiety medications) as less than enlightened. Finally, many forms of “psychological treatment” (e.g., primal scream therapy, age regression therapy) are questionable at best. All of these treatment approaches and views are linked to the ways clinical psychologists decide who needs assessment, treatment, or intervention as well as the rationale for providing these services. These judgments are influenced by the labels or diagnoses often applied to people. In this chapter, we take a critical look at some of clinical psychology’s definitions and labels. In this way, perhaps we can clarify some of the issues involved in their use.

To give you a better idea of the activities of clinical psychologists who specialize in abnormal behavior or psychopathology, we present a specific example in Box 5-1. This profile describes the work of a *psychopathologist*, a scientist who studies the causes of mental disorders as well as the factors that influence the development of mental disorders.

### The Case of Dmitri A.

Dmitri is now in the second grade. He is of average height and weight and manifests no physical problems. He is somewhat aggressive and tends to bully children smaller than himself. His birth was a normal one, and although he was a bit slow in learning to walk and talk, the deficit was not marked. The first grade was difficult for Dmitri, and his progress was slow. By the end of the school year, he was considerably behind the rest of the class. However, the school officials decided to promote him anyway. They reasoned that he was merely a bit slow in maturing and would “come around” shortly. They noted that his status as an only child, a pair of doting parents, a short attention span, and

## WHAT IS ABNORMAL BEHAVIOR?

Ask 10 different people for a definition of abnormal behavior and you may get 10 different answers. Some of the reasons that abnormal behavior is so difficult to define are (a) no single descriptive feature is shared by all forms of abnormal behavior, and no one criterion for “abnormality” is sufficient; and (b) no discrete boundary exists between normal and abnormal behavior. Many myths about abnormal behavior survive and flourish even in this age of enlightenment. For example, many individuals still equate abnormal behavior with (a) bizarre behavior, (b) dangerous behavior, or (c) shameful behavior.

In this section, we examine in some detail three proposed definitions of abnormal behavior: (a) statistical infrequency or violation of social norms, (b) the experience of subjective distress, and (c) disability, dysfunction, or impairment. We discuss the pros and cons of each definition. Although each of these three definitions highlights an important part of our understanding of abnormal behavior, each definition by itself is incomplete.

### Statistical Infrequency or Violation of Social Norms

When a person’s behavior tends to conform to prevailing social norms or when this particular behavior is frequently observed in other people, the individual is

aggressiveness were all factors that combined to produce his poor school performance.

At the beginning of the second grade, Dmitri was administered a routine achievement test on which he did very poorly. As a matter of school policy, he was referred to the school psychologist for individual testing and evaluation. Based on the results of an intelligence test, a test of adaptive functioning, a review of his school records, and a social history taken from the parents, the psychologist concluded that Dmitri suffered from mental retardation. His IQ was 64 based on a standard intelligence test. Further, a social maturity index derived from parental reports of his social behavior was quite low.

not likely to come to the attention of mental health professionals. However, when a person's behavior becomes patently deviant, outrageous, or otherwise nonconforming, then he or she is more likely to be categorized as "abnormal." Let us consider some examples.

Both of these cases are examples of individuals commonly seen by clinical psychologists for evaluation or treatment. The feature that immediately characterizes both cases is that Dmitri's and Juanita's behaviors violate norms. Dmitri may be considered abnormal because his IQ and school performance depart considerably from the mean. This aspect of deviance from the norm is very clear in Dmitri's case because it can be described statistically and with numbers. Once this numerical categorization is accomplished, Dmitri's assignment to the deviant category is assured. Juanita also came to people's attention because she is *different*. Her clothes, appearance, and interests do not conform to the norms typical of girls or women in her culture.

**Advantages of This Definition.** The definition of abnormality in terms of statistical infrequency or violation of social norms is attractive for at least two reasons.

1. *Cutoff Points:* The statistical infrequency approach is appealing because it establishes *cutoff points* that are quantitative in nature. If the cutoff point on a scale is 80 and an individual scores 75, the decision to label that individual's behavior as abnormal is relatively straightforward. This principle of

statistical deviance is frequently used in the interpretation of psychological test scores. The test authors designate a cutoff point in the test manual, often based on statistical deviance from the mean score obtained by a "normal" sample of test-takers, and scores at or beyond the cutoff are considered "clinically significant" (i.e., abnormal or deviant).

2. *Intuitive Appeal:* It may seem obvious that those behaviors we ourselves consider abnormal would be evaluated similarly by others. The struggle to define exactly what abnormal behavior is does not tend to bother us because, as a U.S. Supreme Court justice once said about pornography, we believe that we know it when we see it.

**Problems with This Definition.** Conformity criteria seem to play a subtle yet important role in our judgments of others. However, although we must systematically seek the determinants of the individual's nonconformity or deviance, we should resist the reflexive tendency to categorize every nonconformist behavior as evidence of mental health problems. Conformity criteria in fact have a number of problems.

1. *Choice of Cutoff Points:* Conformity-oriented definitions are limited by the difficulty of establishing agreed-upon cutoff points. As noted previously, a cutoff is very easy to use once it is established. However, very few guidelines are available for choosing the cutoff point. For

### The Case of Juanita L.

Martha seemed to have a normal childhood. She made adequate progress in school and caused few problems for her teachers or parents. Although she never made friends easily, she could not be described as withdrawn. Her medical history did not reveal any obvious signs of physical problems. When Juanita entered high school, changes began. She combed her hair in a very severe, plain style. She chose clothing that was quite ill-fitting and almost like that worn 50 years ago. She wore neither makeup nor jewelry of any kind. Although she would have been hard to distinguish from the other girls in her class earlier, she now stood out.

Juanita's schoolwork began to slip. She spent hours alone in her room reading the Bible. She also began slipping notes to other girls that commented on

their immorality when she observed them holding hands with boys, giggling, dancing, and so on. She attended religious services constantly; sometimes on Sundays she went to services at five or six separate churches. She fasted frequently and decorated her walls at home with countless pictures of Christ, religious quotations, and crucifixes.

When Juanita finally told her parents that she was going to join an obscure religious sect and travel about the country (in a state of poverty) to bring people Christ's message, they became concerned and took her to a psychiatrist. Shortly afterward, she was hospitalized. Her diagnosis varied, but it included such terms as schizophrenia, paranoid type; schizoid personality; and schizophrenia, undifferentiated type.

**BOX 5-1 Clinical Psychologist Perspective: Kenneth J. Sher, Ph.D.**

A psychopathologist is a scientist who studies how mental disorders develop, as well as the causes (etiology) of mental disorders. A relatively small, but very productive, proportion of clinical psychologists who conduct research call themselves psychopathologists. Kenneth J. Sher is a prominent psychopathologist whose research focuses on the etiology and development of alcohol use disorders.

Dr. Sher is Curators' Professor of Psychological Sciences at the University of Missouri–Columbia. He has well over 200 publications on issues related to alcohol use disorders, methodology in psychopathology research, and personality–psychopathology relations. Dr. Sher has received multiple federal grants to support his research, and he has received numerous awards that acknowledge his scientific contributions.

Dr. Sher's empirical work has evaluated many theories of alcohol use (for example, tension reduction, self-awareness), as well as factors that influence the development of alcohol use disorders in "at-risk" subjects (biological offspring of fathers diagnosed with alcoholism). Dr. Sher is currently conducting two major prospective studies. One assesses "at-risk" subjects at regular intervals during their collegiate and young adult years. For example, one of the studies from this large project found that children of alcoholics (COAs) reported a greater number of alcohol and drug problems, stronger alcohol expectancies, greater behavioral undercontrol, and lower academic achievement than control subjects who did not have a family history of alcoholism (Sher, Walitzer, Wood, & Brent, 1991). Data from the prospective phase of Dr. Sher's study have been used to evaluate a variety of theoretical models for how alcohol problems and other forms of psychopathology develop in children of alcoholics (e.g., Jackson & Sher, 2003). The study has also been extremely informative in estimating the degree that drinking during the college years is related to drinking later in adulthood (Bartholow, Sher, & Krull, 2003). A more recent prospective study has been examining how individual difference variables like personality interact with environmental factors in determining the course of drinking in college. In addition, this study explores how personality influences the types of environments that individuals seek out and how, in turn,

these environments influence individuals with respect to future drinking.

Dr. Sher responded to several questions we posed concerning his background and interests, as well as his predictions about future trends for clinical psychology and psychopathology research.

**What originally got you interested in the field of clinical psychology?**

I'm not really sure. Clinical psychology was the fourth and final focus of my undergraduate studies. I arrived at college with an interest in becoming a marine biologist. If the college had had any relevant courses when I arrived (it was in the middle of Ohio, I'd probably be a marine biologist today. After a brief stint as a communications major (focusing on broadcast media), I became a psychology major. At first, I was interested in becoming a cognitive psychologist because nothing seemed as fundamental a question as "What is thought?" and "How do we think?" However, I found the cognitive psychology of the time (early 1970s) to be overly behavioral and philosophically barren (a far cry from the current state of cognitive science).

My interest in clinical psychology gelled while working as a research assistant for Mardi Horowitz, an academic psychiatrist in San Francisco. There, I became convinced that much can be learned about human nature from an integrated research program including clinical studies (which help to describe phenomena), epidemiological investigations (which serve to establish the extent and course of phenomena in the population), and laboratory research (which can help test specific hypotheses about underlying mechanisms). Horowitz told me that going into clinical psychology "would be the biggest mistake of my life"; he thought I should go to medical school, and my mother, of course, agreed. However, I've never once regretted my choice—although having a lab on a marine research vessel would have been nice too.

**Describe what activities you are involved in as a clinical psychologist, as well as your areas of expertise.**

I am primarily a researcher. I conduct both laboratory research on individual differences in alcohol effects and

field studies of the course of substance use disorders in young adults. I am particularly interested in the interplay of the person and the environment and how risk for and protection from various “bad” outcomes unfold over time in the developing human. Much of my time is spent supervising graduate student research, analyzing data, writing, and peer review (both scholarly articles and grant reviews). I’d say my main expertise is in clinical research methods, alcoholism, anxiety, and comorbidity research. I am also involved in a fair amount of administrative activities in the Psychology Department here and nationally. I’ve been very involved in professional societies such as the American Psychological Association, where I serve on the governing body (the Council of Representatives) and accrediting body (the Commission on Accreditation); the Association for Psychological Science, where I’ve chaired the committee that organizes their annual scientific meeting; and specialized research societies like the Research Society on Alcoholism. These outside service activities complement the more academic responsibilities I hold at my university.

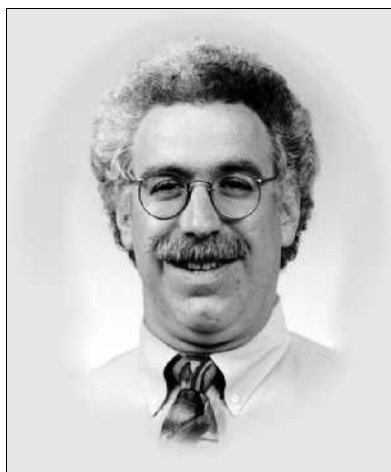
#### **What are the future trends you see for clinical psychology?**

It is always hazardous to guess the future, but it is clear that the role of the clinical psychologist as an independent health care provider is diminishing as a function of an oversupply of psychologists, competition from other mental health providers, and managed care. However, with challenges also come opportunities, and the changing mental health scene could provide opportunities for clinical psychologists to have great influence in devising new treatment protocols, supervising treatment staff, and developing behavioral health policies. On the research front, clinical psychologists are uniquely trained to bridge multiple disciplines and can serve as leaders or important collaborators on a variety of research initiatives in basic research in psychopathology and health and in evaluating treatment outcomes.

#### **What are the most promising areas for psychopathology research?**

Psychopathology is poised to have a number of important new discoveries because of basic advances in allied

disciplines. For example, recent developments in neuroimaging (e.g., PET, fMRI) provide the tools to better understand brain mechanisms underlying certain forms of abnormal thought and behavior. The molecular genetic revolution will permit us to discover genes that contribute to various behavior disorders and, by helping us understand how they work in the context of the environment, should tell us much about the underlying molecular biology as well as key environmental processes. At present, many psychologists are defensive about genetic research, fearing that it will trivialize or marginalize basic research on behavior. I hold the opposite view: Advances in genetics will permit us to refine our notions about the role of non-genetic influences on behavior as well as the close interplay between genes and environment. Also, advances in statistical methodology and increased use of prospective data (collected on individuals over long observation periods) and ecological data (collected in the course of normal, day-to-day activities) will help us to better understand psychopathology in environmental and developmental contexts.



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Kenneth J. Sher



PhotoDisc

Appearance or dress may violate social norms but does not necessarily indicate abnormality or psychopathology.

example, in the case of Dmitri, is there something magical about an IQ of 64? Traditional practice sets the cutoff point at 70. Get an IQ score below 70 and you may be diagnosed with mental retardation. But is a score of 69 all that different from a score of 72? Rationally justifying such arbitrary IQ cutoff points is difficult. This problem is equally salient in Juanita's case. Are five crucifixes on the wall too many? Is attendance at three church services per day acceptable?

2. *The Number of Deviations:* Another difficulty with nonconformity standards is the number of behaviors that one must evidence to earn the label "deviant." In Juanita's case, was it just the crucifixes, or was it the total behavioral configuration—crucifixes, clothes, no makeup or jewelry, withdrawal, fasting, and so on? Had Juanita manifest only three categories of unusual behavior, would we still classify her as deviant?

3. *Cultural and Developmental Relativity:* Juanita's case, in particular, illustrates an additional point. Her behavior was not deviant in some absolute sense. Had she been a member of an exceptionally religious family that subscribed to radical religious beliefs and practices, she might never have been classified as maladjusted. In short, what is deviant for one group is not necessarily so for another. Thus, the notion of *cultural relativity* is important. Likewise, judgments can vary depending on whether family, school officials, or peers are making them. Such variability may contribute to considerable diagnostic unreliability because even clinicians' judgments may be relative to those of the group or groups to which they belong. In addition, some behaviors that may seem appropriate at one developmental stage may appear inappropriate at another developmental stage. When considering the presence of psychopathology among youth, it is important to consider whether a child's behavior is inappropriate as compared to same-aged peers, or as compared to all peers.

Two other points about cultural and developmental relativity are also relevant. First, carrying cultural relativity notions to the extreme can place nearly every reference group beyond reproach. Cultures can be reduced to subcultures and subcultures to minicultures. If we are not careful, this reduction process can result in our judging nearly every behavior as healthy. Second, the elevation of conformity to a position of preeminence can be alarming. One is reminded that so-called nonconformists have made some of the most beneficial social contributions. It can also become very easy to remove those whose different or unusual behavior bothers society. Some years ago in Russia, political dissidents were often placed in mental hospitals. In America, it sometimes happens that 70-year-old Uncle Arthur's family is successful in hospitalizing him largely to obtain his power of attorney. His deviation is that, at age 70, he is spending too much of the money that otherwise will be eventually inherited by the family. Finally, if all these points are not enough, *excessive* conformity has itself sometimes been the basis for judging persons abnormal!

### The Case of Cynthia S.

Cynthia has been married for 23 years. Her husband is a highly successful civil engineer. They have two children, one in high school and the other in college. There is nothing in Cynthia's history to suggest psychological problems. She is above average in intelligence, and she completed two years of college before marrying. Her friends all characterize her as devoted to her family. Of all her features, those that seem to describe her best include her strong sense of responsibility and a capacity to get things done. She has always been a "coper." She can continue to function effectively despite a great deal of personal stress and anxiety. She is a warm person, yet not one to wear her feelings or her troubles on her sleeve.

She recently enrolled in a night course at the local community college. In that course, the students were

asked to write an "existential" account of their innermost selves. The psychologist who taught the course was surprised to find the following excerpts in Cynthia's account:

"In the morning, I often feel as if I cannot make it through the day. I frequently experience headaches and feel that I am getting sick. I am terribly frightened when I have to meet new people or serve as a hostess at a party. At times I feel a tremendous sense of sadness; whether this is because of my lack of personal identity, I don't know."

What surprised the instructor was that none of these expressed feelings were apparent from Cynthia's overt behavior. She appeared confident, reasonably assertive, competent, in good spirits, and outgoing.

### Subjective Distress

We now shift the focus from the perceptions of the observer to the perceptions of the affected individual. Here the basic data are not observable deviations of behavior, but the subjective feelings and sense of well-being of the individual. Whether a person feels happy or sad, tranquil or troubled, and fulfilled or barren are the crucial considerations. If the person is anxiety-ridden, then he or she is maladjusted regardless of whether the anxiety seems to produce overt behaviors that are deviant in some way.

Cynthia and Kwame are obviously two very different kinds of people. Cynthia's behavior is, in

a sense, quite conforming. Her ability to cope would be cause for admiration by many. Yet she is unhappy and conflicted, and she experiences much anxiety. A clinical psychologist might not be surprised if she turned up in the consulting room. Her friends, however, would likely be shocked were they to learn that she had sought psychological help.

In contrast, many of Kwame's friends, associates, and family members would be gratified if he were to seek help because most of them have, at one time or another, described him as sick. But Kwame is not at odds with himself. He sees nothing wrong with himself, and he would probably react negatively to

### The Case of Kwame G.

In the course of a routine screening report for a promotion, Kwame was interviewed by the personnel analyst in the accounting company for which he worked. A number of Kwame's peers in the office were also questioned about him. In the course of these interviews, several things were established.

Kwame was a very self-confident person. He seemed very sure of his goals and what he needed to do to achieve them. Although hardly a happy-go-lucky person, he was certainly content with his progress so far. He never expressed the anxieties and uncertainty that seemed typical of so many of his peers. There was nothing to suggest any internal

distress. Even his enemies conceded that Kwame really "had it together."

These enemies started to become quite visible as the screening process moved along. Not many people in the office liked Kwame. He tended to use people and was not above stepping on them now and then to keep his career moving. He was usually inconsiderate and frequently downright cruel. He was particularly insensitive to those below him. He loved ethnic humor and seemed to revel in his prejudices toward minority groups and those women who intruded into a "man's world." Even at home, his wife and son could have reported that they were kept in constant turmoil because of his insensitive demands for their attention and services.

**BOX 5-2 Focus on Professional Issues: Culture and Diagnosis**

Culture has a significant impact on our thoughts and the way we view ourselves and the world around us, our experience and expression of emotions, and our behavior. Therefore, culture should be taken into account when a person is being evaluated for psychological problems, and mental health professionals should be aware of their own cultural biases as they evaluate those from other cultures. What may be labeled as unusual or deviant in one culture may not be considered as such in another culture.

Consider the following case of Gusti A., a 34-year-old Indonesian man:

As a student he was often sick and he pondered on life and why one suffered sickness and death. He was puzzled as to the meaning of life and death. He spent a lot of his time alone in his room trying to solve these problems. Then he found he could not sleep and his condition got worse, to the point that he rarely went to classes or tried to study or even bothered to look after himself properly. His friends became concerned about his condition and wondered if he was going mad. Then one of his friends found him talking to himself and thought he had finally gone crazy. His friend took him home because he was frightened something would happen to him if he were left alone. His condition continued for over six months, until he felt he really was mad. Then he began to have strange experiences. One day he

was walking with a friend who suddenly collapsed unconscious in front of him. Feeling a strong desire to help his friend, Gusti A. reached out his hand and placed it on the unconscious man's head and tried to transfer his energy to him. He then instructed his friend to wake up, and he did. Although he was not sure if his friend had recovered as a result of his action or not, he tried to test his ability to heal others. He also had various premonitions which proved accurate, such as seeing in his mind an accident in front of the university before it happened, and feeling worried about his grandmother and shortly afterwards discovering that she was seriously ill. As a result of several such experiences he was finally convinced that he did in fact possess special powers; furthermore he knew that his grandfather, father and his cousin had similar abilities. He began to learn from books ... about spiritual healing and then began to use his inner power ... to heal people. (Stephen & Suryani, 2000, p. 19).

To those of us from other cultures, Gusti A.'s beliefs and behaviors may seem quite unusual or even evidence of a serious mental disorder like schizophrenia. However, individuals like Gusti A. are viewed as traditional healers (the *balian*) in Bali, Indonesia. Many anthropologists and cross-cultural psychiatrists and psychologists argue that the states of consciousness, beliefs, and behaviors of these traditional healers are distinct from those that characterize mental

any suggestion that he should seek therapy. Furthermore, his lack of motivation for therapy would probably make it an unprofitable venture.

**Advantages of This Definition.** Defining abnormal behavior in terms of subjective distress has some appeal. It seems reasonable to expect that adults and some children can assess whether they are experiencing emotional or behavioral problems and can share this information when asked to do so. Indeed, many methods of clinical assessment (e.g., self-report inventories, clinical interviews) assume that the respondent is aware of his or her internal state and will respond to inquiries about personal distress in an honest manner. In some

ways, this relieves the clinician of the burden of making an absolute judgment as to the respondent's degree of maladjustment. Of course, younger children are often incapable of reflecting upon or reporting their subjective distress, rendering this index of maladjustment moot.

**Problems with This Definition.** The question is whether Cynthia, Kwame, or both are maladjusted. The judgment will depend on one's criteria or values. From a strict standpoint of subjective report, Cynthia qualifies but Kwame does not. This example suggests that labeling someone maladjusted is not very meaningful unless the basis for the judgment is specified and the behavioral manifestations are stated.

illnesses like schizophrenia or dissociative disorder. Stephen and Suryani (2000) note that this case might be mistakenly diagnosed as one of mental illness by diagnosticians who are not culturally informed. Gusti A. successfully completed his university studies, his own personal distress ceased once he realized that he had these special abilities to heal others, and he is a respected and well-functioning member of the community. Stephen and Suryani (2000) suggest that the conversion to becoming a *balian* is like a religious conversion rather than a sign of serious psychosis or dissociation associated with *DSM-IV* defined mental illness.

So, does the *DSM-IV-TR* (APA, 2000) adequately address the issue of culture and the diagnosis of mental illness? Although most acknowledge that the latest edition of the diagnostic manual does a better job of attending to cultural issues than its predecessors, Kleinman (1996) believes that the diagnostic manual is too narrow in its perspective and offers a few suggestions for future diagnostic manuals:

- Provide instruction on culturally sensitive diagnostic interviewing and culturally valid translation and application of *DSM*-based diagnostic tests and research instruments.
- Provide a Cultural Axis that assesses the person's cultural identity and degree of acculturation and the likelihood for cultural obstacles.

Not everyone whom we consider to be “disordered” reports subjective distress. For example, clinicians sometimes encounter individuals who may have little contact with reality yet profess inner tranquility. Nonetheless, these individuals are institutionalized. Such examples remind us that subjective reports must yield at times to other criteria. Another problem concerns the amount of subjective distress necessary to be considered abnormal. All of us become aware of our own anxieties from time to time, so the total absence of such feelings cannot be the sole criterion of adjustment. How much anxiety is allowed, and for how long, before we acquire a label? Many would assert that the very fact of being alive and in an environment that can never wholly

- Provide more information on cultural issues in diagnosis like culturally relevant features as well as a discussion of cultural influence on risk factors, symptoms, and course of the disorder.
- Finally, common cultural terms for distress and culture-bound syndromes should be integrated into the main text of the diagnostic manual (as opposed to being placed in an appendix) so that mental health professionals will be more aware of the variations.



satisfy us will inevitably bring anxieties. Thus, as in the case of other criteria, using phenomenological reports is subject to limitations. There is a certain charm to the idea that if we want to know whether a person is maladjusted, we should ask that person, but there are obvious pitfalls in doing so.

### Disability, Dysfunction, or Impairment

A third definition of abnormal behavior invokes the concepts of *disability*, *dysfunction*, or *impairment*. For behavior to be considered abnormal, it must create some degree of social (interpersonal) or occupational (or educational) problems for the individual. Dysfunction in these two spheres is often quite apparent to

### The Case of Richard Z.

Richard was convinced by his wife to consult with a clinical psychologist. Previous contacts with psychiatrists had on one occasion resulted in a diagnosis of “hypochondriacal neurosis” and, on another, a diagnosis of “passive aggressive personality.” Richard has not worked in several years, even though he has a bachelor’s degree in library science. He claims that he is unable to find employment because of his health. He reports a variety of physical symptoms, including dizziness, breathlessness, weakness, and “funny” sensations in the abdominal area. Making the rounds from physician to physician has enabled him to build an

impressive stock of pills that he takes incessantly. None of his physicians, however, has been able to find anything physically wrong with him.

As a child, Richard was the apple of his mother’s eye. She doted on him, praised him constantly, and generally reinforced the notion that he was someone special. His father disappeared about 18 months after Richard was born. His mother died 6 years ago, and he married shortly after that. Since then, his wife has supported both of them, thus enabling him to finish college. Only recently has she begun to accept the fact that something may be wrong with Richard.

### The Case of Phyllis H.

Phyllis is a college student. She is in her sixth year of undergraduate study but has not yet obtained a degree. She has changed majors at least four times and has also had to withdraw from school on four occasions.

Her withdrawals from school have been associated with her drug habit. In two instances, her family placed her in a mental hospital; on two other occasions, she

served short jail sentences following convictions on shoplifting charges. From time to time, Phyllis engages in prostitution to support her drug habit. Usually, she can secure the money from her parents, who seem to have an uncanny knack for accepting her outrageous justifications. She has been diagnosed with “antisocial personality disorder” and with “drug dependence (cocaine).”

both the individual and the clinician. For example, a lack of friendships or of relationships because of a lack of interpersonal contact would be considered indicative of social dysfunction, whereas the loss of one’s job or failing grades because of emotional problems (e.g., depression) would suggest occupational dysfunction.

According to the disability/dysfunction/impairment definition, both of these cases would suggest the presence of abnormal behavior. Richard is completely dependent on his wife (social dysfunction), and this, coupled with his litany of somatic complaints and his inability to cope with stress, has left him unemployed (occupational dysfunction).

Phyllis’s drug habit has interfered with her occupational (in this case, school) functioning.

**Advantages of This Definition.** Perhaps the greatest advantage to adopting this definition of abnormal behavior is that relatively little inference is required. Problems in both the social and occupational sphere often *prompt* individuals to seek out treatment. It is often the case that individuals come to realize the extent of their emotional problems

when these problems affect their family or social relationships as well as significantly affect their performance at either work or school.

**Problems with This Definition.** Who should establish the standards for social or occupational dysfunction? The patient, the therapist, parents, teachers, friends, or an employer? In some ways, judgments regarding both social and occupational functioning are relative—not absolute—and involve a value-oriented standard. Although most of us may agree that having relationships and contributing to society as an employee or student are valuable characteristics, it is harder to agree on what specifically constitutes an adequate level of functioning in these spheres. In short, achieving a reliable consensus about the nature of an individual’s social relationships and contributions as a worker or student may be difficult. Recognizing this problem, psychopathologists have developed self-report inventories and special interviews to assess social and occupational functioning in a systematic and reliable way.

To summarize, several criteria are used to define abnormal behavior. Each criterion has its

advantages and disadvantages, and no one criterion can be used as a gold standard. Some subjectivity is involved in applying any of these criteria.

### Where Does This Leave Us?

As the previous discussion points out, all definitions of abnormal behavior have their strengths and weaknesses. These definitions can readily incorporate certain examples of abnormal behavior, but exceptions that do not fit these definitions are easy to provide. For example, all of us can think of an “abnormal behavior” that would not be classified as such if we adopted the subjective distress criterion (e.g., spending sprees in mania), and we can think of a behavior that might be classified *incorrectly* as abnormal if we adopted the violation of norms definition (e.g., an NFL all-star’s athletic prowess).

It is also important to note that *abnormal behavior does not necessarily indicate mental illness*. Rather, the term *mental illness* refers to a large class of frequently observed syndromes that are comprised of certain abnormal behaviors or features. These abnormal behaviors/features tend to covary or occur together such that they often are present in the same individual. For example, major depression is a widely recognized mental illness whose features (e.g., depressed mood, sleep disturbance, appetite disturbance, and suicidal ideation) tend to co-occur in the same individual. However, an individual who manifested only one or two of these features of major depression would not receive this diagnosis and might not be considered mentally ill. One can exhibit a wide variety of abnormal behaviors (as judged by any definition) and yet not receive a mental disorder diagnosis.

## MENTAL ILLNESS

Like abnormal behavior, the term *mental illness* or *mental disorder* is difficult to define. For any definition, exceptions come to mind. Nevertheless, it seems important to actually define mental illness rather than to assume that we all share the same implicit idea of what mental illness is.

The text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*

(American Psychiatric Association, 2000), known as *DSM-IV-TR*, is the official diagnostic system for mental disorders in the United States. It states that a mental disorder

is conceptualized as a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of functioning) or with a significantly increased risk of suffering, death, pain, disability, or an important loss of freedom. In addition, this syndrome or pattern must not be merely an expectable and culturally sanctioned response to a particular event, for example, the death of a loved one. Whatever its original cause, it must currently be considered a manifestation of a behavioral, psychological, or biological dysfunction in the individual. Neither deviant behavior (e.g., religious, political, or sexual) nor conflicts that are primarily between the individual and society are mental disorders unless the deviance or conflict is a symptom of the dysfunction in the individual as described above. (p. xxxi)

Several aspects of this definition are important to note: (a) The *syndrome* (cluster of abnormal behaviors) must be associated with distress, disability, or increased risk of problems; (b) a mental disorder is considered to represent a dysfunction *within an individual*; and (c) not all deviant behaviors or conflicts with society are signs of mental disorder.

The astute reader has probably noticed that the *DSM-IV-TR* definition of mental disorder incorporates the three definitions of abnormal behavior presented earlier in this chapter. On the one hand, the *DSM-IV-TR* definition is more comprehensive than any one of the three individual definitions of abnormal behavior presented earlier. On the other hand, the *DSM-IV-TR* definition is more restrictive because it focuses on syndromes, or clusters of abnormal behaviors, that are associated with distress, disability, or an increased risk for problems.

**BOX 5-3 Clinical Psychologist Perspective: Elaine Walker, Ph.D.**

Elaine Walker is Samuel Candler Dobbs Professor of Psychology and Neuroscience in the Department of Psychology at Emory University. She leads a research laboratory that is funded by the National Institutes of Mental Health to study risk factors for major mental illness. Her research is focused on child and adolescent development and the brain changes that are associated with adolescence. She has published over 200 scientific articles and six books dealing with mental health and neuroscience. Dr. Walker also teaches graduate and undergraduate courses at Emory.

Dr. Walker graduated from Washington University in St. Louis and received her Ph.D. in Clinical Psychology from the University of Missouri in 1979. In 1978–1979, she was a postdoctoral research fellow at the University of Southern California, and in 1980 she joined the faculty of Cornell University, where she was assistant then associate professor. In 1985, Dr. Walker accepted a faculty position in the Department of Psychology at Emory University. Dr. Walker is the recipient of awards for her research, including a WT Grant Faculty/Scholar Award, two Career Development awards from the National Institutes of Mental Health, the Zubin Memorial Award from the New York Psychiatric Institute, the Gralnick Award from the American Psychological Society, the Cattell Foundation Award, the Joseph Zubin Award for lifetime achievement in research, and the Scholar-Teacher Award from Emory University.

We asked Dr. Walker about her background and interests, as well as her predictions about future trends for clinical psychology and psychopathology research.

**What originally got you interested in the field of clinical psychology?**

As an undergraduate student, I worked part-time in a psychiatric hospital, and my experiences with the patients stimulated my interest in mental illness, especially the psychoses. I was already fascinated by science and human behavior, so the combination of these factors had a major influence on my career path. I decided to major in psychology by the end of my freshman year, and by the time I was a sophomore made the decision to pursue a career in clinical psychology.

**Describe what activities you are involved in as a clinical psychologist.**

I am a full-time faculty member at Emory University in the Department of Psychology and in the graduate and undergraduate programs in neuroscience. My primary

activities are research, teaching, and service to the field. The main focus of my research is childhood and adolescent risk factors for serious mental illness. In collaboration with graduate students, undergraduate students, postdoctoral fellows, and investigators from other universities, I conduct studies, publish papers, and attend scientific meetings where research findings are presented.

Because my research deals with clinical populations, a considerable amount of my time is spent in diagnostic evaluation of patients and in the supervision of psychological assessments and treatment. I am often asked to consult on diagnostic evaluations of patients and to assess their need for intervention. A typical question is whether the individual is manifesting signs of risk for psychosis.

My teaching on both the graduate and undergraduate levels is primarily in the area of psychopathology. On the undergraduate level, I teach a course in abnormal psychology and advanced seminars on psychosis. On the graduate level, I teach an advanced course in psychopathology and also supervise students who are conducting research for their master's and dissertation projects. Working with students at various stages of their education is a very rewarding experience.

Like most research faculty, I serve on the editorial boards of journals, and I am the editor of one journal, *Psychological Science in the Public Interest*. Thus, some of my time is spent reviewing papers submitted for publication by other researchers in my field. Doing so provides the opportunity to keep up with advances in the field.

Over the years, I have also been in various administrative roles, including serving as director of the Graduate Program in Clinical Psychology and chair of the Department of Psychology.

There is no doubt that this diversity of professional activities—teaching, research, clinical work and administration—makes my professional life very interesting and gratifying. This is one of the benefits of the field of clinical psychology; it provides opportunities for involvement in a range of activities. It is difficult for me to imagine a more fulfilling career.

**What are your particular areas of expertise or interest?**

We study manifestations of risk for psychotic disorders in the domains of motor and cognitive functions, as well as biological indicators. Psychotic illnesses, especially schizophrenia, can be very severe and

debilitating. They typically have their onset in late adolescence or early adulthood, and thereby limit the individual's opportunities for achieving independence. The fact that psychotic disorders tend to have their onset during a specific developmental stage is now assumed to reflect the role of brain maturation processes in the genesis of these illnesses. Our main research objectives are to enhance the prediction of risk for psychosis in youth and to shed light on the neural mechanisms that are involved in the emergence of psychoses. In particular, we are interested in the way that normative brain changes in adolescence may go awry in youth at risk for psychosis. We are pursuing the hypothesis that hormones, especially stress hormones, may be playing an important role in these processes.

In recent years we have expanded our research on the biological response to stress and are pursuing a line of investigation aimed at elucidating the role of biological stress response systems, particularly the hypothalamic-pituitary-adrenal (HPA) axis. This system governs the release of stress hormones, including cortisol in primates, and has pervasive effects on brain function. It appears that the adolescent/early adult period is a critical stage in the development of the HPA axis, and this may be playing a role in triggering the manifestation of vulnerability for psychosis during this period.

#### **What are the future trends you see for clinical psychology?**

Since I entered the field in the 1970s, psychology in general has broadened its focus to encompass the complex interactions between behavioral and biological factors. The same trend is apparent in clinical psychology. As research findings in psychology and neuroscience have accumulated, it has become increasingly apparent that we cannot separate biology and psychology. The notion that biological factors (e.g., genetics, hormones etc.) influence psychological functioning has been widely accepted by both the general public and behavioral scientists. But the pervasive role of psychological factors in altering biological processes, most notably brain function, has only been recognized by scientists in the past few decades. Numerous studies of both animals and humans have demonstrated that psychosocial factors alter brain processes, sometimes triggering permanent changes. This has led us to a more complex and accurate view of the intricate interactions between psychological and biological factors in determining the course of human development. Thus,

university training in clinical psychology now includes a greater emphasis on the interface among behavioral science, neuroscience, and genetics. The knowledge generated in all of these fields is important for research progress in the field of mental health.

#### **How will the field evolve as our ability to assess neurodevelopmental factors increases in sophistication?**

As our scientific understanding of normal brain development increases, so will our opportunities to identify the neurodevelopmental processes involved in mental disorders. I expect that training in clinical psychology will keep pace with advances in the field, and future generations of clinical psychology researchers will be equipped to make significant contributions to research on the causes and treatment, and perhaps even prevention, of mental disorders.



Elaine Walker

## The Importance of Diagnosis

Before uncritically accepting this definition or taking for granted the utility of diagnosing and classifying individuals, we need to answer a basic question: Why should we use mental disorder diagnoses? Diagnosis is a type of expert-level categorization.

Categorization is essential to our survival because it allows us to make important distinctions (e.g., a mild cold vs. viral pneumonia, a malignant vs. a benign tumor). The diagnosis of mental disorders is an expert level of categorization used by mental health professionals that enables us to make important distinctions (e.g., schizophrenia vs. bipolar disorder with psychotic features).

There are at least four major advantages of diagnosis. First, and perhaps most important, a primary function of diagnosis is communication. A wealth of information can be conveyed in a single diagnostic term. For example, a patient with a diagnosis of paranoid schizophrenia was referred to one of the authors by a colleague in New York City. Immediately, without knowing anything else about the patient, a symptom pattern came to mind (delusions, auditory hallucinations, severe social/occupational dysfunction, continuous signs of the illness for at least 6 months). Diagnosis can be thought of as “verbal shorthand” for representing features of a particular mental disorder. Using standardized diagnostic criteria (e.g., those that appear in the *DSM-IV*) ensures some degree of comparability with regard to mental disorder features among patients diagnosed in California, Missouri, North Carolina, Texas, Manhattan, New York, or Manhattan, Kansas.

Diagnostic systems for mental disorders are especially useful for communication because these classificatory systems are largely descriptive. That is, behaviors and symptoms that are characteristic of the various disorders are presented without any reference to theories regarding their causes. As a result, a diagnostician of nearly any theoretical persuasion can use them. If every psychologist used a different, theoretically based system of classification, a great number of communication problems would likely result.

Second, the use of diagnoses enables and promotes empirical research in psychopathology. Clinical psychologists define experimental groups in terms of individuals’ diagnostic features, thus allowing comparisons between groups with regard to personality features, psychological test performance, or performance on an experimental task. Further, the way diagnostic constructs are defined and described will stimulate research on the disorders’ individual criteria, on alternative criteria sets, and on the comorbidity (co-occurrence) between disorders.

Third, and in a related vein, research into the etiology, or causes, of abnormal behavior would be almost impossible to conduct without a standardized diagnostic system. To investigate the importance of potential *etiological factors* for a given psychopathological syndrome, we must first assign subjects to groups whose members share diagnostic features. For example, several years ago, it was hypothesized that the experience of childhood sexual abuse may predispose individuals to develop features of borderline personality disorder (BPD). The first empirical attempts to evaluate the veracity of this hypothesis involved assessing the prevalence of childhood sexual abuse in well-defined groups of subjects with borderline personality disorder as well as in non-borderline psychiatric controls. These initial studies indicated that childhood sexual abuse does occur quite frequently in BPD individuals and that these rates are significantly higher than those found in patients with other (non-BPD) mental disorder diagnoses. Thus, it is worth investigating whether it is an important etiological factor in BPD. Before we could reach these types of conclusions, there had to be a reliable and systematic method of assigning subjects to the BPD category.

Finally, diagnoses are important because, at least in theory, they may suggest which mode of treatment is most likely to be effective. Indeed, this is a general goal of a classification system for mental disorders (Blashfield & Draguns, 1976). As Blashfield and Draguns (1976) stated, “The final decision on the value of a psychiatric classification for prediction rests on an empirical evaluation of the utility of classification for treatment decisions” (p. 148). For example, a diagnosis of schizophrenia

suggests to us that the administration of an antipsychotic medication is more likely to be effective than is a course of psychoanalytic psychotherapy. However, it is important to note one thing in passing. Although, in theory, the linkage between diagnosis and treatment would seem to justify the time involved in diagnostic assessment, often several treatments appear to be equally effective for an individual disorder.

In summary, diagnosis and classification of psychopathology serve many useful functions. Whether they are researchers or practitioners, contemporary clinical psychologists use some form of diagnostic system in their work. At this point, we turn to a brief description of classification systems that have been used to diagnose mental disorders over the years, and then we examine in more detail the features of the diagnostic classification system used most frequently in the United States, the *DSM-IV-TR*.

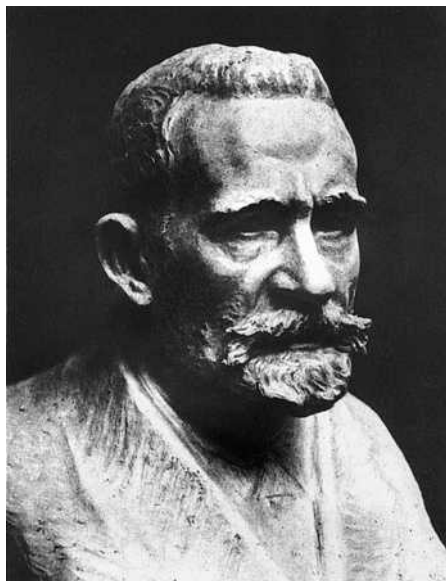
### Early Classification Systems

Classification systems for mental disorders have proliferated for many years. For example, the earliest reference to a depressive syndrome appeared as far back as 2600 B.C. (Menninger, 1963). Since that time, both the number and breadth of classification systems have increased. To bring some measure of order out of this chaos, the Congress of Mental Science adopted a single classification system in 1889 in Paris. More recent attempts can be traced to the World Health Organization and its 1948 *International Statistical Classification of Diseases, Injuries, and Causes of Death*, which included a classification of abnormal behavior.

In 1952, the American Psychiatric Association published its own classification system in the *Diagnostic and Statistical Manual*, and this manual contained a glossary describing each of the diagnostic categories that were included. This first edition, known as *DSM-I*, was followed by revisions in 1968 (*DSM-II*), 1980 (*DSM-III*), 1987 (*DSM-III-R*), and 1994 (*DSM-IV*). Presently, the most widely used classification system is the text revision

of *DSM-IV* (*DSM-IV-TR*, American Psychiatric Association, 2000), which appeared in 2000. A new version of the *DSM*, the *DSM-V*, is scheduled for release in 2013. To help classify psychopathology among very young children, a similar manual has been developed for children aged 0–3 years (i.e., *DC 0–3: Diagnostic Classification System, 0–3*, published in 1994). A revised version, the *DC 0–3R* was published in 2005. All of these manuals are embodiments of Emil Kraepelin's efforts in the late 19th century (see Figure 5-2). To illustrate how things have changed over the past 50 years, compare the British system in use in the late 1940s (see Table 5-1) with the *DSM-IV-TR* system described in Table 5-2.

From the 1950s to the early 1960s, the enthusiasm for psychiatric diagnosis waned (L. N. Robins & Helzer, 1986). Diagnosis was said to be dehumanizing and to ignore individual variation. But diagnosis in psychiatry and psychology has staged a comeback. The most revolutionary changes in our diagnostic system were introduced in *DSM-III*, published in



Culver Pictures, Inc.

**FIGURE 5-2** Emil Kraepelin is generally regarded as the father of modern systems of psychiatric diagnosis and classification.

**TABLE 5-1 Classifications of Mental Disorders in Use by the Royal Medico-Psychological Association in the Late 1940s**

PART I

- A. Oligophrenia (amentia, mental deficiency)
  - 1. Idiocy
  - 2. Imbecility
  - 3. Feeble-mindedness (moron)
  - 4. Moral deficiency
- B. Neuroses and psychoneuroses
  - 1. Exhaustion states (including neurasthenia)
  - 2. Anxiety states
  - 3. Compulsions, obsessions, and phobias
  - 4. Hysteria
  - 5. Mixed and other forms
- C. Schizophrenic psychoses
  - 1. Dementia praecox
    - a. Simple
    - b. Hebephrenic
    - c. Katatonic
    - d. Paranoid
  - 2. Paraphrenia
  - 3. Other forms
- D. Psychopathic constitution (including paranoia)
- E. Affective psychoses:
  - 1. Manic-depressive psychosis (cyclothymia)
    - a. Elation
    - b. Depression
    - c. Stupor
  - 2. Involutional melancholia
- F. Confusional states
- G. Epileptic psychoses
- H. General paralysis
- I. Other psychoses associated with organic brain disease
- J. Dementia
- K. Indeterminate types

SOURCE: Adapted from Henderson and Gillespie (1950, pp. 20–21).

1980. These changes included the use of explicit diagnostic criteria for mental disorders, a multi-axial system of diagnosis, a descriptive approach to diagnosis that attempted to be neutral with regard to

theories of etiology, and a greater emphasis on the clinical utility of the diagnostic system. Because these innovations have been retained in subsequent editions of the *DSM* (*DSM-III-R*, *DSM-IV*, *DSM-IV-TR*), they will be described in the following section.

### **DSM-IV-TR**

The text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)* was published in 2000. Revisions to the previous diagnostic manual (*DSM-III-R*) were guided by a three-stage empirical process. First, 150 comprehensive reviews of the literature on important diagnostic issues were conducted. These literature reviews were both systematic and thorough. Results from these reviews led to recommendations for revisions and served to document the rationale and empirical support for the changes made in *DSM-IV*. Second, 40 major reanalyses of existing data sets were completed in cases where the literature reviews could not adequately resolve the targeted diagnostic issue. Third, 12 *DSM-IV* field trials were conducted to assess the clinical utility and predictive power of alternative criteria sets for selected disorders (e.g., antisocial personality disorder). In summary, the changes made in *DSM-IV* (and maintained in *DSM-IV-TR*) were based on empirical data to a much greater extent than was true in previous editions of the *DSM*. A condensed version of the *DSM-IV-TR* appears in Table 5-2.

A complete *DSM-IV-TR* diagnostic evaluation is a *multi-axial assessment*. The multi-axial assessment also is used in the *DC 0–3R*. Clients or patients are evaluated along five axes, or domains of information. Each of these axes/domains should aid in treatment planning and prediction of outcome. *Axis I* is used to indicate the presence of any of the clinical disorders or other relevant conditions, with the exception of the personality disorders and mental retardation. These two classes of diagnoses are coded on *Axis II*. *Axis III* is used to highlight any current medical condition that may be relevant to the conceptualization or treatment of an individual's *Axis I* or *Axis II* clinical disorder.

**TABLE 5-2 A Condensed Version of the DSM-IV-TR****Axis I: Clinical Disorders or Other Conditions That May Be a Focus of Clinical Attention**

- Disorders usually first diagnosed in infancy, childhood, or adolescence (e.g., Pervasive Developmental Disorders)
- Delirium, Dementia, and Amnesic and Other Cognitive Disorders
- Mental Disorders Due to a General Medical Condition
- Substance-related Disorders (e.g., alcohol abuse; cocaine dependence)
- Schizophrenia and Other Psychotic Disorders
- Mood Disorders (e.g., Major Depression, Bipolar Disorder)
- Anxiety Disorders (e.g., Agoraphobia; Post-Traumatic Stress Disorder)
- Somatoform Disorders (e.g., Hypochondriasis)
- Factitious Disorders
- Dissociative Disorders (e.g., Dissociative Identity Disorder)
- Sexual and Gender Identity Disorders (e.g., Vaginismus; Fetishism)
- Eating Disorders (e.g., Anorexia Nervosa)
- Sleep Disorders (e.g., Narcolepsy)
- Impulse Control Disorders (e.g., Kleptomania)
- Adjustment Disorders
- Other conditions that may be a focus of clinical attention (e.g., Bereavement)

**Axis II: Personality Disorders and Mental Retardation**

- Personality Disorders (e.g., Borderline, Antisocial, Dependent, Paranoid)
- Mental Retardation

**Axis III: General Medical Conditions That Are Potentially Relevant to the Understanding or Management of the Individual's Mental Disorder****Axis IV: Psychosocial and Environmental Problems**

- Problems with primary support group
- Problems related to the social environment
- Educational problems
- Occupational problems
- Housing problems
- Economic problems
- Problems with access to health care services
- Problems related to interaction with the legal system/crime
- Other psychosocial and environmental problems

**Axis V: Global Assessment of Functioning (GAF) Scale<sup>a</sup>**

<i>Code</i>	<i>Description</i>
100 to 91	Superior functioning in a wide range of activities
81 to 90	Absent or minimal symptoms (e.g., mild anxiety before an exam), good functioning in all areas, interested and involved in a wide range of activities, socially effective, generally satisfied with life, no more than everyday problems or concerns (e.g., occasional argument).
71 to 80	If symptoms are present they are transient, expectable reactions to psychosocial stressors.
61 to 70	Some mild symptoms.
51 to 60	Moderate symptoms.
41 to 50	Serious symptoms (e.g., suicidal ideation, severe obsessional rituals, frequent shoplifting) OR any serious impairment in social, occupational, or school functioning (e.g., no friends, unable to keep a job).
31 to 40	Some impairment in reality testing or communication.
21 to 30	Behavior is considerably influenced by delusions or hallucinations.
11 to 20	Some danger of hurting self or others.
1 to 10	Persistent danger of severely hurting self or others (e.g., recurrent violence) OR persistent inability to maintain minimal personal hygiene OR serious suicidal act with clear expectation of death
0	Inadequate information

<sup>a</sup>Full descriptions are provided here only for Codes 90–81, 50–41, and 10–1.

### The Case of Michelle M.

Michelle M. was a 23-year-old woman admitted to an inpatient unit at a hospital following her sixth suicide attempt in 2 years. She told her ex-boyfriend (who had broken up with her a week earlier) that she had swallowed a bottle of aspirin, and he rushed her to the local emergency room. Michelle had a 5-year history of multiple depressive symptoms that never abated; however, these had not been severe enough to necessitate hospitalization or treatment. They included dysphoric mood, poor appetite, low self-esteem, poor concentration, and feelings of hopelessness.

In addition, Michelle had a history of a number of rather severe problems that had been present since her teenage years. First, she had great difficulty controlling her emotions. She was prone to become intensely dysphoric, irritable, or anxious almost at a moment's notice. These intense negative affect states were often unpredictable and, although frequent, rarely lasted more than 4 or 5 hours. Michelle also reported a long history of impulsive behaviors, including polysubstance

abuse, excessive promiscuity (an average of about 30 different sexual partners a year), and binge eating. Her anger was unpredictable and quite intense. For example, she once used a hammer to literally smash a wall to pieces following a bad grade on a test.

Michelle's relationships with her friends, boy-friends, and parents were intense and unstable. People who spent time with her frequently complained that she would often be angry with them and devalue them for no apparent reason. She also constantly reported an intense fear that others (including her parents) might abandon her. For example, she once clutched a friend's leg and was dragged out the door to her friend's car while Michelle tried to convince the friend to stay for dinner. In addition, she had attempted to leave home and attend college in nearby cities on four occasions.

Each time, she returned home within a few weeks. Prior to her hospital admission, her words to her ex-boyfriend over the telephone were, "I want to end it all. No one loves me."

Psychosocial and environmental problems relevant to diagnosis, treatment, and prognosis are indicated on *Axis IV*. Finally, a quantitative estimate (1 to 100) of an individual's overall level of functioning is provided on *Axis V*. Each of the five axes contributes important information about the patient, and together they provide a fairly comprehensive description of the patient's major problems, stressors, and level of functioning.

**TABLE 5-3 Diagnostic Evaluation: Michelle M.**

Axis I:	300.4	Dysthymic Disorder, early onset
	305.00	Alcohol Abuse
	305.20	Cannabis Abuse
	305.60	Cocaine Abuse
	305.30	Hallucinogen Abuse
Axis II:	301.83	Borderline Personality Disorder (PRINCIPAL DIAGNOSIS)
Axis III:	none	
Axis IV:		Problems with primary support group Educational problems
Axis V:	GAF = 20 (Current)	

The *DSM-IV-TR* diagnostic evaluation for Michelle M. is shown in Table 5-3. Several features of this diagnostic formulation are noteworthy. First, Michelle has received multiple diagnoses on Axis I. This is allowed, and even encouraged, in the *DSM-IV* system because the goal is to describe the client's problems comprehensively. Second, note that her borderline personality disorder (BPD) diagnosis on Axis II is considered the *principal diagnosis*. This means that this condition is chiefly responsible for her admission to the hospital and may be the focus of treatment. Finally, her *Global Assessment of Functioning* (GAF) score on Axis V indicates serious impairment—in this case, a danger of hurting herself.

## GENERAL ISSUES IN CLASSIFICATION

We have briefly described the *DSM-IV-TR* to give the reader a general idea of what psychiatric classification entails. However, it is important to examine a number of broad issues related to classification in general and to the *DSM-IV-TR* specifically.

**TABLE 5-4 General Issues in Classification****Categories Versus Dimensions**

Is the categorical model adopted in *DSM-IV* (i.e., the disorder is either present or absent) really appropriate? Is a dimensional model preferable?

**Bases of Categorization**

Should there be multiple ways of making diagnostic judgments? Does this create too much heterogeneity within a diagnostic category?

**Pragmatics of Classification**

How do we decide whether a condition is included in the diagnostic manual?

**Description**

Are the features of the diagnostic categories adequately described? Are the diagnostic criteria specific and objective?

**Reliability**

Are diagnostic judgments reliable? Can different diagnosticians agree on the classification of an individual?

**Validity**

Can we make meaningful predictions based on our knowledge of an individual's diagnosis?

**Bias**

Are the features of the disorders in *DSM-IV* biased against particular individuals because of their gender, race, or socioeconomic background? Are diagnosticians biased in their interpretation or application of the diagnostic criteria?

**Coverage**

Do the *DSM-IV* diagnoses apply to the people who present for psychological or psychiatric treatment? Is the *DSM-IV* too narrow in its coverage, or is it too broad?

Table 5-4 presents a summary of the eight major issues discussed below.

**Categories Versus Dimensions.** Essentially, the mental disorder categories represent a typology. Based upon certain presenting symptoms or upon a particular history of symptoms, the patient is placed in a *category*. This approach has several potential limitations. First, in too many instances, it is easy to confuse such categorization with explanation. If one is not careful, there is a tendency to think “This patient is

experiencing obsessions because she has obsessive-compulsive disorder” or “This person is acting psychotic because he has schizophrenia.” When this kind of thinking occurs, explanation has been supplanted by a circular form of description.

In addition, as noted earlier in this chapter, abnormal behavior is not qualitatively different from so-called normal behavior. Rather, these are endpoints of a continuous *dimension*. The difference between so-called normal behavior and psychotic behavior, for example, is one of degree rather than kind (Chapman & Chapman, 1985). Yet mental disorder diagnoses in terms of categories imply that individuals either have the disorder in question or they do not. This all-or-nothing type of thinking may be at odds with what we know about how symptoms of psychopathology are distributed in the population. For example, a categorical model of borderline personality disorder (BPD), as presented in the *DSM-IV-TR* (i.e., present vs. absent), may not be appropriate because individuals differ only with respect to how many BPD symptoms they exhibit (a quantitative difference). In other words, the categorical model may misrepresent the true nature of the borderline construct (Trull, Widiger, & Guthrie, 1990). In fact, there may be relatively few diagnostic constructs that are truly categorical in nature (Widiger & Trull, 2007).

To illustrate, consider Figure 5-3, which presents dimensions of worry, anxiety, and fear that are characteristic, in extreme form, of an anxiety disorder. This example concerns a person's experience when anticipating and potentially going on a job interview. When considering dimensions relevant to psychological disorders, it is helpful to organize these according to thoughts, emotion, and behaviors. One can see that thoughts anticipating the interview range from those associated with some degree of confidence to those more characteristic of fear and dread. Likewise, emotional experience may range from physical arousal that is helpful to that which is maladaptive and disruptive. Finally, behavioral responses to this situation range from attending the interview to various degrees of avoidance. As noted in Figure 5-3, it is only when our thinking patterns, emotions, and behaviors cause great distress or problems that we consider these indicative of a disorder, in the diagnostic sense. However,

	Thoughts	Emotion	Behaviors
Normal	"I'm going on a job interview today. I hope they like me. I'm going to show them what I've got!"	Slight physical arousal but good alertness.	Going to the job interview and performing well.
Mild	"I'm going on a job interview today. I wonder if they will think badly of me. I hope my voice doesn't shake."	Mild physical arousal, perhaps feeling a bit tingly, but with good alertness.	Going to the job interview but fidgeting a bit.
Moderate	"Wow, I feel so nervous about that interview today. I bet I don't get the job. I wonder if I should just forget about it?"	Moderate physical arousal, including shaking and trembling, with a little more difficulty concentrating.	Drafting two e-mails to cancel the interview but not sending them. Going to the interview but appearing physically nervous.
Severe	"My God, that interview is today. I feel sick. I just don't think I can do this. They will think I'm an idiot!"	Severe physical arousal, including shaking, dizziness, and restlessness, with trouble concentrating.	Postponing the interview twice before finally going. Appearing quite agitated during the interview and unable to maintain eye contact.
Anxiety Disorder	"No way can I do this. I'm a total loser. I can't get that job. Why even bother? I don't want to look so foolish!"	Extreme physical arousal with dizziness, heart palpitations, shaking, and sweating, with great trouble concentrating.	Cancelling the interview and staying home all day.

**FIGURE 5-3** Continuum of worry, anxiety, or fear related to the prospect of a job interview.

SOURCE: Kearny, C. & Trull, T. (2012).

this dimensional perspective highlights that our ability to react adaptively is a matter of degree.

**Bases of Categorization.** To classify psychiatric patients, one must use a wide assortment of methods and principles. In some cases, patients are classified almost solely on the basis of their current behavior or presenting symptoms. In other cases, the judgment is made almost entirely on the basis of history. In the case of major depression, for example, one individual may be diagnosed on the basis of a diagnostic interview conducted by a clinician; another may be classified because of a laboratory result, such as a "positive" dexamethasone suppression test (DST); still another may be diagnosed as a result of scores on a self-report measure of depression. Laboratory results provide the basis for some diagnoses of cognitive disorders (e.g., vascular dementia), whereas other cognitive disorder diagnoses (e.g., delirium) are determined solely by behavioral observation. Thus, the diagnostic enterprise may be quite complicated for the clinician, requiring both knowledge of

and access to a wide variety of diagnostic techniques. A major implication is that membership in any one diagnostic category is likely to be heterogeneous because there are multiple bases for a diagnosis.

**Pragmatics of Classification.** Psychiatric classification has always been accompanied by a certain degree of appeal to medical authority. But there is a concurrent democratic aspect to the system that is quite puzzling. For example, psychiatry for many years regarded homosexuality as a disease to be cured through psychiatric intervention. As a result of society's changing attitudes and other valid psychological reasons, homosexuality was dropped from the *DSM* system and is now regarded as an alternate lifestyle (see Spitzer, 1981). Only when homosexual individuals are disturbed by their sexual orientation or wish to change it do we encounter homosexuality in the *DSM-IV* (as an example under the category "sexual disorder not otherwise specified"). The issue here is not whether this decision was valid or not. The issue is how the decision to drop homosexuality

from the *DSM* system was made. The demise of homosexuality as a disease entity occurred through a vote of the psychiatric membership.

This example also serves as a reminder that classification systems such as the *DSM* are crafted by committees. The members of such committees represent varying scientific, theoretical, professional, and even economic constituencies. Consequently, the final classification product adopted may represent a political document that reflects compromises that will make it acceptable to a heterogeneous professional clientele.

**Description.** Without doubt, the *DSM-IV-TR* provides thorough descriptions of the diagnostic categories. For Axis I and II disorders, a detailed description of the symptoms of each diagnostic category is presented. As an example, Table 5-5 presents the *DSM-IV-TR* diagnostic criteria for the eating disorder bulimia nervosa. The *DSM* provides additional information for each diagnosis, including the age of onset, course, prevalence, complications, family patterns, cultural considerations, associated descriptive features and mental disorders, and associated laboratory findings. All this descriptive detail should enhance the system's reliability and validity.

**Reliability.** A system of classification that cannot establish its reliability has serious problems. In this context, *reliability* refers to the consistency of diagnostic judgments across raters. One of the major changes in *DSM-III* (American Psychiatric Association, 1980)—the inclusion of specific and objective criteria for each disorder—reflected an attempt to increase the reliability of the diagnostic system. If Psychologist A and Psychologist B both observe the same patient but cannot agree on the diagnosis, then both their diagnoses are useless because we do not know which to accept. This is the very situation that plagued the American diagnostic systems for many years. For example, an early study illustrating the unreliability of previous diagnostic systems was carried out by Beck, Ward, Mendelson, Mock, and Erbaugh (1962). Two different psychiatrists each interviewed the same 153 newly admitted psychiatric patients. Overall agreement among

**TABLE 5-5 DSM-IV Criteria for Bulimia Nervosa**

- 
- A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
    - (1) eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances
    - (2) a sense of lack of control of eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating)
  - B. Recurrent inappropriate compensatory behavior in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, enemas, or other medications; fasting; or excessive exercise.
  - C. The binge eating and inappropriate compensatory behaviors both occur, on average, at least twice a week for 3 months.
  - D. Self-evaluation is unduly influenced by body shape and weight.
  - E. The disturbance does not occur exclusively during episodes of Anorexia Nervosa.

**Specify Type**

*Purging Type:* During the current episode of Bulimia Nervosa, the person has regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas.

*Nonpurging Type:* During the current episode of Bulimia Nervosa, the person has used other inappropriate compensatory behaviors, such as fasting or excessive exercise, but has not regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas.

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these psychiatrists was only 54%. Some of the disagreements in diagnosis seemed to stem from inconsistencies in the information patients presented to the psychiatrists. For example, Patient A may have been relatively open with Psychiatrist F, but less so with Psychiatrist G. However, much of the unreliability problem seemed to lie with the diagnosticians and/or the diagnostic system itself.

Certain pragmatic factors can also reduce reliability across diagnosticians. Sometimes a given institution will not admit patients who carry a certain diagnosis.

Yet a mental health professional may feel strongly that the patient could benefit from admission (or perhaps has nowhere else to go). What should be done? The “humanitarian” choice often seems to be to alter a diagnosis, or at least to “fudge” a bit. The patient with alcohol dependence suddenly is diagnosed with something else. Similarly, an insurance company may reimburse a clinic for the treatment of patients with one diagnosis but not another. Or perhaps one diagnosis permits six therapy visits but another allows as many as fifteen sessions. Therefore, a diagnosis may be intentionally or unintentionally manipulated.

These examples may lead us to believe that diagnostic unreliability is the rule and not the exception. However, Meehl (1977), for example, feels that psychiatric diagnosis is not nearly as unreliable as it is made out to be. Specifically, Meehl argues that if we confine ourselves to major diagnostic categories, require adequate clinical exposure to the patient, and study well-trained clinicians who take diagnosis seriously, then interclinician agreement will reach acceptable levels.

The field of psychopathology has begun to address these concerns about reliability by developing *structured diagnostic interviews* that essentially “force” diagnosticians to assess individuals for the specific *DSM* criteria that appear in the diagnostic manual. For example, there are now several structured interviews that assess features of Axis I disorders, and a number of structured interviews for Axis II disorders exist as well. Interestingly, the overall level of diagnostic reliability reported in empirical studies has increased greatly following the introduction of these structured interviews. It is clear that adhering to the structure and format of these interviews has led to a significant increase in diagnostic reliability. Table 5-6 presents a brief section from a structured interview. We will discuss structured interviews in more detail in Chapter 6.

However, even with the use of structured interviews, reliability is not equally good across all categories. The presence versus absence of some disorders (e.g., generalized anxiety disorder) may be particularly difficult to judge. Further, there is some question as to whether or not busy clinicians will devote the time and effort necessary to systematically evaluate

**TABLE 5-6 SIDP-IV Questions Used to Assess a Dependent Personality Disorder Criterion**

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CRITERION 1-DEPEN: HAS DIFFICULTY MAKING EVERYDAY DECISIONS WITHOUT AN EXCESSIVE AMOUNT OF ADVICE AND REASSURANCE FROM OTHERS

**Questions to Ask**

Some people enjoy making decisions and other people prefer to have someone they trust tell them what to do. Which do you prefer?

Do you often turn to others for advice about everyday decisions like what to have for lunch or what clothes to buy?

**Scoring**

- 0 = not present
  - 1 = subthreshold
  - 2 = present
  - 3 = strongly present
- 

Adapted from the Structured Interview for DSM-IV Personality (SIDP-IV: Pfohl, Blum, & Zimmerman, 1994). Copyright © 1989, 1994. Used with permission.

the relevant diagnostic criteria. Reliability coefficients never seem as high in routine, everyday work settings as they are in structured research studies.

**Validity.** Reliability will directly affect the validity of a diagnostic system. As long as diagnosticians fail to agree on the proper classification of patients, we cannot demonstrate that the classification system has meaningful correlates—that is, has *validity*. Important correlates include prognosis, treatment outcome, ward management, etiology, and so on. And without predictive validity, classification becomes an intellectual exercise devoid of any really important utility. However, if we can demonstrate that categorization accurately indicates etiology, course of illness, or preferred kinds of treatment, then a valid basis for its use has been established.

The predominant method for establishing the validity of a diagnostic construct was outlined in a classic article by L. N. Robins and Guze (1970). They proposed that establishing the diagnostic validity of a syndrome is a five-stage process: (a) *clinical description*, including a description of

characteristic features beyond the disorder's symptoms (e.g., demographic features); (b) *laboratory studies* (including psychological tests) to identify meaningful correlates of the diagnosis; (c) *delimitation from other disorders* to ensure some degree of homogeneity among diagnostic members; (d) *follow-up studies* to assess the test-retest reliability of a diagnosis; and (e) *family studies* to demonstrate that the proposed disorder tends to run in families, suggesting a hereditary component to the disorder. This particular five-stage method for establishing diagnostic validity remains quite influential even today. In fact, most contemporary research in psychopathology represents one or more of the validation stages outlined by Robins and Guze.

**Bias.** Ideally, a classification system will not be biased with respect to how diagnoses are assigned to individuals who have different backgrounds (e.g., different gender, race, or socioeconomic status). The validity and utility of a classification system would be called into question if the same cluster of behaviors resulted in a diagnosis for one individual but not for another individual. The two areas of potential bias that have received the most attention are sex bias and racial bias.

Some critics have attacked the *DSM* system as a male-centered device that overestimates pathology in females (M. Kaplan, 1983); others deny this charge (Kass, Spitzer, & Williams, 1983). Widiger and Spitzer (1991) presented a useful conceptual analysis of what constitutes *sex bias* in a diagnostic system. They argue that previous attempts to demonstrate diagnostic sex bias have been both conceptually and methodologically flawed. Further, some of the findings of earlier studies (e.g., Broverman, Broverman, Clarkson, Rosenkrantz, & Vogel, 1970) have been misinterpreted and misunderstood (see Widiger & Settle, 1987, for a demonstration of the flaws in the Broverman et al. study).

Widiger and Spitzer note that differential sex prevalence for a disorder does not in and of itself demonstrate diagnostic sex bias because, for example, it is conceivable that biological factors or cultural factors may make it more likely that males (or females) will exhibit the criteria for a certain

diagnosis. For example, antisocial personality disorder is diagnosed much more frequently in men than in women, and conduct disorder in boys more than girls, but this may be the result of biological differences (e.g., testosterone) or other factors that influence the two genders differentially (e.g., societal expectations for aggressiveness in men). However, Widiger and Spitzer did present evidence suggesting that clinicians may be biased in the way they *apply* diagnoses to males versus females, even in cases where the symptoms presented by each were exactly the same! Although this suggests that there may be some bias in the way clinicians interpret the diagnostic criteria (i.e., clinicians may exhibit sex bias), it does not indicate sex bias within the diagnostic criteria. These results suggest the need for better training of diagnosticians rather than an overhaul of the diagnostic criteria.

Concerning bias due to race or ethnicity, it is important to recognize that one's culture can affect many factors related to the diagnosis and treatment of mental illness (Alarcón, 2009). First, culture can influence belief systems that may lead to the experience of stress and then to symptoms of mental disorder. Examples of these "culture-bound syndromes" are provided in the *DSM-IV-TR* and include conditions such as koro, dhat, frigophobia, and voodoo death. Culture can also influence how members cope with stress, leading potentially to maladaptive behavior. The content or characteristics of symptoms of mental disorder may also vary by culture. Finally, culture is likely to impact the willingness to seek treatment as well as the availability of services.

Therefore, it is important for clinicians to consider cultural influences when diagnosing and treating individuals for mental illness. Toward this end, *DSM-IV-TR* outlines procedures for making a cultural formulation of an individual's problems that includes data on the individual's cultural identity, the cultural explanation of the problems, cultural factors related to the psychosocial environment, cultural influences on the relationship between the individual and mental health professionals, and an overall cultural assessment for the diagnosis and treatment of the individual (see Table 5-7).

**TABLE 5-7 DSM-IV-TR Cultural Formulation**

*DSM-IV-TR* (APA, 2000) suggests that a mental health professional supplement traditional *DSM-IV-TR* diagnostic formulations with a cultural formulation of presenting symptoms of clients whose cultural background differs from that of the treating mental health professional. Information is obtained to address the following topics:

- **Cultural identity of the client:** Note the client's ethnic or cultural reference groups as well as language abilities and preferences.
- **Cultural explanations of the client's problems:** Note how the identified cultural group might explain the present symptoms and how these symptoms compare to those experienced by those in the cultural reference group.
- **Cultural factors related to the psychosocial environment:** Note how the cultural reference group might interpret the social stresses, as well as availability of social supports and other resources that may aid treatment.
- **Cultural influences on the relationship between the client and the mental health professional:** Indicate differences in cultural and social status between the client and mental health professional that might influence diagnosis and treatment.
- **Overall cultural assessment for diagnosis and care:** Summarize how cultural factors and considerations are likely to influence the assessment and treatment of the client.

**Coverage.** With close to 400 possible diagnoses, *DSM-IV-TR* cannot be faulted for being too limited in its coverage of possible diagnostic conditions. It is likely that most conditions that bring individuals in for psychiatric or psychological treatment could be classified within the *DSM-IV-TR* system. However, some may feel that *DSM-IV-TR* errs in the opposite direction—that its scope is too broad. For example, a host of childhood developmental disorders are included as mental disorders. The child who is dyslexic, has speech problems such as stuttering, or has great difficulties with arithmetic is given a *DSM-IV-TR* diagnosis. Many question the appropriateness or benefit of labeling these conditions as mental disorders.

Another example of the possible overinclusiveness of the *DSM-IV-TR* is the inclusion of “premenstrual dysphoric disorder” as a proposed diagnostic category. This diagnosis and its criteria appear in

the appendix containing diagnostic criteria provided for further study. Many women objected strenuously to this diagnosis when it was first proposed because they argued that such a category could easily be used to discriminate against women in many areas (e.g., employment). Controversial diagnoses like this cause some to wonder whether the architects of the *DSM* have gone too far.

**Additional Concerns.** Although the previously described difficulties are real and fairly obvious, a number of indirect or subtle problems arise through the acceptance and use of diagnostic classification systems. For example, classifications tend to create the impression that mental disorders exist per se. Such terms as *disorder*, *symptom*, *condition*, and *suffering from* suggest that the patient is the victim of a disease process. The language of the system can eventually lead even astute observers toward a view that interprets learned reactions or person–environment encounters as disease processes.

In addition, if we are not careful, we may come to feel that classifying people is more satisfying than trying to relieve their problems. As we shall see later, therapy can be an uncertain, time-consuming process that is often fraught with failure. But pigeonholing can be immediately rewarding: It provides a sense of closure to the classifier. Like solving crossword puzzles, it may relieve tension without having any long-term positive social significance.

The system likewise caters to the public's desire to regard problems in living as medical problems that can be dealt with simply and easily by a pill, an injection, or a scalpel. Unfortunately, however, learning to solve psychological problems is hard work. The easier approach is to adopt a passive, dependent posture in which the patient is relieved of psychological pain by an omniscient doctor. Although such a view may be serviceable in dealing with strictly medical problems (but see Engel, 1977), it has dubious value at best in confronting the psychosocial problems of living.

A final indirect problem is that diagnosis can be harmful or even stigmatizing to the person who is labeled. In our society, diagnosis may close doors rather than open them for patients and ex-patients.

Stigma is also a major reason people do not seek treatment for mental distress (Corrigan, 2004). Too often, diagnosis seems to obscure the real person; observers see labels, not the real people behind them. Thus, labels can damage relationships, prevent people from being hired or promoted or from seeking treatment, and in extreme cases, result in a loss of civil rights. Labels can even encourage some people to capitulate and assume the role of a “sick” person.

## CAUSES OF ABNORMAL BEHAVIOR AND MENTAL ILLNESS

Up to this point, we have discussed issues regarding the description and definition of abnormal behavior as well as the implications of diagnosing and classifying individuals. However, very little has been said about what factors may cause abnormal behavior and mental illness. Although we will discuss various *etiological models of psychopathology* in the chapters on intervention, it is useful to present these models briefly here to give you some idea of the predominant viewpoints.

### Major Models of Psychopathology

Table 5-8 presents a brief overview of major models of psychopathology and the explanation of abnormal behavior offered by each. As can be seen, some of the etiological models are quite different in their perspective on abnormal behavior. We will discuss these models in more detail later in the book, in the context of clinical interventions (Chapters 11–15) and specialties in clinical psychology (Chapters 16–19). As we will see, differences among the models have implications for how a clinician adhering to one of these viewpoints will conduct assessment and treatment. For example, a clinical psychologist subscribing to a cognitive theory of depression will probably use cognitively based assessment instruments to identify maladaptive cognitions as well as cognitive-behavioral interventions to treat depression (see Chapter 14).

### Diathesis-Stress Model

A more general model of etiology that can accommodate a variety of theoretical viewpoints (e.g., those in Table 5-8) is the diathesis-stress model of psychopathology. The diathesis-stress model is not

**TABLE 5-8 Brief Description of Several Models of Psychopathology**

Model	Explanation	Example of Abnormal Behavior
Biological	Processes in central nervous system (CNS) have gone awry	Schizophrenia is caused by an excess of dopaminergic activity.
Developmental Psychopathology	Maladjustment arises from a distortion in the path or trajectory in healthy adaptation; maladjustment is due to interactions between the individual and their environment	Depression is caused by interpersonal stressors that make it hard to learn appropriate coping skills, and depression cyclically leads to later additional interpersonal stressors
Psychodynamic	Intrapsychic conflict	Specific phobia is due to the displacement of an intrapsychic conflict onto an external object that can then be avoided.
Learning	Learned the same way normal behavior is learned	Specific phobia is learned via classical conditioning.
Cognitive	Due to maladaptive cognitions	Depression results from negative views about oneself, the world, and the future.
Humanistic	Relative neglect of one's own self-view and overreliance on the appraisals of others when the two are incongruous	Generalized anxiety disorder reflects this overreliance and incongruity.

wedded to one school of thought and can incorporate biological, psychological, and environmental factors. A *diathesis* refers to a vulnerability or predisposition to possibly develop the disorder in question. A diathesis can be biological (e.g., a genetic predisposition, a deficit or excess in neurotransmitter functioning) or psychological (e.g., maladaptive cognitive schema, maladaptive personality style). A diathesis is necessary but not sufficient to produce a mental disorder. Predispositions, whether they are biological or psychological, do not guarantee that people develop psychological disorders like anxiety disorder or depression. According to the diathesis-stress model, the *combination* of a predisposition and stress (or stressors) may produce psychological problems.

One way to think of a predisposition or diathesis is in terms of vulnerability. You can be vulnerable to a disorder or condition, but that does not ensure that you will develop the disorder. What is required in addition to a diathesis is sufficient *stress*. It is the interplay between the predisposition and stress that will determine whether a disorder develops. Within this framework, *stress* can be environmental (e.g., victim of an assault), biological (e.g., poor nutrition), interpersonal (e.g., acrimonious marriage), or even psychological (e.g., toxic family environment).

Two other features of this model are important to note as well. First, it is important to recognize that a diathesis or predisposition, be it biological or psychological, can *influence the perception of stress*. Stress is, after all, subjective in nature. The same event may be perceived and experienced as much more stressful by one person than another person who has a different level of the diathesis or vulnerability.

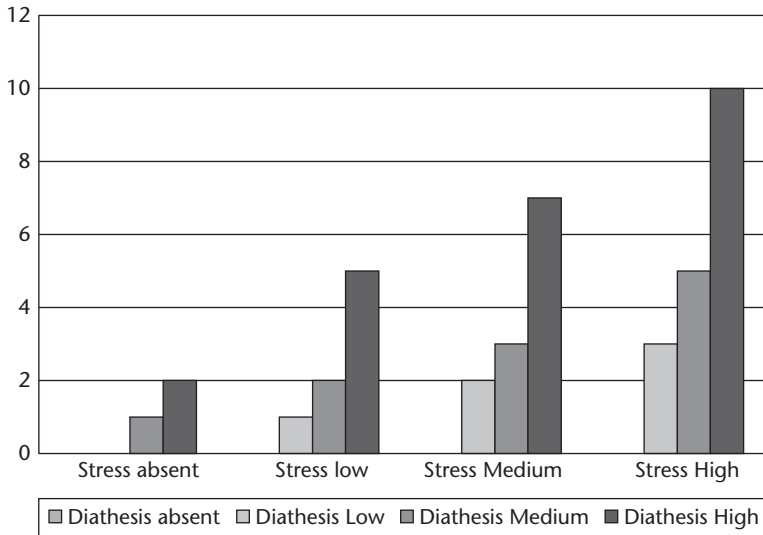
Second, one's predisposition is likely to *influence a person's own life course and choice of experiences*. In other words, individuals' choices of life experience and their preferences are likely guided, at least in part, by the diathesis. This makes some sense, if we think about it for a moment. Our experiences are influenced by a number of preferences and decisions we make. The kinds of friends or romantic partners we choose, the experiences we seek out,

the jobs we take, the place we choose to live—all of these are likely influenced by diatheses we bring to each decision. These choices and experiences, in turn, influence the people, places, and events we encounter in life. So, the point here is that a diathesis will at least partially determine the range and varieties of life events that we experience, some of which may be perceived as stressful.

Both the diathesis and the stress are necessary to produce the disorder in question. Possessing the diathesis increases the likelihood of developing the disorder but does not guarantee this outcome. Moreover, as may be apparent, the exact nature of the diathesis and stress necessary for developing a specific disorder is likely to vary from disorder to disorder. Finally, the interaction between the diathesis and stress is also likely to be disorder-specific (see, e.g., Monroe & Simons, 1991).

But how do these two interact to lead to psychological disorders, according to the diathesis-stress model? Is a predisposition an all-or-nothing vulnerability? What about stress? As it turns out, a dimensional perspective on both diathesis and stress is most consistent with current research and theory. This has important implications. For most of us, some degree of diathesis or predisposition is present, ranging from low vulnerability to high vulnerability. Figure 5-4 presents an example of how different levels of diathesis (vulnerability) may interact with different levels of stress to produce symptoms of psychological disorder ( $y$ -axis; rated on a scale from 0 to 10). As you can see, when the diathesis is absent or very low, even moderate levels of stress may not result in many features of psychology disorder (rating of 5). However, with increasing levels of vulnerability (e.g., Diathesis High), even moderate and high levels of stress result in significant features of psychological disorder.

This model helps us begin to understand why two people exposed to the same adverse conditions and levels of stress may have different outcomes. For example, why does one soldier develop severe symptoms of post-traumatic stress disorder after serving in the Gulf War while another who fought



**FIGURE 5-4** Continuum of Vulnerability (Diathesis) and Stress

side by side with him does not? The explanation, in simplest terms, is that the soldiers' respective levels of vulnerability to post-traumatic stress disorder differed.

### THE VALUE OF CLASSIFICATION

Classification systems are necessary; otherwise, our experience and our consciousness become a chaotic array of events. By abstracting the similarities and the differences among the events of our experience, we can establish categories of varying width and purpose that allow us to generalize and predict.

Clinical psychology is very much concerned with the diagnosis, classification, and treatment of mental illness. The *DSM-IV-TR* system, although

clearly not perfect, will continue to be used by contemporary clinical psychologists in their research, consultation, and practice. All of us have, and will continue to have, some disagreement with the *DSM-IV-TR* or any other diagnostic system. Diagnostic systems have their advantages and disadvantages, and the criteria for individual mental disorders are fallible (Widiger & Trull, 1991). The *DSM-IV-TR*, like its predecessors, has been accused of being more useful for clinical research than for clinical practice. This is probably why clinicians often fail to use the diagnostic manual. However, we hope that you are convinced that diagnostic formulations are important because these formulations have communication value, have potential treatment implications, and facilitate psychopathology research.

### CHAPTER SUMMARY

Clinical psychologists engage in the diagnosis and classification of psychological problems. A single, all-encompassing definition of what constitutes

“abnormality” is difficult to come by. In this chapter, we have reviewed the pros and cons of three frequently cited criteria for abnormal behavior:

conformity to norms, subjective distress, and disability or dysfunction.

Mental illness refers to a large class of frequently observed syndromes that are comprised of co-occurring abnormal behaviors. The diagnosis of psychological problems or mental illness serves the function of communication, promotes research, and suggests treatment options. The *DSM-IV-TR* is the official diagnostic system used in the United States (and other places as well).

Diagnostic classification systems should be practical, descriptive, reliable, valid, and unbiased and provide comprehensive coverage of frequently

encountered clinical problems. Such diagnostic systems will advance the field by promoting psychopathology research, allowing us to investigate the causes and treatment of psychological problems.

Features of psychological disorders lie on a continuum and vary in degree. The diathesis-stress model of psychopathology can accommodate major theoretical models of how mental disorders develop. Further, this comprehensive model highlights that both vulnerability to disorder (diathesis) and stress experienced lie on a continuum. It provides a better understanding of why some people exposed to the same stress develop problems whereas others do not.

## KEY TERMS

**Axis I** The diagnostic axis of the *DSM-IV-TR* that identifies all of the clinical disorders that are present, except for the personality disorders and mental retardation.

**Axis II** The diagnostic axis of the *DSM-IV-TR* that indicates the presence of personality disorders or mental retardation.

**Axis III** The diagnostic axis of the *DSM-IV-TR* that identifies current medical conditions that may be relevant to the conceptualization or treatment of the disorders diagnosed on Axes I and II.

**Axis IV** The diagnostic axis of the *DSM-IV-TR* that specifies any psychosocial or environmental problems relevant to diagnosis, treatment, and prognosis.

**Axis V** The diagnostic axis of the *DSM-IV-TR* that provides a numerical index of the individual's overall level of functioning.

**categories** Discrete classifications. Many of the mental disorders in the current diagnostic system are presented as categorical in nature, meaning that people are judged either to have the disorder or not have it.

**conformity to norms** One of the three major definitions of abnormal behavior, this definition labels behavior as abnormal if it violates cultural norms.

**cultural relativity** In the context of conformity-oriented definitions of abnormal behavior, the fact that judgments about the abnormality of a particular behavior may vary from culture to culture or subculture to subculture.

**cutoff points** In the context of conformity-oriented definitions of abnormal behavior, the numerical values on a test or inventory that differentiate normal from abnormal performance.

**DC 0–3** A diagnostic classification system describing patterns of maladjustment and symptoms among children aged 0 to 3 years.

**DC 0–3R** The current version of the *DC 0–3*.

**diathesis** In the diathesis-stress model of psychopathology, a vulnerability (e.g., genetic, psychological) to develop a particular disorder.

**dimensions** Continua. In a dimensional classification system, individuals may be seen as falling on any point of a continuum ranging from total absence of a disorder to its most severe manifestation.

**disability or dysfunction** One of the three major definitions of abnormal behavior, this definition labels behavior as abnormal if it creates social or occupational problems for the individual.

**DSM-III** The third edition of the *Diagnostic and Statistical Manual for Mental Disorders*, published in 1980. The *DSM-III* introduced revolutionary changes in the diagnostic system, including explicit, etiologically neutral diagnostic criteria and a multiaxial system of diagnosis.

**DSM-IV-TR** The current edition of the *Diagnostic and Statistical Manual for Mental Disorders*, published in 2000.

**environmental stress** In the diathesis-stress model of psychopathology, a stressor (e.g., biological, psychological) that acts together with a diathesis to produce a given mental disorder.

**etiologial factors** Causal factors.

#### **etiologial models of psychopathology**

Causal models of abnormal behavior and mental illness that also have implications for assessment and treatment. Major etiologial models of psychopathology include the biological, psychodynamic, learning, and cognitive models.

**Global Assessment of Functioning** The score provided on Axis V that serves as an index of the person's overall level of functioning.

**mental disorder** A syndrome (cluster of abnormal behaviors) occurring within an individual that is associated with distress, disability, or increased risk of problems.

**mental illness** A large class of frequently observed syndromes that comprise certain abnormal behaviors or features.

**multiaxial assessment** The evaluation of patients along multiple domains of information. The *DSM-IV-TR* calls for diagnosis along five separate axes,

each of which aids in treatment planning and the prediction of outcome.

**principal diagnosis** The diagnosis that is chiefly responsible for a person's distress or disability and should be considered the focus of treatment.

**psychopathologist** A scientist who studies the causes of mental disorders as well as the factors that influence their development.

**reliability** In the context of diagnostic classification, the consistency of diagnostic judgments across raters.

**sex bias** In the context of diagnostic classification, sex bias would be demonstrated if the same cluster of behaviors resulted in a diagnosis for members of one sex but not for the other. Although the current diagnostic criteria are not biased in and of themselves, clinicians may be biased in the way they apply these diagnoses to males and females.

**structured diagnostic interviews** A class of interviews that assesses for the specific criteria appearing in the diagnostic manual.

**subjective distress** One of the three major definitions of abnormal behavior, this definition labels as psychologically abnormal those people with a poor sense of well-being and/or a high level of subjective distress.

**syndrome** A group of symptoms that tend to occur together.

**validity** In the context of diagnostic classification, the extent to which diagnoses correlate with meaningful variables such as etiology, prognosis, and treatment outcome.

## **WEB SITES OF INTEREST**

To visit any of the following Web sites, go to [www.wadsworth.com](http://www.wadsworth.com) and click Links.

5-1 Mental Health America  
<http://www.mentalhealthamerica.net/>

5-2 National Alliance on Mental Illness  
<http://www.nami.org/>

5-3 Mental Health Advocacy Coalition  
<http://www.mentalhealthadvocacy.org/>

5-4 Health Minds

<http://www.mentalhealthadvocacy.org/>

5-5 Active Minds (Mental Health on College  
Campuses)

<http://www.activeminds.org/>

5-6 DSM-V Project Site

<http://www.dsm5.org>

## PART II

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# Clinical Assessment

- 6 The Assessment Interview
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  - 9 Behavioral Assessment
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-

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# 6

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## The Assessment Interview

### FOCUS QUESTIONS

1. What are major issues to consider when conducting an assessment interview?
2. What are the most common types of assessment interviews? Briefly describe each type.
3. What are the similarities and differences between structured and unstructured interviews?
4. What types of reliability and validity are relevant to an evaluation of a structured interview?
5. Why is the validity of a structured diagnostic interview difficult to assess?

### CHAPTER OUTLINE

#### Assessment in Clinical Psychology

Definition and Purpose

The Referral

The Case of Billy G.

What Influences How the Clinician Addresses the Referral Question?

#### The Interview

General Characteristics of Interviews

BOX 6-1: *Computer Interviewing: Are Clinicians Necessary?*

Interviewing Essentials and Techniques

Rapport

Communication

The Patient's Frame of Reference

The Clinician's Frame of Reference

#### Varieties of Interviews

The Intake-Admission Interview

The Mental Status Examination Interview

BOX 6-2: *Sample Intake Report*

The Case-History Interview

The Crisis Interview

BOX 6-3: *Clinical Psychologist Perspective:*

*Thomas A. Widiger, Ph.D.*

The Diagnostic Interview

#### Reliability and Validity of Interviews

Reliability

Validity

Suggestions for Improving Reliability and Validity

#### The Art and Science of Interviewing

#### CHAPTER SUMMARY

#### KEY TERMS

**A**ssessment has long been an important activity of clinical psychologists. In the previous chapter, we touched on assessment in our discussion of the diagnosis of mental disorders. In this chapter, the focus is on interviewing. Subsequent chapters will deal with the assessment of intelligence, personality and psychopathology, and behavior, along with the process of clinical judgment. Before we plunge into the specifics of interviewing, however, let us make a few general comments about assessment.

## **ASSESSMENT IN CLINICAL PSYCHOLOGY**

As mentioned in Chapter 2, psychological assessment as an area of emphasis has seen its ups and downs. During the 1960s and 1970s, there seemed to be a decline in interest in psychological assessment (Abeles, 1990). Therapy was the more glamorous enterprise, and assessment almost seemed somehow “unfair” to clients. It appeared that clinical psychology’s historical commitment to assessment was waning. The prevailing attitude about assessment was “Let the technicians do it!” But in the 1980s, something else began to happen. Students began to show an interest in specialization. They discovered forensic psychology (the application of psychology to legal issues), or they became intrigued by pediatric psychology, geriatrics, or even neuropsychology.

This renewed interest in psychological assessment has carried forward in time. Currently, clinical psychologists more and more use an evidenced-based approach to clinical assessment. Evidence-based assessment (EBA; Hunsley & Mash, 2007) uses theory and knowledge about psychological problems to help in the selection of assessment methods and measures, as well as to guide the actual process of assessment itself. Such an approach overcomes many of the weaknesses of past assessment practices, including a “one-test-fits-all” test selection approach, the use of poorly validated measures, unreliable test interpretation, and the use of tests with limited evidence for treatment utility (Hunsley & Mash, 2007).

In other words, clinical psychologists must be properly trained to know about the assessment process itself, about the conditions to be evaluated, and about the psychometric properties of assessment methods and measures that are available to address the specific assessment situation at hand.

### **Definition and Purpose**

Before proceeding, it is important to provide a definition of psychological assessment and outline some of its goals and features. Psychological assessment can be formally defined in many ways. Clinical assessment involves an evaluation of an individual’s or family’s strengths and weaknesses, a conceptualization of the problem at hand (as well as possible etiological factors), and some prescription for alleviating the problem; all of these lead us to a better understanding of the client. Assessment is not something that is done once and then is forever finished. In many cases, it is an ongoing process—even an everyday process, as in psychotherapy. Whether the clinician is making decisions or solving problems, clinical assessment is the means to the end.

Intuitively, we all understand the purpose of diagnosis or assessment. Before physicians can prescribe a treatment, they must first understand the nature of the illness. Before plumbers can begin soldering pipes, they must first determine the character and location of the difficulty. What is true in medicine and plumbing is equally true in clinical psychology. Aside from a few cases involving pure luck, our capacity to solve clinical problems is directly related to our skill in defining them. Most of us can remember our parents’ stern admonition: “Think before you act!” In a sense, this is the essence of the assessment or diagnostic process. To illustrate this idea, consider the following case.

### **The Referral**

The assessment process begins with a referral. Someone—a parent, a teacher, a psychiatrist, a judge, or perhaps a psychologist—poses a question about the patient. “Why is Juan disobedient?” “Why can’t Alicia learn to read like the other children?” “Is the patient’s impoverished behavioral

### The Case of Billy G.

Billy was in the third grade and having trouble. His teacher reported a number of classroom behavior problems. Billy was loud, talkative, and easily distracted. He was aggressive, and sometimes he struck the other children. His behavior was impulsive, erratic, and obviously hyperactive. He had become a totally disruptive force in the classroom.

Several conferences with the teacher finally convinced Billy's parents that the problem was not completely the school's responsibility. Indeed, much of Billy's behavior was mirrored at home, where he was equally difficult to control. His grades had plummeted in recent months, but his parents could not believe there was an intellectual problem. Therefore, it seemed to them that the explanation must lie in either physical or emotional factors.

Their first decision was to take Billy to their family physician. She could find nothing wrong physically and suggested that they have Billy see a neurologist. After a full neurological examination, including an electroencephalogram and an exhaustive behavioral and medical history, the neurologist could not arrive at a definitive diagnosis.

There was no history of birth trauma, head injury, encephalitis, or risk factors for neurological disease. At the same time, a behavioral history compiled from teachers' reports, parental observations, and the neurologist's own observations confirmed the existence of a definite problem.

The neurologist was leaning toward a diagnosis of attention deficit/hyperactivity disorder (ADHD). However, the neurologist was psychologically minded, and he felt that he detected a strained and somewhat hostile relationship between the parents. In the course of his conversations with the parents, he also learned that the husband was rarely home and seemed totally absorbed in his ambitions to advance in his job. The mother seemed to be reacting to her self-perceived neglect by becoming extremely active in community service and social functions. When Billy came home from school, she was almost always playing bridge, attending fund-raising activities,

or shopping. It certainly seemed that neither parent had much time for Billy. In fact, only since Billy's problems had come to a head in school had the parents seemed aware of him at all.

Thus, the neurologist faced a diagnostic dilemma. Because stimulant medication (e.g., Ritalin) has often been effective with such cases, this might be the way to go. On the other hand, there certainly seemed to be a pattern of parental rejection that might have produced resentment in Billy. Therefore, the "hyperactivity" could be construed as an attempt to gain attention from the parents and parental surrogates (teachers). Such a formulation seemed to imply a recommendation of psychotherapy for the parents and for Billy as well.

The neurologist was concerned about making the wrong diagnosis. Medication has its side effects and might even exacerbate the problem. Further, if the problem were not ADHD, then Billy's behavioral reactions might become more established during the time wasted, and psychotherapy might be more difficult. A diagnosis of ADHD might also create a greater unwillingness in the parents to accept their role in Billy's behavioral difficulties. On the other hand, suppose the family went the psychotherapeutic route, only to learn later that the problem was treatable with medication. Then precious time would have been wasted, and perhaps avoidable physical harm would have occurred.

Thus, the assessment question became one of choosing between a behavioral or biological explanation for Billy's problems—each of which had very distinct treatment implications. Faced with this quandary, the neurologist decided to refer Billy to a clinical child psychologist, who could be expected to administer a variety of intelligence and personality tests, to interview the parents more thoroughly, and to observe Billy under a variety of conditions. The neurologist hoped that a psychological report, coupled with his own neurological findings, would allow him to arrive at a more informed diagnostic and treatment decision.

repertoire a function of poor learning opportunities, or does this constriction represent an effort to avoid close relationships with other people who might be threatening?"

Clinicians thus begin with the *referral question*. It is important that they take pains to understand precisely what the question is or what the referral source

is seeking. In some instances, the question may be impossible to answer; in others, the clinician may decide that a direct answer is inappropriate or that the question needs rephrasing. For example, the clinician may decide that the question "Is this patient capable of murder?" is unanswerable unless there is more information about the situation. Thus, the

question might be rephrased to include probabilities with respect to certain kinds of situations. If parents want their child tested for the sole, often narcissistic, purpose of determining the child's IQ, the clinician might decide that providing such information would eventually do the child more harm than good. Most parents do not have the psychometric background to understand what an IQ estimate means and are quite likely to misinterpret it. Thus, before accepting the referral in an instance of this kind, the clinical psychologist would be well advised to discuss matters with the parents.

### **What Influences How the Clinician Addresses the Referral Question?**

The kinds of information sought are often heavily influenced by the clinician's theoretical commitments. For example, a psychodynamic clinician

may be more likely to ask about early childhood experiences than would a behavioral clinician. In other cases, the information obtained may be similar, but clinicians will make different inferences from it. For example, to a psychodynamic clinician frequent headaches may suggest the presence of underlying hostility but merely evidence of job stress to a behavioral clinician. For some clinicians, case-history data are important because they aid in helping the client develop an anxiety hierarchy; for others, they are a way of confirming hypotheses about the client's needs and expectations.

Assessment, then, is not a completely standardized set of procedures. All clients are not given the same tests or asked the same questions. The purpose of assessment is not to discover the "true psychic essence" of the client, but to describe that client in a way that is useful to the referral source—a way that will lead to the solution of a problem.



Clinical psychologists frequently use interviews to assess their clients or patients.

Of course, this does not mean that one description is as good as another for a particular case.

## THE INTERVIEW

Almost all professions count interviewing as a chief technique for gathering data and making decisions. For politicians, consumers, psychiatrists, employers, or people in general, interviewing has always been a major tool. As with any activity that is engaged in frequently, people sometimes take interviewing for granted or believe that it involves no special skills; they can easily overestimate their understanding of the interview process. Although many people seem awed by the mystique of projective tests or impressed by the psychometric intricacies of objective tests, there is an easy yet deceptive familiarity to interviewing.

The *assessment interview* is at once the most basic and the most serviceable technique used by the clinical psychologist. In the hands of a skilled clinician, its wide range of application and adaptability make it a major instrument for clinical decision making, understanding, and prediction. But for all this, we must not lose sight of the fact that the clinical utility of the interview can be no greater than the skill and sensitivity of the clinician who uses it. In this section, we discuss some basic features of the clinical interview as well as the various interviewing skills and techniques that must be mastered.

### General Characteristics of Interviews

**An Interaction.** An interview is an interaction between at least two persons. Each participant contributes to the process, and each influences the responses of the other. But this characterization falls short of defining the process. Ordinary conversation is interactional, but surely, interviewing goes beyond that. Interviewing, like conversation, involves face-to-face verbal encounters or exchanges. However, a clinical interview is initiated with a goal or set of goals in mind. The interviewer approaches the interaction purposefully, bearing the responsibility for keeping the interview on track and moving toward the goal. Thus, the easy informality that often characterizes

ordinary conversation is less evident. A good interview is one that is carefully planned, deliberately and skillfully executed, and goal-oriented throughout.

Interviewing clearly takes many forms—from fact finding to emotional release to cross-examination. However, all forms of professionally executed interviews are devoid of one feature that often characterizes normal conversation: Interviewers are not using the interchange to achieve either personal satisfaction or enhanced prestige. They are using it to elicit data, information, beliefs, or attitudes in the most skilled fashion possible.

**Interviews Versus Tests.** In a sense, interviews occupy a position somewhere between ordinary conversation and tests. Interviews are more purposeful and organized than conversation but sometimes less formalized or standardized than psychological tests. The exceptions are the structured diagnostic interviews discussed later in this chapter, which in some ways resemble standardized psychological tests.

The hallmark of psychological testing is the collection of data under standardized conditions by means of explicit procedures. Most interviews, however, make provision for at least some flexibility. Thus, a unique characteristic of the interview method is the wider opportunity it provides for an individualized approach that will be effective in eliciting data from a particular person or patient. This flexibility represents both the strength and the weakness of many interviewing techniques. Although one can seek information in the way that seems most appropriate for Patient X, there is also a distinct potential for unreliability and error. We'll have more to say about threats to the reliability and validity of interview data later in this chapter.

**The Art of Interviewing.** Interviewing has often been regarded as an art. Except in the most structured, formal interviews, there is a degree of freedom to exercise one's skill and resourcefulness that is generally absent from other assessment procedures. Decisions such as when to probe, when to be silent, or when to be indirect or subtle test the skill of the interviewer. With experience, one learns to respond to interviewee cues in a progressively more sensitive fashion that ultimately serves the

**BOX 6-1 Computer Interviewing: Are Clinicians Necessary?**

In recent years, use of *computer interviewing* has been growing. Computers have been used to take psychiatric histories, cover assessment of specific problems, do behavioral assessments, and assist in the diagnosis of mental disorders (First, 1994; Greist, 1998; Kobak, Greist, Jefferson, & Katzelnick, 1996). These uses of the computer are said to have several advantages (Erdman, Klein, & Greist, 1985; First, 1994; Greist, 1998). For example, the computer always asks all the questions assigned, reliability is 100%, and for some patients at least, it is less uncomfortable and embarrassing to deal with an inanimate object than a live clinician. At the same time, computers are impersonal and, some might even say, dehumanizing. Then, too, only structured interviews can be employed; interviewer flexibility is not possible (First, 1994). For example, it is not possible to ask additional questions aimed at clarification when an interviewee's response is unclear. Also, the wording and order of questions cannot be tailored to meet the special needs of individual patients. Still, computer interviews have been shown to be useful in identifying target symptoms in clients (Farrell, Comclair, & McCullough, 1987).

There are computerized versions of diagnostic interviews as well. For example, the Computerized Diagnostic Interview Schedule Revised (Blouin, 1991), or CDISR, can be administered by a personal computer, and it assesses the presence and severity of symptoms related to more than 30 Axis I mental disorder diagnoses (e.g., major depression, alcohol dependence, panic disorder). Studies comparing computer-administered and interviewer-administered versions of the DIS have been supportive (Blouin, Perez, & Blouin, 1988; Greist et al., 1987).

Finally, it is interesting to note that the use of computer-assisted interviews has been taken a step further. Recently, Baer et al. (1995) reported preliminary data on a fully automated telephone screening system that uses computerized digital voice recordings and touch-tone responses to assess community

residents for symptoms of depression. In this study, a screening test was offered to community residents. When the toll-free number was called, a series of questions about a variety of depressive symptoms was administered to each caller. Callers answered the questions by selecting specified numbers on the telephone keypad, and there was an option to have the question repeated. All text was narrated by a professional actress and actor. Immediate feedback regarding the level of depression (no depression, minimal or mild depression, severe or extreme depression) was provided to each caller. Toll-free telephone numbers of selected health care professionals were provided to all callers whose responses indicated at least minimal levels of depression.

Do these new computer applications mean the clinician will soon be obsolete? First (1994), for one, thinks not. Although he acknowledges the various advantages of computer-assisted interview assessments, he cites several reasons the computer cannot currently replace the clinician:

- Many nonverbal cues (e.g., facial expressions and vocal inflections) are not currently amenable to computer-based assessment.
- We do not currently have computer-based technology that can process unrestricted language (i.e., free-form patient responses that are typed or submitted in response to computer queries).
- Only clinicians can encode and process information relevant to the course of a mental disorder or temporal sequencing of symptoms.
- Only clinicians are able to apply "clinical judgment"—the implicit threshold of clinical significance.

However, it is important to note that technological advances may someday make several of First's points moot, and as we will discuss in Chapter 10, clinical judgment has its limitations as well.

purposes of the interview. However, it is important to remember that a considerable amount of research on interviewing has been carried out. Practically, this means that novices do not need to rely solely on the slow and sometimes painful accumulation of experience to polish their skill. They can profit from the study of a considerable body of research on interviewing that provides a scientific foundation for their art (Garb, 1998).

## Interviewing Essentials and Techniques

Many factors influence the productivity and utility of data obtained from interviews. Some involve the physical setting. Others are related to the nature of the patient. A mute or uncommunicative patient may not cooperate regardless of the level of the interviewer's skills. Few interviewers are effective

with every patient. Several factors or skills, however, can increase the likelihood that interviews will be productive. Training and supervised experience in interviewing are very important. Techniques that work well for one interviewer can be notably less effective for another; there is a crucial interaction between technique and interviewer. This is why gaining experience in a supervised setting is so important; it enables the interviewer to achieve some awareness of the nature of this interaction.

Training, then, involves not just a simple memorization of rules, but, rather, a growing knowledge of the relationships among rules, the concrete situation being confronted, and one's own impact in interview situations.

**The Physical Arrangements.** An interview can be conducted anywhere that two people can meet and interact. On some occasions, this happens by chance—an encounter with a patient on the street, for example. Usually, the clinician does not choose such a setting. But the needs of the patient, the degree of urgency in the situation, or even, in some instances, sheer coincidence may make an interview of sorts inevitable.

Obviously, certain physical arrangements are especially desirable for an interview. Two of the most important considerations are privacy and protection from interruptions. Nothing is more damaging to the continuity of an interview than a phone that rings relentlessly, an administrative assistant's query, or an imperative knock on the door. Such interruptions are extremely disruptive. But even more important is the message they subtly convey—that the patient and his or her problems are of secondary importance. After all, administrative assistants do not knock on the door or put through a call if they have been instructed otherwise.

Because lack of privacy can lead to many deleterious outcomes, soundproofing is also very important. If noise from a hallway or an adjacent office intrudes, patients will probably assume that their own voices can also be heard outside. Few patients are likely to be open and responsive under such conditions.

The office or its furnishings can be as distracting as loud noises and external clamor. There are

few rules in this area, and much depends on individual taste. However, many clinicians prefer offices that are fairly neutral, yet tasteful. In short, an office with furnishings that demand attention or seem to cry out for comment would not be ideal. The therapist-golfer need not turn the office into a shrine for golf's greatest legends; the therapist with a penchant for antique cars would do well not to litter the desk with scale models of 1928 Fords. Somehow, there must be a middle ground between an office that is cold and forbidding through its very neutrality and one that is littered with obtrusive and distracting objects.

**Note-Taking and Recording.** All contacts with clients ultimately need to be documented. However, there is some debate over whether notes should be taken during an interview. Although there are few absolutes, in general, it would seem desirable to take occasional notes during an interview.

A few key phrases jotted down will help the clinician's recall. Most clinicians have had the experience of feeling that the material in an interview is so important that there is no need to take notes—that the material will easily be remembered. However, after having seen a few additional patients, the clinician may not be able to recall much from the earlier interview. Therefore, a moderate amount of note-taking seems worthwhile. Most patients will not be troubled by it, and if one should be, the topic can be discussed. Occasionally, a patient may comment that what is said must be really important since you are taking it down. Occasionally, too, a patient may request that the clinician not take notes while a certain topic is being discussed.

Most patients probably expect a certain amount of note-taking. However, any attempt at taking verbatim notes should be avoided (except when administering a structured interview, discussed later). One danger in taking verbatim notes is that this practice may prevent the clinician from attending fully to the essence of the patient's verbalizations. An overriding compulsion to get it all down can detract from a genuine understanding of the nuances and significance of the patient's remarks. In addition, excessive note-taking tends to prevent the clinician from observing the patient and from noting subtle changes

of expression or slight changes in body position. Furthermore, a fully transcribed interview will have to be read in full later. The clinician must plow through 50 minutes of notes to extract the most important material, which may have taken up only 10 minutes of the interview.

With today's technology, it is easy to audiotape or videotape interviews. Under no circumstances should this be done without the patient's fully informed consent. In the vast majority of cases, a few minutes' explanation of the desirability of taping, with an accompanying assurance to the patient that the tape will be kept confidential (or released only to persons authorized by the patient), will result in complete cooperation. Because today's world is awash with audio and video recording, most patients are unlikely to object to it. By and large, patients are not even upset by a microphone or videorecorder that are in plain view. There may be a few passing moments of self-consciousness, but these quickly fade. Indeed, it may turn out that the clinician is more threatened by the recording than the patient, especially if the interview is likely to be examined or evaluated by superiors or consultants.

In some instances, it is desirable to videotape certain interviews. In the interests of research, of training interviewers or therapists, or of feedback to the patient as part of the therapeutic process, videotaping sometimes has great value. Like audio recording, it should be done openly, unobtrusively, and with the patient's informed consent.

## Rapport

Perhaps the most essential ingredient of a good interview is a relationship between the clinician and the patient. The quality and nature of that relationship will vary, of course, depending on the purpose of the interview. These differences will undoubtedly affect the kind of relationship that develops during the contact.

**Definition and Functions.** *Rapport* is the word often used to characterize the relationship between patient and clinician. Rapport involves a comfortable atmosphere and a mutual understanding of the

purpose of the interview. Good rapport can be a primary instrument by which the clinician achieves the purposes of the interview. A cold, hostile, or adversarial relationship is not likely to be constructive. Although a positive atmosphere is certainly not the sole ingredient for a productive interview (a warm yet ill-prepared interviewer will not generate the best of interviews), it is usually a necessary one. Whatever skills the interviewer possesses will surely be rendered more effective in proportion to the interviewer's capacity to establish a positive relationship. Patients approach most interviews with some degree of anxiety. They may be anxious lest they are discovered to be "crazy"; they may be fearful that what they state in the interview will be passed along to employers. Whatever the specific nature of these concerns, their presence is enough to reduce the interviewer's potential effectiveness.

**Characteristics.** Good rapport can be achieved in many ways—perhaps as many ways as there are clinicians. However, no bag of "rapport tricks" is likely to substitute for an attitude of acceptance, understanding, and respect for the integrity of the patient. Such an attitude does not require that the clinician like every patient. It does not require the clinician to befriend every patient. It does not require the clinician to master an agreed-upon set of behaviors guaranteed to produce instant rapport. It does require that patients not be prejudged based on the problems they seek help for. Attitudes of understanding, sincerity, acceptance, and empathy are not techniques; to regard them as such is to miss their true import. To ask to be taught how to appear sincere, accepting, and empathic is to confess the absence of these qualities.

When patients realize that the clinician is trying to understand their problems in order to help them, then a broad range of interviewer behavior becomes possible. Probing, confrontation, and interviewer assertiveness may be acceptable once rapport has been established. If the patient accepts the clinician's ultimate goal of helping, a state of mutual liking is not necessary. The patient will recognize that the clinician is not seeking personal satisfaction in the interview.

## Communication

Rapport is not, as is often thought by beginning students, a state wherein the clinician is always liked or always regarded as a great person. Rather, it is a relationship founded on respect, mutual confidence, trust, and a certain degree of permissiveness. It is neither a prize bestowed by an awed client nor a popularity contest to be won by the clinician.

Some patients have had past experiences that will not easily permit them to accept even genuine overtures for a professional relationship. But in most cases, if the clinician perseveres in the proper role and maintains an attitude of respect as she or he searches for understanding, the relationship will develop. A common mistake of beginning interviewers in early interviews is to say something like, "There, there, don't worry. I know exactly what you're feeling." Such comments may convince clients that the interviewer does not really know how they feel. After all, how could this stranger possibly know how I feel? Rapport will come, but it will come through quiet attitudes of respect, acceptance, and competence rather than through quick fixes.

**Special Considerations.** Rapport can be especially challenging to achieve in cases that involve more than one individual or a unique referral source. For instance, a family therapy or couples therapy case involves simultaneously establishing a connection with multiple individuals, each of whom may have very different perspectives and varying enthusiasm for attending the session. Interviews of child and adolescent clients similarly require the psychologist to establish rapport with both the parent(s), who most often has initiated contact with the psychologist, and the child, who may feel blamed or stigmatized by this parent. Rapport also can be especially challenging when the client is aware that the information collected during the interview likely will be used to determine a school placement, to meet employment criteria, or to formulate a legal disposition regarding child custody, legal sanctions, or maltreatment allegations. In each of these cases, it is essential to remain cognizant of the challenges in establishing quick and easy rapport and to consider how this may affect the validity of the data that are being collected.

In any interview, there must be communication. Whether we are helping persons in distress or assisting patients in realizing their potential, communication is our vehicle. The real problem is to identify the skills or techniques that will ensure maximum communication.

**Beginning a Session.** It is often useful to begin an assessment session with a casual conversation. A brief comment or question about difficulties in finding a parking space or even a banal comment on the weather may help establish the clinician as a real person and allay any fears the patient may have had as to whether he or she can ever relate to a "shrink." But whatever its specific content, a brief conversation designed to relax things before plunging into the patient's reasons for coming will usually facilitate a good interview.

**Language.** Of extreme importance is the use of language that the patient can understand. Some initial estimate of the patient's background, educational level, or general sophistication should be made. The kind of language employed should then reflect that judgment. It is offensive to speak to a 40-year-old woman with a master's degree in history as if she were an eighth grader. It is not necessary to infantilize people seeking help; asking for help need not imply that one has a diminished capacity to understand.

At the same time, it may be necessary to abandon psychological jargon to be understood by some patients. And perhaps the depth of our understanding is questionable if we cannot communicate without resorting to four-syllable words. If we find ourselves unwittingly using grandiose language to extort admiration from patients, then something is wrong. Similarly, clinicians who try to use "teenage" language when interviewing a 15-year-old may wind up not only alienating the client but looking foolish in the process. In short, if your respect for the patient is intact, you generally need not reach for shallower techniques.

In a related vein, it is important to use words that will be interpreted by the patient as you mean

them to be. Very often, for example, asking a mother how her son behaves is likely to prompt the response, “Oh, he’s a good boy—he does just what I tell him.” Sometimes psychologists become so focused on concepts such as behavior that we forget what these words mean to most people.

It is also important to clarify the intended meaning of a word or term used by a client if there are uncertainties or alternative interpretations. For example, a clinician should not assume he or she knows what a client means by the statement “She’s abusive.” It may indicate that the individual does not treat others particularly well, or it may indicate that the individual is physically abusive—something that warrants immediate intervention.

**The Use of Questions.** Maloney and Ward (1976) observed that the clinician’s questions may become progressively more structured as the interview proceeds. They distinguish among several forms of questions, including open-ended, facilitative, clarifying, confronting, and direct questions. Each is designed in its own way to promote communication. And each is useful for a specific purpose or patient. Table 6-1 illustrates these types of questions.

**Silence.** Perhaps nothing is more disturbing to a beginning interviewer than silence. However, silences can mean many things. The important point is to assess the meaning and function of silence in the context of the specific interview. The clinician’s response to silence should be reasoned and responsive to the goals of the interview rather than to personal needs or insecurities.

Perhaps the client is organizing a thought or deciding which topic to discuss next. Perhaps the silence is indicative of some resistance. But it is as inappropriate to jump in and fill every momentary silence with chatter as it is to simply wait out the patient every time, regardless of the length of the silence. Whether the clinician ends a lengthy silence with a comment about the silence or decides to introduce a new line of inquiry, the response should facilitate communication and understanding and not be a desperate solution to an awkward moment.

**Listening.** If we are to communicate effectively in the clinician’s role, our communication must reflect understanding and acceptance. We cannot hope to do this if we have not been listening, for it is by listening that we come to appreciate the information and emotions that the patient is conveying. If we are concerned about impressing the client, if we are insecure in our role, if we are guided by motivations other than the need to understand and accept, then we are not likely to be effective listeners.

Many people, for example, when introduced to someone, cannot recall the person’s name 2 minutes later. The most common reason for this is a failure to listen. They were distracted, preoccupied, or perhaps so concerned about their own appearance that they never really heard the name. Sometimes therapists are so sure of an impression about the patient that they stop listening and thereby ignore important new data. The skilled clinician is one who has learned when to be an active listener.

**TABLE 6-1 Five Types of Interview Questions**

Type	Importance	Example
Open-ended	Gives patient responsibility and latitude for responding	“Would you tell me about your experiences in the Army?”
Facilitative	Encourages patient’s flow of conversation	“Can you tell me a little more about that?”
Clarifying	Encourages clarity or amplification	“I guess this means you felt like ... ?”
Confronting	Challenges inconsistencies or contradictions	“Before, when you said ... ?”
Direct	Once rapport has been established and the patient is taking responsibility	“What did you say to your father when he criticized your choice?”

SOURCE: Maloney and Ward (1976).

**Gratification of Self.** The clinical interview is not the time or the place for clinicians to work out their own problems. Sometimes a clinician is professionally insecure or inexperienced. Sometimes the patient's problems, experiences, or conversation reminds clinicians of their own problems or threatens their own values, attitudes, or adjustment. In one way or another, however, clinicians must resist the temptation to shift the focus to themselves. Rather, their focus must remain on the patient. This is obviously a matter of degree. None of us is so self-controlled that our thoughts never wander or our concentration never falters. However, the clinician-patient roles are definite and should not be confused.

In some instances, the patient will ask personal questions of the clinician. In general, clinicians should avoid discussing their personal lives or opinions. However, this advice must be tempered by awareness of the reasons for the question. Thus, a breezy opening question by a patient such as, "Say, what did you think of that basketball game last night?" does not have the same significance as the question, "Do you think Freud was correct in his assessment of the importance of penis envy in women?" When a question seems to suggest something of importance about the patient's problems, it is usually best to deflect it or to turn it around so that you can pursue your clinical hypothesis. But if a question is trivial, innocent, or otherwise basically inconsequential, a failure to respond directly will probably be perceived as the worst kind of evasion.

**The Impact of the Clinician.** Consider two therapists working in the same clinic. One therapist is a 50ish, matronly psychiatrist with a marked affinity for print house dresses. Another is a clinical psychologist—male, very youthful in appearance, quite thin, carefully dressed, and seemingly quite unsure of himself. It is inevitable that these two therapists would be perceived differently by their patients. Each of us has a characteristic impact on others, both socially and professionally. As a result, the same behavior in different clinicians is unlikely to provoke the same response from a patient. The tall, well-muscled, athletic therapist may somewhat intimidate certain kinds of patients. The very

feminine female interviewer may elicit responses in a client very different from those elicited by her male counterpart. Therefore, it is important for all clinicians to cultivate a degree of self-insight or at least a mental set to consider the possible effects of their own impact before attaching meaning to the behavior of their patients.

**The Clinician's Values and Background.** Nearly everyone accepts the notion that one's own values, background, and biases will affect one's perceptions. Unfortunately, we are usually more skilled at validating this notion in others than in ourselves. Therefore, clinicians must examine their own experiences and seek the bases for their own assumptions before making clinical judgments of others. What to the clinician may appear to be evidence of severe pathology may actually reflect the patient's culture. Take the following example:

A 48-year-old ethnic Chinese woman had been receiving antipsychotic and antidepressant medication for psychotic depression. On this regimen, she had lost even more weight and more hope and had become more immobilized. A critical element in this diagnosis of psychosis was the woman's belief that her deceased mother, who had appeared in her dreams, had traveled from the place of the dead to induce the patient's own death and to bring her to the next world. This symptom was interpreted not as a delusional belief but as a culturally consistent belief in a depressed woman who had recently begun to see her deceased mother in her dreams (a common harbinger of death in the dreams of some Asian patients). This patient responded well after the antipsychotic medication was discontinued, the antidepressant medication was reduced in dosage, and weekly psychotherapy was begun. (Westermeyer, 1987, pp. 471–472)

This case illustrates how all the behavioral cues that clinicians typically rely on may lose their meaning when applied to a patient from another culture.

We begin to realize how much a clinician's ability to make sense of a patient's verbalizations depends on a shared background.

For example, some midwestern clinicians listening to Asian American patients may suddenly feel as if they have lost their own frame of reference. But in dealing with midwestern patients, how many times will those same clinicians mistakenly assume that their frames of reference are identical to those of their patients? In other cases, gender differences can sometimes produce nearly the same effects. Gender-related factors can interact with a clinician's values and background. Then, everything from sheer ignorance to gender stereotypes can conspire to reduce the validity of the assessment interview. The answer seems to lie in making assessors more "gender aware" (L. S. Brown, 1990; Good, Gilbert, & Scher, 1990). How does one become more gender aware? An expert in gender issues has made the following suggestions:

Clinicians seeking to enhance their gender awareness might focus on three areas—their knowledge, attitudes, and behaviors. Knowledge is typically increased by reading (such as research and conceptual articles and books) or attending a course or seminar on gender issues. Attitudes are enhanced through experiences with people holding conceptions of gender that differ from one's own (such as people from differing cultures, religions, or sexual orientations), which serve to broaden our understanding of gender issues. Behaviors are improved through practice and feedback (with a supervisor that has expertise in gender-related issues). (G. Good, personal communication)

### **The Patient's Frame of Reference**

If the clinician is going to be effective in achieving the goals of the interview, it is essential that he or she have an idea of how the patient views the first meeting. Only with such awareness can the patient's verbalizations and behaviors be placed in

their proper context. By the same token, the establishment of rapport will be more difficult if the clinician is not sensitive to the patient's initial perceptions and expectations. A patient may have an entirely distorted notion of the clinic and even be ashamed of having to seek help. Sometimes patients have been pressured into seeking help. A spouse has finally said, "Get help or we're through!" A sorority lays down an ultimatum that a member either "get therapy" or leave the house. Some patients present themselves at the clinic to placate employers. Whatever the reason, it will inevitably color the nature of interview behavior.

For many individuals, going to see a clinical psychologist arouses feelings of inadequacy. Some individuals will respond to this by "clamming up." Others will display a kind of bravado that says, "See, I'm not weak at all!" Still others may become competitive and imply that psychology is not all it's cracked up to be or suggest that it is really unlikely that the clinician has much to offer. In contrast, there are patients who start with a view of the clinician as a kind of savior. Although it is often quite reinforcing to be viewed as a miracle worker or a great healer, remember that the patient will probably reconsider this evaluation later. For example, a young inpatient diagnosed with borderline personality disorder once informed the entire inpatient unit that one of the authors was the best therapist in the hospital and maybe one of the best in all of clinical psychology. Imagine the author's chagrin when he witnessed, 4 days later, the same patient's announcement that the author was a horrible therapist and an embarrassment to his profession.

### **The Clinician's Frame of Reference**

In a sense, the general dictum here, as in any endeavor, is "Be prepared." This implies that the clinician should have carefully gone over any existing records on the patient, checked the information provided by the person who arranged the appointment, and so on. Such a posture will ensure that the clinician knows as much as can be known at that point about the patient. Such preparation may also minimize spending interview time going over

material that the patient may already have covered with other clinic staff.

In addition, the clinician should be perfectly clear about the purpose of the interview. Is it to evaluate the patient for hospitalization? Is the patient seeking information? If the interview is being conducted on a referral basis, the clinician should be quite sure that he or she understands what information is being requested by the referring person. It is always disconcerting to discover later that, as a clinician, you misinterpreted the reason for the interview.

Through it all, the clinician must remain focused. However, objectivity need not imply coldness or aloofness. Rather, it suggests that the clinician must be secure enough to maintain composure and not lose sight of the purposes of the interview. For example, if a client should become very angry and attack the clinician's ability, training, or good intentions, the clinician must remember that the first obligation is to understand. The clinician should be secure enough to distinguish between reality and the forces that drive the patient.

Depending on the purpose of the interview, the clinician should also be prepared to provide some closure for the client at the conclusion of the interview. That is, as the interview progresses, the clinician will be formulating hypotheses and recommendations. A confident but enigmatic smile at the close of the interview, coupled with a "We'll be in touch," will not suffice. The clinician should be prepared to make a referral, set up another appointment, and/or provide some feedback to the client.

## VARIETIES OF INTERVIEWS

Up to this point, we have reviewed various interviewing essentials and techniques that are relevant to the interviewing process, regardless of the type of interview. In this section, we discuss several of the more common types of interviews that clinical psychologists conduct. It is important to note, however, that more than one of these interviews may be administered to the same client or patient. For example, the same patient may complete an intake-admission interview when admitted to a hospital, a

case-history and *mental status examination interview* once on the hospital unit, and later a *structured diagnostic interview* by the treating clinician. With this in mind, let us now turn to a survey of some of the more commonly used types of interviews.

The many varieties of interviews have two primary distinguishing features. First, interviews differ in their purpose. For example, the purpose of one interview may be to evaluate a client who is presenting to an outpatient clinic for the first time (*intake-admission interview*), whereas the purpose of another interview may be to arrive at a *DSM-IV-TR* diagnostic formulation (*diagnostic interview*).

The second major distinguishing factor is whether an interview is unstructured (often labeled a "clinical interview") or structured. In *unstructured interviews*, clinicians are allowed to ask any questions that come to mind in any order. In contrast, structured interviews require the clinician to ask, verbatim, a set of standardized questions in a specified sequence. We will have much more to say about structured versus unstructured interviews later in this chapter.

The same kinds of skills are required regardless of the purpose or type of interview. Rapport, good communication skills, appropriate follow-up questions, and good observational skills are all necessary, even when administering a structured interview. Also, it should be kept in mind that any assessment interview may have strong therapeutic overtones. After all, patients' perceptions of the clinic, their motivation, and their expectations for help may all be shaped to a significant extent by their experiences in intake interviews or in diagnostic screening sessions.

We organize our presentation in this section according to the purpose of an interview. However, it is important to keep in mind that structured and unstructured versions of all these interviews exist.

### The Intake-Admission Interview

An intake interview generally has two purposes: (a) to determine why the patient has come to the clinic or hospital and (b) to judge whether the agency's facilities, policies, and services will meet the needs and expectations of the patient. Many

times, a psychiatric social worker conducts such interviews. Often, these talks are face-to-face, but there has been an increasing tendency to use telephone contacts prior to the initial interview.

A skilled, sensitive telephone interviewer can obtain much of the information that has traditionally been gathered at the clinic. Under some conditions or in particular clinics, the intake interview may be conducted by the same person who later does the diagnostic interview or the test workup. An advantage of this procedure is that patients do not get shoved from pillar to post as they make the rounds from one type of interview to the next.

Another function of the initial interview is to inform the patient of such matters as the clinic's functions, fees, policies, procedures, and personnel. Patients are consumers and have every right to information regarding services and charges. These concrete details can certainly influence patients' motivation for therapy and can often dispel some myths that might decrease their expectations for help. Box 6-2 presents an example of an intake report based on an interview with a prospective client in a community-based outpatient clinic.

### The Case-History Interview

In a *case-history interview*, as complete a personal and social history as possible is taken. The clinician is interested both in concrete facts, dates, and events and in the patient's feelings about them. It is important to note that a relentless pursuit of dates and names can sometimes obscure important data and create in the patient a set to respond in concrete terms. This mental set can sometimes impede progress in later interviews.

Basically, the purpose of a case history is to provide a broad background and context in which both the patient and the problem can be placed. Our diagnostic and therapeutic technology is not yet so advanced that specific behaviors, problems, or thoughts can always be understood in exactly the same way in every person. It is therefore essential that the patient's problems be placed in a proper historical-developmental context so that their

diagnostic significance and their therapeutic implications can be more reliably determined.

The range of material covered in personal-social histories is quite broad. It covers both childhood and adulthood, and it includes educational, sexual, medical, parental-environmental, religious, and psychopathological matters. Although, as noted earlier, much of this material will be factual, it is extremely important to note how patients present the material—how they speak about it, the emotional reactions to the material, evasiveness or openness, and so on.

Although most patients, particularly competent adults, provide their own personal-social history, other knowledgeable adults can often furnish invaluable data and impressions. A parent, spouse, an employer, a teacher, or a friend can be rich sources of information. Depending on the age or cognitive ability of the client, these "external informants" sometimes are the only valid sources of useable information. In addition, there are issues of confidentiality and trust. Even when the patient gives consent and helps recruit the informants, many clinicians fear that using them can impede the subsequent therapeutic relationship. Still, outside sources can often provide a picture of the patient that cannot be achieved in any other fashion. Table 6-2 presents a typical case-history outline.

### The Mental Status Examination Interview

A *mental status examination* is typically conducted to assess the presence of cognitive, emotional, or behavioral problems. The general areas covered in these interviews, along with excerpts from a sample report, are shown in Table 6-3.

A major limitation of mental status interviews has been their unreliability, because they are often highly unstructured in execution. To address this problem, structured mental status examination interviews have been devised. Here, specific questions are asked to assess behavior in a variety of areas. It is important for clinical psychologists to be familiar with the mental status examination because these interviews are one of the primary

**BOX 6-2 Sample Intake Report**

**Name:** MORTON, Charles (fictitious name)

**Age:** 22

**Sex:** Male

**Occupation:** Student

**Date of interview:** June 1, 1998

**Therapist:** Luke Baldry, Ph.D. (fictitious name)

**Identifying Information:** The client is a 22-year-old White male who is presently a full-time student at a large midwestern university. Currently, he lives alone in an apartment and works part-time at a local grocery store.

**Chief Complaint:** The client presents to the clinic today complaining of "depression" that reportedly has become worse over the past 2 weeks.

**History of Presenting Problem:** The client reports that he has experienced symptoms of depression "off and on" for the past year. These symptoms include (a) depressed mood ("feeling sad"); (b) appetite disturbance but no significant weight loss; (c) sleep disturbance (early morning awakening); (d) fatigue; (e) feelings of worthlessness; and (g) difficulty concentrating. All of these symptoms have been present nearly every day over the past 2 weeks.

The client reports that about 1 year ago, a long-standing romantic relationship of 4 years ended. Following this breakup, the client reports, he became increasingly withdrawn and, in addition to some of the symptoms noted above, experienced several crying spells.

Although his adjustment to this event became better as time progressed, the client reports that the breakup "shook" his confidence and led to a decrease in the number of social activities he engaged in. Further, he reports that he has not dated since. Last semester, the client transferred to this university from a community college in another midwestern location. He reports that the move was difficult both emotionally and academically. Specifically, being away from his hometown, family, and friends has led him to feel more isolated and dysphoric. Further, his grades this past semester reportedly suffered. He reports that his grades dropped from A's at his previous school to C's at this university. Toward the end of this past semester (once his probable grades in his classes became apparent), he developed an increasing number of depressive symptoms.

**Past Treatment History:** The client reports that he has not previously sought out psychological or psychiatric treatment.

**Medical History:** No significant medical history was reported.

**Substance Use/Abuse:** The client denies any current symptoms of substance abuse or dependence. He has "tried" marijuana on three occasions in the past but denies current use. He reports drinking, on average, three or four cans of beer per week.

**Medication:** The client reports that he is not currently taking any medication.

**Family History:** Both of the client's biological parents are living, and he has one brother (age 20) and one sister (age 26). The client reports that his mother suffers from depression and has received outpatient treatment on numerous occasions. Further, he reports that his maternal grandfather was diagnosed with depression. No substance use problems among family members were noted.

**Suicidal/Homicidal Ideation:** The client denied any current or past suicidal or homicidal ideation, intent, or action.

**Mental Status:** The client was well-groomed, cooperative, and dressed appropriately. He was alert and oriented in all spheres. His mood and affect were dysphoric. His speech was clear, coherent, and goal-directed. Some attention and concentration difficulties were noted. Further, his immediate memory was mildly impaired. No evidence of formal thought disorder, delusions, hallucinations, or suicidal/homicidal ideation was found. His insight and judgment appear to be fair.

#### **Diagnostic Impression**

Axis I: 296.22, Major Depressive Disorder, Single Episode

Axis II: V71.09, No Diagnosis

Axis III: None

Axis IV: Problems related to the social environment; Educational problems

Axis V: GAF = 55 (current)

**Recommendations:** Individual psychotherapy. Cognitive-behavioral treatment for depression.

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Luke Baldry, Ph.D.  
Licensed Clinical Psychologist

**TABLE 6-2 A Typical Case-History Outline**

1. Identifying data, including name, sex, occupation, address, date and place of birth, religion, and education.
2. Reason for coming to the agency and expectations for service.
3. Present situation, such as description of daily behavior and any recent or impending changes.
4. Family constellation (family of orientation), including descriptions of mother, father, and other family members and the respondent's role in the family in which he or she grew up.
5. Early recollections, descriptions of earliest clear events and their surroundings.
6. Birth and development, including ages of walking and talking, problems compared with other children, and the person's view of his or her early experiences.
7. Health, including childhood and later diseases and injuries, problems with drugs or alcohol, and comparison of one's body with others.
8. Education and training, including subjects of special interest and achievement.
9. Work record, including reasons for changing jobs and attitudes toward work.
10. Recreation and interests, including volunteer work, reading, and the respondent's report of adequacy of self-expression and pleasures.
11. Sexual development, covering first awareness, kinds of sexual activities, and view of the adequacy of sexual expressions.
12. Marital and family data, covering major events and what led to them, and comparison of present family of birth and orientation.
13. Self-description, including strengths, weaknesses, and ideals.
14. Choices and turning points in life, a review of the respondent's most important decisions and changes, including the single most important happening.
15. View of the future, including what the subject would like to see happen next year and in five or ten years, and what is necessary for these events to happen.
16. Any further material the respondent may see as omitted from the history.

SOURCE: Norman D. Sundberg, *Assessment of Persons*, copyright © 1977, pp. 97–98. Reprinted by permission of Pearson Education, Upper Saddle River, NJ.

modes of clinical assessment for a variety of mental health professionals (including psychiatrists).

### The Crisis Interview

Increasingly, clinicians have been functioning in novel settings, including storefront clinics and telephone hotlines specializing in advice or comfort to drug abusers, to parents fearful of abusing their children, or to persons who are just lonely. Many of the usual “rules” of interviewing or the usual categorizations of interviews are blurred in these instances. However, the basic principles remain.

Take the example of a mother who, during the absence of her husband, became terrified that she would abuse her small son. The following telephone conversation ensued:

MOTHER: My God, help me. Is this the place ... that ... I mean, I need somebody. Tell me.

VOLUNTEER: Yes, it is. Tell me what it is. Go ahead and talk.

MOTHER: I'm so nervous. I feel like I'll bust. Danny is crying, and my husband isn't here, and I've got to stop him. I can't stand it any longer.

VOLUNTEER: OK, I think I understand. Are you alone?

MOTHER: Yes, but I can't handle it.

VOLUNTEER: I know. And you're very upset. But I think we can talk it over. Where are you? What's your address?

**TABLE 6-3 Mental Status Examination Interview of a 24-Year-Old Man Diagnosed with Schizophrenia**

**General Outline of Mental Status Examination**

- I. General Presentation: Appearance, Behavior, Attitude
- II. State of Consciousness: Alert, Hyperalert, Lethargic
- III. Attention and Concentration
- IV. Speech: Clarity, Goal-directedness, Language deficits
- V. Orientation: To Person, Place, Time
- VI. Mood and Affect
- VII. Form of Thought; Formal Thought Disorder
- VIII. Thought Content: Preoccupations, Obsessions, Delusions
- IX. Ability to Think Abstractly
- X. Perceptions: Hallucinations
- XI. Memory: Immediate, Recent, Remote
- XII. Intellectual Functioning
- XIII. Insight and Judgment

\*\*\*\*\*

The patient appeared disheveled and exhibited "odd" behavior throughout the interview. Although he appeared alert, some impairment in his attention and concentration was noted. Specifically, he experienced difficulty repeating a series of digits and performing simple calculations without the aid of pencil and paper. No language deficits were noted, although the patient's speech was at times difficult to understand and did not appear to be goal-directed (not a response to the question posed). He was oriented to person and place, but was not oriented to time. Specifically, he was unsure of the month and day. He reported his mood as "fine"; his affect appeared to be blunted. He demonstrated some signs of formal thought disorder: tangentiality and loose associations. He denied suicidal ideation but did report his belief that he was being "framed by the FBI" for a crime he did not commit. When confronted with the fact that he was in a psychiatric hospital, not a prison, he stated that this was all part of an FBI "cover-up," so that he could be made to look "crazy." Although he denied hallucinations, his behavior suggested that, on occasion, he was responding to auditory hallucinations. For example, he stared off into space and began whispering on several occasions. His ability to abstract appeared to be impaired. For example, when asked how a baseball and an orange are alike, he responded, "They both are alive." The patient's immediate and recent memories were slightly impaired, although his remote memory was intact. It is estimated that he is of average intelligence. Currently, his insight and judgment appear to be poor.

- |   |  |
|---|--|
| <p>MOTHER: I'm at home at 308 Park Place. I wish John would come home. I feel better when he's here. I just can't handle it. Nobody thought I should get married.</p> <p>VOLUNTEER: What do you think is wrong? Are you afraid of hurting Danny?</p> <p>MOTHER: He won't stop crying. He's always crying. John doesn't know what it's like. I suppose he blames me—I know my mother does. (Starts crying uncontrollably.)</p> | <p>VOLUNTEER: Look, that's all right. Take it easy. Where is John?</p> <p>MOTHER: He's ... he drives a truck. He won't be back till Thursday.</p> <p>VOLUNTEER: I think I understand ... and I know this is hard for you. Have you talked with anybody about your feelings on these things?</p> <p>MOTHER: No. Well, with Marge next door a little bit. She said she felt like that a few times. But ... I don't know.</p> |
|---|--|

The volunteer in this situation kept on reinforcing the notion that she understood. The calm yet confident manner of the volunteer seemed to reassure the mother, who agreed to come in the next afternoon and to bring her son along with her.

Obviously, the purpose of the *crisis interview* is to meet problems as they occur and to provide an immediate resource. Their purpose is to deflect the potential for disaster and to encourage callers to enter into a relationship with the clinic or make a referral so that a longer-term solution can be worked out. Such interviewing requires training, sensitivity, and judgment. Asking the wrong question in a case-history interview may only result in a piece of misinformation. However, a caller who is asked a wrong question on the telephone may hang up. As clinical services begin to transcend the boundaries of the conventional clinic, there

is a chance that they will be diluted by having to operate in situations that offer less opportunity for control. But the problems seem to be outweighed by the opportunity to intervene during real crises.

### The Diagnostic Interview

As mentioned in Chapter 5, clinical psychologists evaluate patients according to *DSM-IV* criteria. Insurance companies, research protocols, or even court proceedings may require a diagnostic evaluation. How clinicians arrive at such a formulation, however, is for the most part left up to them. Historically, they used a clinical interview—a free-form *unstructured interview* whose content varied greatly from clinician to clinician. As might be expected, this interviewing method often results in unreliable ratings because two clinicians evaluating the same

#### BOX 6-3 Clinical Psychologist Perspective: Thomas A. Widiger, Ph.D.

Dr. Thomas Widiger, a professor in the Psychology Department of the University of Kentucky, is perhaps best known for his work in the areas of classification and diagnosis of mental disorders. In his career, he has published close to 200 articles, books, or book chapters. As one of the few psychologists intimately involved in the latest revision of the diagnostic manual of mental disorders, Dr. Widiger served as research coordinator of *DSM-IV*. Dr. Widiger is the author of two semistructured interviews, the Personality Disorder Interview-IV, or PDI-IV (Widiger, Mangine, Corbitt, Ellis, & Thomas, 1995) and the Structured Interview for the Five Factor Model of Personality (Trull & Widiger, 1997). We had the chance to ask Dr. Widiger a few questions about his background, his perspective on the field, and his thoughts on structured interviews.

#### What originally got you interested in the field of clinical psychology?

I suppose that what originally got me interested in clinical psychology was genetic dispositions and parental influences. However, my memory is that I was interested in why I was the way I was. Most of my friends who were in college were art majors, although one was pre-dental and another was pre-medicine (none were psychology majors). Those who did not attend college worked in the fields of auto mechanics

and highway repair. For the first 2 years of college I majored in creative writing. I wanted to be a novelist.

However, I did recognize that it would be very difficult to make a reasonable living writing poetry and novels. In the second semester of my sophomore year, I took a course in abnormal psychology. I found it very interesting, rivaling even an English literature course that was taught by a very long-haired hippie who had students over to his house to discuss Vonnegut, Heller, and Castenada (the good old days). Clinical psychology was a field that was concerned with issues that were (or should be) of central importance to any individual's life—why you are the way you are and what you can do about it. Perhaps my interest was typical for a college-age student going through a normal period of identity confusion, or perhaps it reflected a concern with my own conflicts and struggles.

At the end of the semester, I asked the instructor to recommend some additional readings. I was attending a junior college, and this was the only advanced course in psychology that was offered. He recommended three books: Freud's *Interpretation of Dreams*, R. D. Laing's *Divided Self*, and Sandor Ferenczi's *Sex in Psychoanalysis*. I have no idea why he included Ferenczi's text along with Freud's and Laing's; one can only speculate. In any case, I was fascinated with the texts by Freud and Laing. I read them through voraciously, bought additional books by Freud, Laing,

and others, and decided then to switch my major to clinical psychology.

**Describe what activities you are involved in as a clinical psychologist.**

My primary activity within clinical psychology is conducting and supervising research. I am fortunate to be assisted by many bright, motivated, and talented graduate students. Most of my studies are in collaboration with them. We meet regularly to discuss and generate new ideas for research, as well as to work out the nuts and bolts of ongoing projects. In my opinion, most (if not all) of the controversies and disputes within clinical psychology can be meaningfully informed, if not ultimately resolved, by empirical research, and I enjoy the challenge of trying to design and implement informative projects.

I also teach a number of graduate and undergraduate courses, including Abnormal Psychology, Psychopathology, History of Clinical Psychology, Ethical Issues in Clinical Psychology, and Personality. I try to emphasize current issues and controversies. Some of my more successful studies were generated in part through class discussions.

I am also an investigator for Kentucky's State Board of Psychology. Clinical psychologists within the state of Kentucky must be licensed by the State Board, and this board receives complaints regarding fraudulent and unethical practices. I am usually investigating two or three psychologists at any particular point in time. This is difficult and time-consuming work and always unpleasant (if not demoralizing), as there are no winners.

I also have a small private practice, confined to just one or two persons, usually undergraduate or graduate students enrolled within other departments of the university. I also supervise the psychotherapy provided by two or three graduate students within the Psychological Services Center, a small clinic operated by the University of Kentucky Department of Psychology. My own particular approach to psychotherapy is eclectic, although I emphasize in particular the cognitive-behavioral and psychodynamic (object-relational) perspective.

Outside of this, I garden, gamble, and wait for the college basketball season to begin.

**What are your particular areas of expertise or interest?**

My primary areas of interest are diagnosis, assessment, and classification, particularly dimensional versus categorical models of classification, gender differences and biases, and personality disorders. There are indeed specific etiologies and pathologies, but I believe that most instances of mental disorder are the result of a complex interaction over time of a

number of biogenetic dispositions and environmental experiences. A demarcation between normal and abnormal functioning is meaningful but in many respects arbitrary. I do not consider persons with mental disorders to be qualitatively different from us ("I'm OK and you're not"). I have never met a person who I believe is without mental illness. This is perhaps a provocative remark, but perhaps it shouldn't be. We have no problem acknowledging that we have suffered from many physical disorders throughout our lives and are probably currently suffering from a number of them. However, due in large part to the stigmatization of a mental disorder (the fear that we are not in fact "masters of our domain"), we somehow believe that we have never suffered from or never will suffer from a mental disorder ("I'm OK and you're OK"). Life can be extremely difficult, and our genetic dispositions and familial/social/cultural experiences will inevitably leave us with flaws, conflicts, dysregulations, irrationalities, and limitations that will significantly impair our ability to live a fully satisfying, meaningful, and enjoyable existence. Perhaps none of us is entirely psychologically healthy ("I'm not OK and neither are you").

**What are the future trends you see for clinical psychology?**

The future of clinical psychology is a good question. We appear to be in a significant time period for the profession. It may be very different 50 years from now, which is perhaps not surprising given that it was very different 50 years ago. My younger colleagues sometimes have the impression that this is an established profession that will successfully resist economic pressures to dissolve. In fact, however, it is itself a young profession that came into existence largely in response to economic pressures.

**What are the advantages of structured interviews, and what future developments do you see in this area of assessment?**

Criticism is perhaps the lifeblood of scientific progress. The scientific documentation of the efficacy of psychotherapy developed in large part to address the charge that psychotherapy had no real or meaningful benefits. A comparable trend is occurring with respect to clinical assessment, including unstructured clinical interviews. Clinicians are having to defend the validity and credibility of their diagnoses and assessments to judges, lawyers, review boards, insurance companies, and so forth. Some of the attacks will have a self-serving (perhaps even unethical) motivation, but they must still be addressed.

*(Continued)*

**BOX 6-3 Clinical Psychologist Perspective: Thomas A. Widiger, Ph.D. (Continued)**

One of the major innovations of the third edition of the American Psychiatric Association's (1980) *Diagnostic and Statistical Manual of Mental Disorders (DSM-III)* was the provision of relatively specific and explicit criteria sets to facilitate the obtainment of reliable clinical diagnoses. Prior to *DSM-III*, clinical diagnoses were so unreliable that there was no doubt that they lacked validity. If two clinicians provided different diagnoses, it is highly unlikely that both of them were correct. The relatively specific and explicit criteria sets in *DSM-III* have led to the obtainment of reliable diagnoses within research, which has in turn led to highly informative (and replicated) research concerning etiology, pathology, and treatment.

However, research has also indicated that unreliable diagnoses continue to be provided within applied clinical settings, largely because of the failure to conduct systematic and comprehensive assessments of the diagnostic criteria sets. There will be instances in which there are valid reasons for not adhering to the *DSM*, but any such deviation should at least be acknowledged and documented. Unstructured clinical assessments in routine clinical practice do tend to be unsystematic, idiosyncratic, and unreliable. As a result, they fail to correlate meaningfully with external validators (that is, with valid indicators of etiology, pathology, and treatment); they often correlate with indicators of gender, ethnic, and other biased expectations or assumptions; and they often lack credibility when critiqued by an external review.

Semi-structured clinical interviews offer many advantages and benefits. They ensure that the interview will be systematic, comprehensive, and replicable. They minimize the occurrence of idiosyncratic biases and assumptions. They provide inquiries and probes that have been shown empirically to generate useful information. Reliable and valid diagnoses within clinical practice will be obtained if the interview is

systematic, comprehensive, and objective. Semi-structured interviews should be used in forensic, disability, and other formal assessments and should be part of initial intake assessments (along with self-report screening inventories). This is not to say that semi-structured interviews do not have limitations.

They can be problematic to establishing rapport, and they will at times be superficial and inappropriately constraining. However, semi-structured interviewing can be incorporated into a clinical practice without suffering serious costs. Most graduate programs in clinical psychology devote a year of training to assessment. In the early years of the profession, none of this time appeared to be given to the importance of objective, systematic, and comprehensive clinical interviewing. However, this does appear to be changing. I do expect the assessment training of graduate students in clinical psychology in the future to give more attention to the value and techniques of semi-structured clinical interviews.



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patient may arrive at different diagnostic formulations. Research on the reliability of diagnoses using unstructured clinical interviews has not supported this approach (e.g., Matarazzo, 1983; Ward, Beck, Mendelson, Mock, & Erbauch, 1962).

Fortunately, things have changed. Researchers have developed *structured diagnostic interviews* that

can be used by clinical psychologists in their research or clinical work. A structured diagnostic interview consists of a standard set of questions and follow-up probes that are asked in a specified sequence. The use of structured diagnostic interviews ensures that all patients or subjects are asked the same questions. This makes it more likely that two clinicians who



<p>Did you go out of your way to avoid (PHOBIC STIMULUS)?</p> <p>(Are there things you didn't do because of this fear, that you would otherwise have done?)</p> <p>IF NO: How hard (is/was) it for you to (CONFRONT PHOBIC STIMULUS)?</p>	<p>D. The phobic situation(s) is avoided or else endured with intense anxiety or distress.</p>	<p>? 1 2 3</p> <p> </p> <p>GO TO *OBSESSIVE COMPULSIVE DISORDER*</p>	<p>F70</p>
<p>IF UNCLEAR WHETHER FEAR WAS CLINICALLY SIGNIFICANT: How much did (PHOBIA) interfere with your life?</p> <p>(Is there anything you've avoided because of being afraid of (PHOBIC STIMULUS)?</p> <p>IF DOES NOT INTERFERE WITH LIFE: How much has the fact that you were afraid of (PHOBIC STIMULUS) bothered you?</p>	<p>E. The avoidance, anxious anticipation, or distress in the feared situation interferes significantly with the person's normal routine, occupational (academic) functioning, or with social activities or relationships with others, or there is marked distress about having the phobia.</p>	<p>? 1 2 3</p> <p> </p> <p>GO TO *OBSESSIVE COMPULSIVE DISORDER*</p>	<p>F71</p>
<p>IF YOUNGER THAN AGE 18: How long have you had these fears?</p>	<p>F. For individuals under age 18 years, the duration is at least 6 months.</p>	<p>? 1 2 3</p> <p> </p> <p>GO TO *OBSESSIVE COMPULSIVE DISORDER*</p>	<p>F72</p>
<p>IF NOT ALREADY CLEAR: RETURN TO THIS ITEM AFTER COMPLETING SECTION ON PTSD AND OBSESSIVE-COMPULSIVE DISORDER.</p>	<p>G. The anxiety, panic attacks, or phobic avoidance associated with the specific object or situation are not better accounted for by another mental disorder, such as Obsessive-Compulsive Disorder (for example, fear of contamination), Posttraumatic Stress Disorder (for example, avoidance of stimuli associated with a severe stressor), Separation Anxiety Disorder (for example, avoidance of school), Social Phobia (for example, avoidance of social situations because of fear of embarrassment), Panic Disorder with Agoraphobia, or Agoraphobia without History of Panic Disorder.</p>	<p>? 1 2 3</p> <p> </p> <p>GO TO *OBSESSIVE COMPULSIVE DISORDER*</p>	<p>F73</p>

? = inadequate information    1 = absent or false    2 = subthreshold    3 = threshold or true

FIGURE 6-1 (Continued)

SPECIFIC PHOBIA CRITERIA A, B, C, D, E, F, AND G ARE CODED "3"	1	3	F74
GO TO *OBSESSIVE COMPULSIVE DISORDERS		SPE- CIFIC PHO- BIA	
INDICATE TYPE: (Check all that apply)			
___ Animal Type (includes insects)			F75
___ Natural Environment Type (includes storms, heights, water)			F76
___ Blood/Injection/Injury Type (includes seeing blood or injury or receiving an injection or other invasive procedure)			F77
___ Situational Type (includes public trans- portation, tunnels, bridges, elevators, flying, driving, or enclosed places)			F78
___ Other Type (for example, fear of situations that might lead to choking, vomiting, or contracting an illness) Specify: _____			F79
<b>*SPECIFIC PHOBIA CHRONOLOGY*</b>			
IF UNCLEAR: During the past month have you been bothered by (SPECIFIC PHOBIA)?	Has met criteria for Specific Phobia during past month	? 1 3	F80
INDICATE CURRENT SEVERITY: 1 – Mild: Few, if any, symptoms in excess of those required to make the diagnosis are present, and symptoms result in no more than minor impairments in social or occupational functioning. 2 – Moderate: Symptoms or functional impairment between "mild" and "severe" are present. 3 – Severe: Many symptoms in excess of those required to make the diagnosis or several symptoms that are particularly severe are present, or the symptoms re- sult in marked impairment in social or occupational functioning.  CONTINUE WITH *AGE AT ONSET*, BELOW.			F81
? = inadequate information    1 = absent or false    2 = subthreshold    3 = threshold or true			

**FIGURE 6-1** (Continued)

evaluate the same patient will arrive at the same diagnostic formulation (high interrater reliability).

Several structured diagnostic interviews are available to clinical psychologists to help evaluate

both adults and youth. Figure 6-1 presents a portion of the Structured Clinical Interview for Axis I *DSM-IV* Disorders (First, Spitzer, Gibbon, & Williams, 1995), known as the SCID-I. This section of

<p>IF CURRENT CRITERIA NOT FULLY MET (OR NOT AT ALL):</p> <p>4 – In Partial Remission: The full criteria for the disorder were previously met but currently only some of the symptoms or signs of the disorder remain.</p> <p>5 – In Full Remission: There are no longer any symptoms or signs of the disorder but it is still clinically relevant to note the disorder—for example, in an individual with previous episodes of Specific Phobia who has been symptom-free on an anti-anxiety agent for the past three years.</p> <p>6 – Prior History: There is a history of the criteria having been met for the disorder but the individual is considered to have recovered from it.</p>		F82
When did you last have (ANY SX OF SPECIFIC PHOBIA)?	Number of months prior to interview when last had a symptom of Specific Phobia	F83
<b>*AGE AT ONSET*</b>		
IF UNKNOWN: How old were you when you first started having (SXS OF SPECIFIC PHOBIA)?	Age at onset of Specific Phobia (CODE 99 IF UNKNOWN)      — —	F84
<div style="background-color: #e0e0e0; padding: 5px; display: inline-block;">           GO TO            *OBSESSIVE            COMPULSIVE            DISORDER*         </div>		
? = inadequate information    1 = absent or false    2 = subthreshold    3 = threshold or true		

**FIGURE 6-1** (Continued)

the SCID-I assesses the presence of the *DSM-IV* criteria for Specific Phobia. The questions the interviewer asks appear in the left column, and the actual *DSM-IV* criteria for this disorder appear in the middle column.

Despite the availability of a wide range of structured interviews for diagnosis, it appears that few clinicians use these in everyday practice. For example, a recent study estimated that clinicians used structured diagnostic interviews with only about 15% of their patients (Bruchmüller, Magraf, Suppiger, & Schneider, 2011). Interestingly, clinicians markedly underestimated their patients' acceptance of structured interviews, and this appeared to be at least partially responsible for the clinicians' reluctance to use these in routine clinical practice. A previous study of patients that had undergone structured interviewing indicated that patients on average were highly satisfied with the interview, almost all patients rated their relationship to the interviewer as positive, and only a small proportion felt "questioned out" after the procedure (Suppiger, In-Albon,

Hendriksen, Hermann, Magraf, & Schneider, 2009). These studies, therefore, suggest that we as clinicians should not assume that structured diagnostic interviews will be viewed as onerous or unhelpful to our patients and clients. Rather, if used routinely, these interviews can help us arrive at reliable and valid diagnoses that can inform treatment and intervention.

## RELIABILITY AND VALIDITY OF INTERVIEWS

As with any form of psychological assessment, it is important to evaluate the reliability and validity of interviews. The reliability of an interview is typically evaluated in terms of the level of agreement between at least two raters who evaluated the same patient or client. Agreement refers to consensus on diagnoses assigned, on ratings of levels of personality traits, or on any other type of summary information derived from an interview. This is often referred to as

*interrater reliability*. It can be quantified in many ways, including the *kappa coefficient* (Cohen, 1960) or the intraclass correlation coefficient (Shrout & Fleiss, 1979).

The validity of an interview concerns how well the interview measures what it intends to measure. For example, a demonstration that scores from a depression interview correlate highly with scores from a well-respected self-report measure of depression would suggest there is some degree of validity in the use of this interview's scores to assess depression. Evidence for an interview's *predictive validity* would be demonstrated if scores from this measure were significantly correlated with (and therefore "predicted") future events believed to be relevant to that construct. For example, if scores from our depression interview were highly correlated with poorer academic performance over the next 2 months, then we might say we have evidence supporting the predictive validity of our interview.

As should be apparent, both the reliability and validity of a measure, such as an interview, are a matter of degree. Scores from interviews, like those from psychological tests, are neither perfectly reliable nor perfectly valid. But the higher the reliability and validity, the more confident we are in our conclusions. Let us turn now to look more closely at reliability and validity issues regarding interviews.

### Reliability

Standardized (structured) interviews with clear scoring instructions will be more reliable than unstructured interviews. The reason is that structured interviews reduce both information variance and criterion variance. Information variance refers to the variation in the questions that clinicians ask, the observations that are made during the interview, and the method of integrating the information that is obtained (Rogers, 1995). Criterion variance refers to the variation in scoring thresholds among clinicians (Rogers, 1995). Clear-cut scoring guidelines make it more likely that two clinicians will score the same interviewee response in a similar way.

Because most of the research on the psychometric properties of interviews has focused on structured

diagnostic interviews, we discuss these in some detail. For many years, diagnostic interviews were considered quite unreliable (Matarazzo, 1983; Ward et al., 1962). However, several things changed. First, with the introduction of *DSM-III* (American Psychiatric Association, 1980), operational criteria were developed for most of the mental disorder diagnoses. This made it much easier to know what features to assess in order to rule in or rule out a particular mental disorder diagnosis. Second, and perhaps more important, several groups of investigators developed structured interviews to systematically assess the various *DSM* criteria for mental disorders. Clearly, the reliability of the diagnostic information derived from structured interviews exceeds that obtained from unstructured interviews (Rogers, 1995).

As previously mentioned, the most common type of reliability assessed and reported for structured diagnostic interviews is interrater reliability. Another measure of reliability that is examined in structured diagnostic interviews, as well as other interviews, is *test-retest reliability*—the consistency of scores or diagnoses across time. We expect that, in general, individuals should receive similar scores or diagnoses when an interview is readministered. For example, a patient assigned a diagnosis of major depressive disorder based on a structured interview would be expected to receive the same diagnosis if reinterviewed (using the same structured interview) the next day. We expect the test-retest reliability of an interview to be quite high when the intervening time period between the initial testing and the retest is short (hours or a few days). However, when the intervening time period is long (months or years), test-retest reliability typically suffers. One reason—especially when assessing "current" mental disorder diagnoses—is that the psychological status of the patient may have changed. For example, the fact that a patient does not again receive a major depressive disorder diagnosis at 6-month retest is not necessarily an indictment of our structured interview. Because major depressive episodes can be of relatively short duration, our interview may be quite accurate in revealing no diagnosis at retest.

The point is that the level of test-retest reliability that is obtained must be interpreted in the

context of the nature of the variable (a brief state or temporary syndrome vs. a long-standing personality trait) as well as the length of the intervening time period between test and retest. When test–retest reliability is low, this may be due to a host of factors, including subjects’ tendency to report fewer symptoms at retest, subjects’ boredom or fatigue at retest, or the effect of variations in mood on the report of symptoms (Sher & Trull, 1996). Table 6-4 describes reliability indices for structured interviews.

Table 6-5 presents a hypothetical data set from a study assessing the reliability of alcoholism diagnoses derived from a structured interview. This example assesses interrater reliability (the level of agreement between two raters), but the calculations would be the same if one wanted to assess test–retest reliability. In that case, the data for Rater 2 would be replaced by data for Testing 2 (Retest). As can be seen, the two raters evaluated the same 100 patients for the presence/absence of an alcoholism diagnosis, using a structured interview. These two raters agreed in 90% of the cases [(30 + 60)/100]. Agreement here refers to coming to the same conclusion—not just agreeing that the diagnosis is present but also that the diagnosis is absent. Table 6-5 also presents the calculation for kappa—a chance-corrected index of agreement that is typically lower than overall agreement. The reason for this lower value is that raters will agree on the basis of chance alone in situations where the prevalence rate for a diagnosis is relatively high or relatively low. In the example shown in Table 6-5, we see that the diagnosis of alcoholism is relatively infrequent.

Therefore, a rater who always judged the disorder to be absent would be correct (and likely to agree with another rater) in many cases. The kappa

**TABLE 6-5 Diagnostic Agreement Between Two Raters**

		Rater 2	
		Present	Absent
Rater 1	Present	30 a	5 b
	Absent	5 c	60 d

N = 100

$$\text{Overall Agreement} = a + d/N = .90$$

$$\begin{aligned} \text{Kappa} &= \frac{(a + d/N) - ((a + b)(a + c) + (c + d)(b + d))/N^2}{1 - ((a + b)(a + c) + (c + d)(b + d))/N^2} \\ &= \frac{ad - bc}{ad - bc + N(b + c)/2} \\ &= \frac{1775}{2275} \\ &= .78 \end{aligned}$$

coefficient takes into account such instances of agreement based on chance alone and adjusts the agreement index (downward) accordingly. In general, a kappa value between .75 and 1.00 is considered to reflect excellent interrater agreement beyond chance (Cicchetti, 1994).

### Validity

The validity of any type of psychological measure can take many forms. *Content validity* refers to the measure’s comprehensiveness in assessing the variable of interest. In other words, does it adequately

**TABLE 6-4 Common Types of Reliability That Are Assessed to Evaluate Interviews**

Type of Reliability	Definition	Statistical Index
Interrater or interjudge reliability	Index of the degree of agreement between two or more raters or judges as to the level of a trait that is present or the presence/absence of a feature or diagnosis	Pearson’s <i>r</i> Intraclass correlation Kappa
Test–retest reliability	Index of the consistency of interview scores across some period of time	Pearson’s <i>r</i> Intraclass correlation

measure all important aspects of the construct of interest? For example, if an interview is designed to measure depression, then we would expect it to contain multiple questions assessing various emotional, cognitive, and physiological aspects of depression.

*Criterion-related validity* refers to the ability of a measure to predict (correlate with) scores on other relevant measures. These measures may be administered concurrently with the interview (*concurrent validity*) or at some point in the future (*predictive validity*). For example, an interview assessing conduct disorder in childhood may be said to have criterion-related validity to the extent that its scores correlate with measures of peer rejection and aggressive behavior.

*Discriminant validity* refers to the interview's ability not to correlate with measures that are not theoretically related to the construct being measured. For example, there is no theoretical reason a specific phobia (e.g., of heights) should be correlated with level of intelligence. Therefore, a demonstration that the two measures are not significantly correlated would indicate the specific phobia interview's discriminant validity.

Finally, *construct validity* is used to refer to all of these aspects of validity. Thus, many researchers describe the process of developing and validating a measure as a process of construct validation. Table 6-6 describes these validity indices.

In the case of structured diagnostic interviews, content validity is usually assumed because these

interviews were developed to measure the *DSM* criteria for specific mental disorders. That leaves the need for validation efforts aimed at establishing an interview's criterion-related, discriminant, and construct validity.

Although some validation studies have been conducted, many more studies are needed. Let us take a popular structured diagnostic interview, the SCID, as an example. As noted by Rogers (1995), relatively few studies have attempted to demonstrate the criterion-related or discriminant validity of the SCID. Specifically, not many studies have compared SCID diagnoses and scores to those obtained from other diagnostic interviews, to clinical diagnoses, or to scores from self-report inventories.

Why is this the case? L. N. Robins (1985) has noted several difficulties associated with validating a structured diagnostic interview. Laboratory tests that validate mental disorder diagnoses are not available. Therefore, there is no "gold standard" to use as a comparison. Further, structured diagnostic interviews were developed at least partially because of a dissatisfaction with self-report inventories. Therefore, it does not seem appropriate or desirable to use a self-report inventory as a gold standard. Any lack of agreement between a structured diagnostic interview and a self-report inventory may be more of an indictment against the validity of the self-report inventory than it is against the validity of the structured diagnostic interview. The same problem exists with using a "clinical impression" (based on an unstructured clinical interview) as a comparison. Some investigators have used a test-retest

**TABLE 6-6 Common Types of Validity That Are Assessed to Evaluate Interviews**

Type of Validity	Definition
Content validity	The degree to which interview items adequately measure the various aspects of the variable or construct.
Predictive validity	The degree to which interview scores can predict (correlate with) behavior or test scores that are observed or obtained at some point in the future.
Concurrent validity	The extent to which interview scores are correlated with a related, but independent, set of test/interview scores or behaviors.
Construct validity	The extent to which interview scores are correlated with other measures or behaviors in a logical and theoretically consistent way. This will involve a demonstration of both convergent and discriminant validity.

NOTE: Predictive and concurrent validity are both subtypes of criterion-related validity.

design to address the validity issue; however, this speaks more to the stability or reliability of interview scores than to the validity of the measure. Of course, we would expect that a valid measure would also be reliable. But the test–retest design does not directly address the validity question.

These points are well taken. We must realize that no infallible criterion measure exists for comparison purposes. In these situations, we conduct multiple validity studies using a variety of criterion measures. Our confidence in the validity of our structured interview will increase as a function of the number of times we find that scores from our measure are highly associated with scores from alternative measures of the same or similar constructs and are not significantly related to scores from measures of constructs that, theoretically, should be unrelated to the diagnosis in question.

### **Suggestions for Improving Reliability and Validity**

The following suggestions summarize some of the previous discussion; they should help improve both the reliability and validity of interviews.

1. Whenever possible, use a structured interview. A wide variety of structured interviews exist for conducting intake-admission, case-history, mental status examination, crisis, and diagnostic interviews.
2. If a structured interview does not exist for your purpose, consider developing one. Generate a standard set of questions to be used, develop a set of guidelines to score respondents' answers, administer this interview to a representative sample of subjects, and use the feedback from subjects and interviewers to modify the interview. If nothing else, completing this process will help you better understand what it is that you are attempting to assess and will help you become a better interviewer.
3. Whether you are using a structured interview or not, certain interviewing skills are essential: establishing rapport, being an effective communicator, being a good listener, knowing when and how to ask additional questions, and being a good observer of nonverbal behavior.
4. Be aware of the patient's motives and expectancies with regard to the interview. For example, how strong are his or her needs for approval or social desirability?
5. Be aware of your own expectations, biases, and cultural values. Periodically, have someone else assess the reliability of the interviews you administer and score.

## **THE ART AND SCIENCE OF INTERVIEWING**

Becoming a skilled interviewer requires practice. Without the opportunity to conduct real interviews, to make mistakes, or to discuss techniques and strategies with more experienced interviewers, a simple awareness of scientific investigations of interviewing will not confer great skill. What, then, are the functions of research on interviewing? A major one is to make clinicians more humble regarding their "intuitive skills." Research suggests, for example, that prior expectancies can color the interviewer's observations, that implicit theories of personality and psychopathology can influence the focus of an interview, and that the match or mismatch of interviewer and interviewee in terms of race, age, and gender may influence the course and outcome of the interview. Thus, a number of influences on the interview process have been identified.

Furthermore, if we never test our hypotheses, if we never assess the validity of our diagnoses, if we never check our reliability against someone else, or if we never measure the efficacy of a specific interview technique, then we can easily develop an ill-placed confidence that will ultimately be hard on our patients. It may be true, as some cynics argue, that 10 studies, all purporting to show that "mm-hmm" is no more effective than a nod of the head in expressing interviewer interest, still fail to disprove that in one specific or unique clinical interaction there may indeed be a difference. But

such studies and many others like them will surely give us pause and encourage us to question our assumptions.

Although no single interview study will offer an unambiguous solution to an interview problem, these studies have a cumulative effect. Research can offer suggestions about improving the validity of our observations and techniques, shatter some

timeworn illusions, and splinter a few clichés. By the sheer cumulative weight of its controlled, scientific approach, research can make interviewers more sensitive and effective. A clinician steeped in both the art and the science of interviewing will be more effective (though hardly more comfortable) than one who is conscious of only one of these dual aspects of interviewing.

## CHAPTER SUMMARY

*Clinical assessment* involves an evaluation of an individual's strengths and weaknesses, a conceptualization of the problem at hand, and some prescription for alleviating the problem. The interview is the most basic and most serviceable assessment technique used by clinical psychologists. There are two primary distinguishing factors among interviews. First, interviews differ with regard to their purpose. In this chapter, we have discussed the intake-admission interview, the case-history interview, the mental status examination interview, the crisis interview, and the diagnostic interview. A second distinguishing feature concerns whether the interview is unstructured

(often called a clinical interview) or structured. In contrast to unstructured interviews, structured interviews require the clinician to ask verbatim a set of standardized questions in a specified sequence.

Regardless of the type of interview or its purpose, certain skills are required, including rapport, good communication skills, appropriate follow-up questions, and good observational skills. As with any form of psychological assessment, it is important to evaluate the reliability and validity of interview scores. Finally, we have made several suggestions for improving the reliability and validity of interview scores.

## KEY TERMS

**assessment interview** One of the most basic techniques employed by the clinical psychologist for the purpose of answering a referral question. If administered skillfully, the assessment interview can provide insight into the problem and inform clinical decision making.

**case-history interview** An interview conducted for the purpose of gaining a thorough understanding of the patient's background and the historical/developmental context in which a problem emerged.

**clinical assessment** An approach to assessment that involves an evaluation of an individual's strengths and weaknesses, a conceptualization of the problem at hand, and the generation of recommendations for alleviating the problem.

**computer interviewing** The use of computers for administering clinical interviews.

**concurrent validity** A form of criterion-related validity. The extent to which interview scores correlate with scores on other relevant measures administered at the same time.

**construct validity** The extent to which interview scores correlate with other measures or behaviors in a logical and theoretically consistent way. To be construct valid, an interview must demonstrate all of the aspects of validity.

**content validity** The degree to which interview items adequately measure all aspects of the construct being measured.

**crisis interview** An interview conducted for the purposes of (a) defusing or problem solving through the crisis at hand and (b) encouraging the individual to enter into a therapeutic relationship at the agency or elsewhere so that a longer-term solution can be worked out.

**criterion-related validity** The extent to which interview scores predict (correlate with) scores on other relevant measures.

**diagnostic interview** An interview conducted for the purpose of arriving at a *DSM-IV* diagnostic formulation.

**discriminant validity** The extent to which interview scores do not correlate with measures that are not theoretically related to the construct being measured.

**intake-admission interview** An interview conducted for the purposes of (a) determining why the patient has come to an agency (e.g., clinic, hospital), (b) determining whether the agency can meet the patient's needs and expectations, and (c) informing the patient about the agency's policies and procedures.

**interrater reliability** The level of agreement between at least two raters who have evaluated the same patient independently. Agreement can refer to consensus on symptoms assigned, diagnoses assigned, and so on.

**kappa coefficient** A statistical index of interrater reliability computed to determine how reliably raters judge the presence or absence of a feature or diagnosis.

**mental status examination interview** An interview conducted to evaluate the patient for the presence of cognitive, emotional, or behavioral problems. In the MSE interview, the clinician assesses the patient in a number of areas, including (but not limited to) general presentation, quality of speech, thought content, memory, and judgment.

**predictive validity** A form of criterion-related validity. The extent to which interview scores correlate with scores on other relevant measures administered at some point in the future.

**rapport** A word often used to characterize the relationship between patient and clinician. In the context of the clinical interview, building good rapport involves establishing a comfortable atmosphere and sharing an understanding of the purpose of the interview.

**referral question** The question posed about the patient by the referral source (e.g., Why is a particular child earning poor grades?).

**structured diagnostic interview** A diagnostic interview that consists of a standard set of questions asked in a specified sequence. The questions may be keyed to the diagnostic criteria for a number of disorders.

**test-retest reliability** The consistency of interview scores over time. Generally, we expect individuals to receive similar diagnoses from one administration to the next if the interval between administrations is short.

**unstructured interview** An interview in which the clinician asks any questions that come to mind in any order.

# 7

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## The Assessment of Intelligence

### FOCUS QUESTIONS

1. What is intelligence, and what are some of the problems we face in measuring this construct?
2. What is the relationship between intelligence and school success as well as between intelligence and occupational status and success?
3. What do studies suggest regarding the genetic versus environmental influence on intelligence?
4. How are the Stanford-Binet Fifth Edition (SB-5) and Wechsler scales (WAIS-IV, WISC-IV) similar? How are they different?
5. How are intelligence tests used in a clinical situation? What are some of the limitations regarding their use in these situations?

### CHAPTER OUTLINE

#### Intelligence Testing: Yesterday and Today

##### The Concept of Intelligence

BOX 7-1: *The Bell Curve*

Brief Review of Reliability and Validity

Definitions of Intelligence

Theories of Intelligence

##### The IQ: Its Meaning and Its Correlates

The Intelligence Quotient (IQ)

Correlates of the IQ

Heredity and Stability of IQ Scores

BOX 7-2: *Behavioral Genetics*

BOX 7-3: *The Concept of Heritability*

##### The Clinical Assessment of Intelligence

The Stanford-Binet Scales

The Wechsler Scales

The WAIS-IV

The WISC-IV

*A Brief Case Report: Intellectual Evaluation*

The WPPSI-III

The Clinical Use of Intelligence Tests

*The Case of Harold*

Some Final Observations and Conclusions

### CHAPTER SUMMARY

### KEY TERMS

### WEB SITES OF INTEREST

The history of clinical psychology is inextricably tied to the assessment of intelligence. Without the success in this and related assessment enterprises, there might not have been a field of clinical psychology. As the years passed, however, clinicians became increasingly interested in other aspects of the profession, such as therapy. Assessment began to take a back seat, and technicians started to conduct assessments, as they had prior to World War II. However, as indicated in earlier chapters, assessment experienced a renaissance of sorts. Intelligence tests in particular remain prominent in the clinical psychologist's arsenal of assessment devices (Camara, Nathan, & Puente, 2000).

In this chapter, we provide some background relevant to the controversies over intellectual assessment, present major definitions and theories of intelligence, focus on the measurement of intelligence, and finally, discuss the appropriate interpretation of intelligence test scores.

## INTELLIGENCE TESTING: YESTERDAY AND TODAY

Several important historical developments in the latter half of the 19th century greatly influenced the ultimate introduction of measures of intelligence (Hunt, 2011; Thorndike, 1997; Wasserman & Tulsky, 2005; White, 2006). First, compulsory education in the United States and other countries resulted in a very diverse student body. Many students came from “uneducated” families or families that did not speak English. As a result, the failure rate in schools shot up dramatically. To preserve resources, there was pressure to identify those most likely to succeed in school. Second, psychological scientists believed, and ultimately demonstrated, that mental abilities could be measured. Although early attempts focused primarily on measures of sensory acuity and reaction time (e.g., Francis Galton, James McKeen Cattell), the groundwork was laid.

Alfred Binet and his collaborator, Theodore Simon, became leaders in the intelligence testing movement when they devised the Binet-Simon test to identify individual differences in mental functioning (see Chapter 2). Binet's original purpose was to develop an objective method of identifying those truly lacking in academic ability (as opposed to those with behavior problems). Like others of the day, Binet and Simon regarded intelligence as a “faculty” that was inherited, although they also spoke of it as affected by training and opportunity. With the interest in quantifying intellectual performance and with the continuing growth of compulsory education in Europe and North America, intelligence testing became firmly entrenched (Hunt, 2011; Thorndike, 1997; Wasserman & Tulsky, 2005).

Institutions such as schools, industries, military forces, and governments were, by their nature, interested in individual differences (e.g., levels of intelligence) that might affect performance in those settings; therefore, intelligence testing prospered. For many years, the critical importance and



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**FIGURE 7-1** Alfred Binet developed the first widely accepted test of intelligence. The test, which eventually became the Stanford-Binet, has undergone numerous revisions over the years.

# ANTHROPOMETRIC LABORATORY

For the measurement in various  
ways of **Human Form and Faculty.**

*Entered from the Science Collection of the S. Kensington Museum.*

This laboratory is established by Mr. Francis Galton for  
the following purposes:—

1. For the use of those who desire to be accurately measured in many ways, either to obtain timely warning of remediable faults in development, or to learn their powers.
2. For keeping a methodical register of the principal measurements of each person, of which he may at any future time obtain a copy under reasonable restrictions. His initials and date of birth will be entered in the register, but not his name. The names are indexed in a separate book.
3. For supplying information on the methods, practice, and uses of human measurement.
4. For anthropometric experiment and research, and for obtaining data for statistical discussion.

Charges for making the principal measurements:  
THREEPENCE each, to those who are already on the Register.  
FOURPENCE each, to those who are not:— one page of the Register will thenceforward be assigned to them, and a few extra measurements will be made, chiefly for future identification.

The Superintendent is charged with the control of the laboratory and with determining in each case, which, if any, of the extra measurements may be made, and under what conditions.

H & W. Brown, Printers, 20 Fulham Road, S.W.

widespread use of intelligence tests went largely unchallenged. However, by the end of the 1960s, everyone from psychologists to consumer advocates seemed to be attacking the validity of these tests. Basically, the argument was that such tests discriminate through the inclusion of unfair items.

As a result of a lengthy civil rights suit (*Larry P. v. Wilson Riles*) begun in 1971, the California State Board of Education in 1975 imposed a moratorium on the use of intelligence tests to assess disabilities in African Americans. The court held that IQ testing is prejudicial to African American children and tends to place them, without real justification, in allegedly stigmatizing programs for cognitively impaired individuals. Others disputed the court's judgment, however. Some African Americans contemplated a court challenge of the ruling, claiming it assumed that African Americans would do poorly on the tests. Still others argued that IQ testing is not a social evil but the principal means by which we can right the wrongs imposed upon minorities by a devastating environment.

Stephen Gould's (1981) popular book *The Mismeasure of Man* was a scathing critique of the intelligence testing movement and of the "reification" of the notion of intelligence. Essentially, Gould argued that theorists such as Spearman (see below) mistakenly accorded general intelligence, or *g*, the status of a true entity because of their misunderstanding of factor analytic techniques. Further, Gould contended that those arguing for the heritability of intelligence were in some cases mistaken and in other cases guilty of fraud. Gould's book was a huge success that further intensified the attack on intelligence testing.

This rather heated debate resurfaced in the 1990s with the publication of *The Bell Curve* (Herrnstein & Murray, 1994). In this book, Herrnstein and Murray reviewed the concept of intelligence, recounted the history of intelligence testing, responded to many of the critiques offered by Gould (1981), and delved into public policy issues such as poverty, crime, welfare, and affirmative action. Even today, the merits of the Herrnstein and Murray book continue to be debated (Alderfer, 2003; Nisbett, 2009; Sternberg, Grigorenko, & Kidd, 2005). Box 7-1 briefly presents

some of the more controversial aspects of this book. Whatever the outcome of all the controversy, it does illustrate that intellectual assessment is not an obscure academic activity; it is right there in the midst of contemporary social and public policy issues.

There is little question that intelligence tests have been misused at times in ways that have penalized underrepresented groups. There is also little doubt that some tests have contained certain items that have adversely affected the performance of some minorities. We should, therefore, do everything we can to develop better tests and to administer and interpret them in a sensitive fashion. However, banning tests seems an inappropriate cure that may ultimately harm the very people who need help.

## THE CONCEPT OF INTELLIGENCE

Two issues that have plagued psychologists from the beginning are still not resolved (Sternberg et al., 2005; Wasserman & Tulsky, 2005; White, 2000). First, exactly what is meant by the term *intelligence*? Second, how do we develop valid instruments for measuring it? In this section, we address both questions. But first, we need to review the psychometric concepts of reliability and validity.

### Brief Review of Reliability and Validity

As we discussed in the previous chapter, all interviews and tests must demonstrate both reliability and validity to be useful. Tables 7-1 and 7-2 present brief definitions of the most common forms of reliability and validity used to evaluate psychological tests.

**Reliability.** With regard to psychological tests, reliability refers to the consistency with which individuals respond to test stimuli. There are several ways of evaluating reliability. First, there is *test-retest reliability*—the extent to which an individual makes similar responses to the same test stimuli on repeated occasions. If each time we test a person we get

### BOX 7-1 The Bell Curve

Perhaps no other psychology book in recent times has generated as much controversy as Herrnstein and Murray's (1994) *The Bell Curve*. Briefly, Herrnstein and Murray argue that, since the 1960s, the United States has become increasingly divided based on the cognitive or intellectual ability of its citizens. What has emerged is a class labeled the "cognitive elite" who are primarily concentrated in a small group of occupations (e.g., doctors, lawyers, professors) that essentially screen for high IQ. Although intelligence is a product of both genetic and environmental factors, our country's attempt to "equalize" the environment for all (i.e., give everyone the same opportunities to succeed) ironically leads to a situation in which the genes we inherit are the primary source of individual differences. In a sense, Herrnstein and Murray contend, this will only serve to widen the gap between the haves and the have-nots in coming generations. The authors also present evidence supporting their position that cognitive ability/intelligence is the most important predictor of outcomes such as financial stability, success in college, welfare dependence, producing "illegitimate" children, and criminal behavior. They also review the data on ethnic/racial differences in IQ and argue that efforts to raise IQ scores through educational programs or programs such as Head Start have not produced positive long-term effects. Finally, Herrnstein and Murray provide a number of prescriptions for remedying the current disparity, including overhauling affirmative action policies for education and the workplace as well as returning decision-making power to local governing bodies.

Most of the negative reaction to this book appears to be based on disagreement with the authors' prescriptions for social policy and, at times, appears to take the form of ad hominem arguments. In addition,

some critics have taken issue with the methodology, analysis, and interpretation of some of the empirical studies cited and discussed in the book. On the other hand, a group of experts in the field of intelligence published a brief article in the *Wall Street Journal* (Arvey et al., 1994) that outlined "mainstream" conclusions among researchers on intelligence. Many of the points made in *The Bell Curve* are consistent with these conclusions. The experts, however, stopped short of prescribing social policy based on these conclusions.

Alderfer (2003) argues that psychologists have not gone far enough in highlighting the limitations of the empirical analysis presented in *The Bell Curve*. Alderfer remains unconvinced by the authors' "scientific arguments," including the heritability of intelligence as well as the relations between IQ and social problems (e.g., poverty, unemployment, welfare, imprisonment). According to Alderfer, socioeconomic status is perhaps the major contributing factor for racial differences in IQ and is the third variable responsible for the apparent association between IQ and social problems. Therefore, he urges psychologists to focus their energies on combating injustices, including racism, that lead to poorer achievement.

Finally, Sternberg et al. (2005) presented a series of compelling arguments that highlighted the lack of consensus, even today, as to the definition and measurement of intelligence, as well as the fact that the concept of "race" is actually a social construction without biological or genetic basis. Furthermore, both IQ scores as well as heritability estimates for intelligence are highly variable *within* racial groups. Therefore, the lack of precision in defining intelligence and the great variability in estimates within groups limit any conclusions that can be drawn regarding the relations between IQ and race and genetics.

different responses, the test data may not be very useful. In some instances, clients may remember on the second occasion their responses from the first time. Or they may develop a kind of "test-wiseness" from the first test that influences their scores the second time around. In still other cases, clients may rehearse between testing occasions or show practice effects. For all these reasons, another gauge of reliability is sometimes used—*equivalent-forms reliability*. Here, equivalent or parallel forms of a test are developed to avoid the preceding problems.

Sometimes it is too expensive (in time or money) to develop an equivalent form, or it is difficult or impossible to be sure the forms are really equivalent. Under such circumstances, or when retesting is not practical, assessing *split-half reliability* is a possibility. This means that a test is divided into halves (usually odd-numbered items versus even-numbered items), and participants' scores on the two halves are compared. Split-half reliability also serves as one possible index of a test's *internal consistency reliability*. Do the items on the test appear to be measuring the same

**TABLE 7-1 Common Types of Reliability That Are Assessed to Evaluate Psychological Tests**

Type of Reliability	Definition	Statistical Index
Test-retest reliability	Index of the consistency of test scores across some period of time	Pearson's $r$ Intraclass correlation
Equivalent forms reliability	Index of the consistency of test scores across time; not vulnerable to a "practice effect" (not repeating the same test)	Pearson's $r$
Split-half reliability	Index of the internal consistency of the test (do the items seem to be measuring the same variable or construct?)	Pearson's $r$
Internal consistency reliability	Preferred index of internal consistency, in which the average of all possible split-half correlations is computed	Cronbach's alpha Kuder-Richardson-20
Interrater or interjudge reliability	Index of the degree of agreement between two or more raters or judges as to the level of a trait that is present or the presence/absence of a feature or diagnosis	Pearson's $r$ Intraclass correlation Kappa

**TABLE 7-2 Common Types of Validity That Are Assessed to Evaluate Psychological Tests**

Type of Validity	Definition
Content validity	The degree to which the test items adequately measure the various aspects of the variable or construct.
Predictive validity	The degree to which test scores can predict (correlate with) behavior or test scores that are observed or obtained at some point in the future.
Concurrent validity	The extent to which test scores are correlated with a related, but independent, set of test scores or behaviors.
Construct validity	The extent to which test scores are correlated with other measures or behaviors in a logical and theoretically consistent way. This will involve a demonstration of both convergent and discriminant validity.

NOTE: Predictive and concurrent validity are both subtypes of criterion-related validity.

thing? That is, are the items highly correlated with each other? The preferred method of assessing internal consistency reliability involves computing the average of all possible split-half correlations for a given test (Cronbach's  $\alpha$ ).

Another aspect of reliability, *interrater* or *interjudge reliability*, was discussed in the previous chapter in the context of interview assessment. The goal here is to demonstrate that independent observers can agree about their ratings or judgments of some particular aspect of the person's behavior.

Regardless of the kind of reliability in question, the goal is to demonstrate consistency in the data. A test must be able to provide evidence that the scores it yields are consistent over time and over examiners or are otherwise reliable (as in

split-half or equivalent-forms reliability). Without reliability, consistency, or stability of measurement, a test cannot be valid. However, even though a test shows reliability, this does not automatically imply validity. For example, a test involving the ability to discriminate among colors may produce scores that are highly reliable over time, yet not be a valid measure of intelligence.

**Validity.** In general, *validity* refers to the extent to which an assessment technique measures what it is supposed to measure. Like reliability, there are several forms of validity. *Content validity* indicates the degree to which a group of test items actually covers the various aspects of the variable under study. For example, a test that purported to measure

overall adjustment but that contained only items dealing with adjustment at work would not have content validity because it failed to include items dealing with adjustment at home, with friends, and in other contexts. *Predictive validity* is demonstrated when test scores accurately predict some behavior or event in the future. A test designed to predict school success is valid if scores today reflect the school achievement behavior of children 2 years hence. *Concurrent validity* involves relating today's test scores to a concurrent criterion (e.g., teachers' judgments of school success). Finally, *construct validity* is shown when test scores relate to other measures or behaviors in a logical, theoretically expected fashion. For example, suppose we have a test for alienation. Given the nature of alienation, a valid test of it might be expected to correlate with lack of vigor or even depression. If our test does that, our confidence in its construct validity is increased.

### Definitions of Intelligence

So what should intelligence tests measure? In one sense, intelligence tests are achievement tests because they measure what one has learned (Sternberg et al., 2005). There is no universally accepted definition of intelligence (Wasserman & Tulsy, 2005). However, over the years, most have fallen into one of three classes:

1. Definitions that emphasize adjustment or adaptation to the environment—adaptability to new situations, the capacity to deal with a range of situations.
2. Definitions that focus on the ability to learn—on educability in the broad sense of the term.
3. Definitions that emphasize abstract thinking—the ability to use a wide range of symbols and concepts, the ability to use both verbal and numerical symbols.

To illustrate a little of the long-standing diversity of definitions, consider the following examples:

- [Intelligence is] the aggregate or global capacity of the individual to act purposefully, to think

rationally, and to deal effectively with his environment. (Wechsler, 1939, p. 3)

- As a concept, intelligence refers to the whole class of cognitive behaviors which reflect an individual's capacity to solve problems with insight, to adapt himself to new situations, to think abstractly, and to profit from his experience. (Robinson & Robinson, 1965, p. 15)
- Intelligence is a very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely book learning, a narrow academic skill, or test-taking smarts. Rather, it reflects a broader and deeper capability for comprehending our surroundings—"catching on," "making sense" of things, or "figuring out" what to do. (Arvey et al., 1994)
- Intelligence is defined in terms of the ability to achieve success in life in terms of one's personal standards, within one's socio-cultural context. (Sternberg, 2003, p. 141)

The foregoing classes of and specific definitions of intelligence are not mutually exclusive. Furthermore, several of these definitions contain distinct overtones of both social values and motivational elements. Beyond this, however, many definitions of intelligence are so broad or general as to be nearly useless. In many ways, there is an overall sameness to tests of intelligence that belies their origins in diverse definitions. Thus, one begins to wonder whether definitions really make all that much difference or whether constructing IQ tests is just an atheoretical, pragmatic enterprise in which we generate items that we hope will correlate with some external criterion (e.g., school grades).

### Theories of Intelligence

There have been many theoretical approaches to the understanding of intelligence. These include psychometric theories, developmental theories, neuropsychological theories, and information-processing theories (Deary, Penke, & Johnson, 2010; Flanagan & Harrison, 2005; Hunt, 2011;

Kamphaus, 1993; Neisser et al., 1996; Sternberg et al., 2005). Over the years, there has been no shortage of either theories or controversies. We present only a brief overview of several leading theories here.

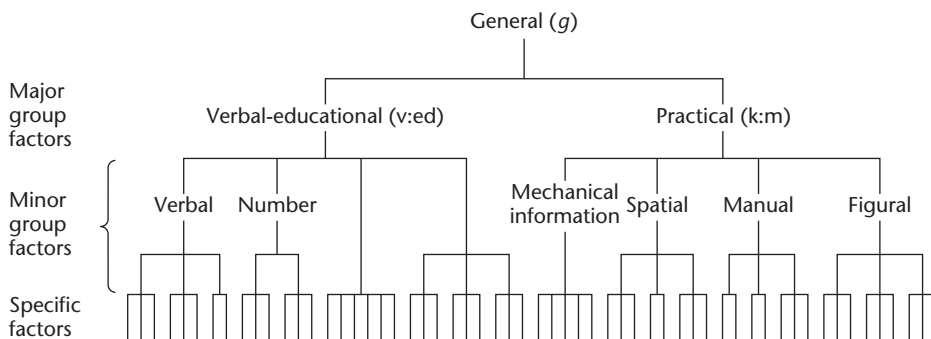
**Factor Analytic Approaches.** Spearman (1927), the father of factor analysis, posited the existence of a  $g$  factor (general intelligence) and  $s$  factors (specific intelligence). The elements that tests have in common are represented by  $g$ , whereas the elements unique to a given test are  $s$  factors. Basically, however, Spearman's message, buttressed by factor analytic evidence, was that intelligence is a broad, generalized entity.

A number of individuals took issue with Spearman's contentions, including E. L. Thorndike and L. L. Thurstone. For example, Thurstone (1938) presented evidence (based on a factor analysis of over 50 separate tests that had been administered to 240 participants) for a series of "group" factors rather than the almighty  $g$  factor. Ultimately, Thurstone described seven group factors, which he labeled Numerical Facility, Word Fluency, Verbal Comprehension, Perceptual Speed, Spatial Visualization, Reasoning, and Associative Memory (Thurstone's *Primary Mental Abilities*). Unfortunately, Spearman and Thurstone were using different methods of factor extraction (principal components vs. principal factors) and rotation, which often result in different solutions even when applied to the

same data set (Gould, 1981). It is also possible that the discrepant results were due to Spearman analyzing data from a wider range of cognitive ability levels (i.e., school children) while Thurstone relied more on data gathered from high cognitive ability students (i.e., those from a select academic institution) (Hunt, 2011). Further, both men appeared to be guilty of reifying the factor(s) "discovered" by their respective analyses. The end result was an at times acrimonious debate between Spearman and Thurstone and their respective followers.

**Cattell's Theory.** The work of R. B. Cattell (1987) emphasized the centrality of  $g$ . At the same time, Cattell offered a tentative list of 17 primary ability concepts. He described two important second-order factors that seem to represent a partitioning of Spearman's  $g$  into two components: *fluid ability* (the person's genetically based intellectual capacity) and *crystallized ability* (the capacities, tapped by the usual standardized intelligence test, that can be attributed to culture-based learning). Essentially, Cattell's approach might be described as a hierarchical model of intelligence. An example of this sort of model is shown schematically in Figure 7-2.

**Guilford's Classification.** The views of Guilford (1967) were quite different from those of Cattell, Spearman, Thurstone, and most other psychometricians. Guilford proposed a *Structure of the Intellect (SOI) model* and then used a variety of statistical and



**FIGURE 7-2** Model of a hierarchical organization of abilities.

SOURCE: Adapted from *The Structure of Human Abilities*, rev. ed., by P. E. Vernon, p. 22. Copyright © 1960 by Methuen & Co., Ltd. Reprinted by permission of Thomson Publishing Services.

factor analytic techniques to test it. Whereas other psychometric approaches generally attempted to infer a model from the data, Guilford used the model as a guide in generating data.

Guilford reasoned that the components of intelligence could be organized into three dimensions: operations, contents, and products. The operations are cognition, memory, divergent production (constructing logical alternatives), convergent production (constructing logic-tight arguments), and evaluation. The content dimension involves the areas of information in which the operations are performed: figural, symbolic, semantic, and behavioral. Finally, when a particular mental operation is applied to a specific type of content, there are six possible products: units, classes, systems, relations, transformations, and implications. If we contemplate all possible combinations, we arrive at 120 separate intellectual abilities. Perhaps the most widely held reservation about Guilford's approach is that it is a taxonomy or classification rather than a theory.

**More Recent Developments.** Traditionally, intelligence tests have been constructed to assess what we know or can do. Recent approaches, however, have begun to take on a highly cognitive or information-processing look. For example, some researchers try to describe a person's moment-by-moment attempts to solve a problem—from the moment a stimulus registers to the person's verbal or motor response. This is a more dynamic view of intelligence than the older theories of mental components. Some of these researchers have focused on speed of information processing and others on strategies of processing. A number of levels of processing have been studied, including speed of processing, speed in making choices in response to stimuli, and speed with which individuals can extract various aspects of language from their long-term memory. But many problems and questions remain. Is there a central processing mechanism for information? How do the processing elements change as the person develops? Are there general problem-solving skills or merely skills specific to certain ability areas? Perhaps time will tell.

Gardner (1983, 1999) has described a theory of multiple intelligences. Human intellectual competence involves a set of problem-solving skills that enable the person to resolve problems or difficulties. Sometimes this results in the potential for acquiring new information. To date, Gardner has described a family of eight intelligences: linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, naturalistic, interpersonal, and intrapersonal (Chen & Gardner, 2005). For example, the interpersonal refers to the ability to notice, appreciate, and make distinctions among other individuals in terms of feelings, beliefs, and intentions. A major criticism of Gardner's theory is that some of his proposed "intelligences" may be better conceptualized as "talents" than as forms of intelligence (Neisser et al., 1996). Nevertheless, Gardner's views have attracted a great deal of attention from psychologists and educators alike and emphasize areas of potential and ability that are not tapped by traditional psychological tests.

To cite another example of a theory of multiple forms of intelligence, Sternberg (1985, 1991, 2005) has proposed a *triarchic theory of intelligence*. He maintains that people function on the basis of three aspects of intelligence: componential, experiential, and contextual. This approach deemphasizes speed and accuracy of performance. Instead, the emphasis is on planning responses and monitoring them. The componential aspect refers to analytical thinking; high scores would characterize the person who is a good test-taker. The experiential aspect relates to creative thinking and characterizes the person who can take separate elements of experience and combine them insightfully. Finally, the contextual aspect is seen in the person who is "street smart"—one who is practical, knows how to play the game, and can successfully manipulate the environment. According to Sternberg, a person's performance is governed by these three aspects of intelligence. However, whether all the foregoing can account for individual differences or is just a theory of cognition is debatable.

Although Spearman, Thurstone, and others may seem to have given way to Cattell, Guilford, Gardner, or Sternberg, clinicians' day-to-day use of tests suggests that they have not really outgrown the

*g* factor of Spearman or the group factors of Thurstone. The whole notion of a single IQ score that can represent the individual's intelligence strongly implies that we are trying to discover how much *g* the person has. At the same time, however, most current intelligence tests are composed of subtests so that the total IQ represents some average or composite of subtest scores. This implies that, to some extent at least, we have also accepted Thurstone's group factors. We seem to want to identify and quantify how much intelligence the person has, yet we cannot escape the belief that intelligence is somehow patterned—that two people may have the same overall IQ score and still differ in specific abilities. Thus, it would appear that practicing clinicians think more in line with Spearman or Thurstone and are less affected by the recent information-processing and multiple intelligence perspectives.

## THE IQ: ITS MEANING AND ITS CORRELATES

### The Intelligence Quotient (IQ)

**Ratio IQ.** Binet regarded the *mental age* (MA) as an index of mental performance. Each item successfully passed on a Binet test signified a certain number of months' credit. At the conclusion of the test, the items passed were added up and the MA emerged. Thus, there was nothing magical about an MA; all it meant was that *X* number of items had been passed. Subsequently, Stern (1938) developed the concept of *intelligence quotient* (IQ) to circumvent several problems that had arisen in using the difference between the *chronological age* (CA) and the MA to express deviance. At first glance, two children, one with an MA of 4 years and a CA of 5 years and another with an MA of 14 years and a CA of 15 years, would seem to be equally deficient. However, this is not the case because intellectual growth is much more rapid at younger age levels. Therefore, even though there is only a 1-year discrepancy between the MA and the CA of both children, the younger child is actually more deficient, intellectually, than the older one. The

IQ notion enables us to perform the following computation:

$$IQ = MA/CA \times 100$$

As a result, we find that our 15-year-old has an IQ of 93, whereas the 5-year-old has an IQ of 80. These differing scores better reflect the reality of more rapid intellectual growth at younger ages.

It should be noted that in measuring intelligence, we cannot be sure that we are dealing with equal-interval measurement. We cannot be sure that an IQ of 100 is really twice as much as an IQ of 50 or that our scale has an absolute zero point. We cannot add and subtract IQs. All we can do is state that a person with an IQ of 100 is brighter than a person with an IQ of 50. All of this should serve to remind us that IQs and MAs are merely scores.

**Deviation IQ.** Although initially appealing, the ratio IQ is significantly limited in its application to older age groups. The reason is that a consistent (even if very high) mental age (MA) score accompanied by an increasing chronological age (CA) score will result in a lower IQ. Thus, it may appear that IQ has decreased over time when in fact one's intellectual ability has been maintained.

To deal with this problem, Wechsler introduced the concept of deviation IQ. The assumption is made that intelligence is normally distributed throughout the population. A *deviation IQ* then involves a comparison of an individual's performance on an IQ test with that of his or her age peers. Thus, the same IQ score has a similar meaning, even if two individuals are markedly different in age (e.g., a 22-year-old vs. an 80-year-old). In both cases, an IQ of 100 indicates an average level of intellectual ability for that age group.

### Correlates of the IQ

Whether intelligence tests are valid depends on how we define intelligence. If we are looking for some global entity that transcends school success or related achievements, the answer is probably no. But if we define intelligence mainly as a predictor of success in school, then the answer is likely to be yes.

Whether we define intelligence in terms of *g*, separate abilities, or hierarchical relationships among factors, society ultimately decides which abilities will be valued, rewarded, and nurtured. Perhaps this is why all intelligence tests seem so much alike. They are designed to predict what society values. Our society tends to reward verbal ability, reasoning, reading, information acquisition, analytic ability, and so on.

**School Success.** In general, IQs have been shown to relate substantially both to success in school and to achievement tests that measure what has been learned (Deary et al., 2010; Hunt, 2011; Kamphaus, 1993; Ones, Viswesvaran, & Dilchert, 2005). The correlation between IQ scores and grades is about .50 (Neisser et al., 1996). It seems apparent that success in school is related to a host of variables, including motivation, teacher expectations, cultural background, attitudes of parents, and many others. We are then confronted with the very difficult clinical task of sorting out those variables. When success or failure in school occurs, is it because of intelligence, motivation, cultural background, or what? Any behavior is complexly determined by many variables other than just general or specific intelligence.

**Occupational Status and Success.** Because amount of education would seem to be, in general, a strong determinant of the kind of job one can obtain, it will come as no surprise to learn that IQ and occupational status are related. This relationship seems to be true whether occupational status is defined in terms of income, rated prestige, or social prestige, or regardless of gender or ethnicity (Ones et al., 2005). Interestingly, however, intelligence scores also appear to be good predictors of job performance (Hunt, 2011; Neisser et al., 1996; Ones et al., 2005); IQ scores outperform predictors such as biographical data, reference checks, education, and college grades. However, once entry to a profession has been gained, the degree of intelligence may not separate the more eminent from the less eminent. Apparently, some minimum level of ability is necessary to achieve entry to or minimal performance in a given occupation (though this may be debatable). Once an individual gains entry, however, the degree

of subsequent success may be more a function of nonintellectual factors.

**Demographic Group Differences.** Although most studies find few if any significant differences between males and females in overall IQ scores, significant differences between the sexes have been obtained for specific abilities (Hunt, 2011; Neisser et al., 1996). Males tend to score significantly higher on measures of spatial ability and, after puberty, on measures of quantitative ability. Females tend to score significantly higher on measures of verbal ability (Neisser et al., 1996). Among racial/ethnic groups, Hispanic Americans and African Americans in North America tend to obtain significantly lower IQ scores than do European Americans in North America (Hunt, 2011; Neisser et al., 1996; Ones et al., 2005). These findings, although consistent, have been the source of much controversy. Neisser et al. (1996) point out that although we do not know what causes these ethnic/racial differences, the size of the differences are within a range that could be accounted for by environmental factors, such as differential opportunities and resources available to youth from different ethnic backgrounds in North America. More research is needed in this area to provide insight into the nature of these ethnic/racial differences. Despite the differences, however, IQ scores remain good predictors of school, college, and work achievement among Hispanic Americans and African Americans (Ones et al., 2005).

### **Heredity and Stability of IQ Scores**

**Heritability of Intelligence.** In contrast to the situation half a century ago, almost all psychologists now acknowledge that intelligence is influenced, at least in part, by genetic factors (Deary et al., 2010; Hunt, 2011; Neisser et al., 1996; Petrill, 2005). The reason for this reversal of opinion is the large body of empirical evidence provided by *behavioral genetics* studies over the past several decades (McGue, Bouchard, Iacono, & Lykken, 1993; Plomin, DeFries, McClearn, & McGuffin, 2008). Box 7-2 presents a brief overview of the methods of behavioral genetics.

**BOX 7-2 Behavioral Genetics**

Behavioral genetics is a research specialty in which both genetic and environmental influences on the development of behavior are evaluated. Proteins are produced and regulated by genetic codes, and proteins interact with physiological intermediaries (hormones, neurotransmitters, structural properties of the nervous system) to produce behavior (Plomin, DeFries, & McClearn, 2008). The genetic makeup of an individual, referred to as the *genotype*, is fixed at birth. A person's genotype is passed down from the biological parents. The *phenotype* refers to observable characteristics of an individual, and a person's phenotype can change. Intelligence and even mental disorders are phenotypic characteristics that may change over time. The phenotype is a product of the genotype *and* the environment.

One of the most powerful (in the explanatory sense) research designs used in behavioral genetics is the twin method. This method involves comparing *monozygotic (MZ) twins*, who are genetically identical, with *dizygotic (DZ) twins*, who share only about 50% of their genetic material, on the behavior or characteristic of interest. The similarity among twin pairs is typically presented in the form of a *concordance rate* or *similarity index*. In its simplest form, a concordance rate is the percentage of instances across all twin pairs in which both twins exhibit similar behaviors or characteristics. A concordance rate or similarity index for the MZ twin sample that is significantly greater than that for the DZ twin sample suggests that genetic influences play an important role in the development of that set of behaviors or features.

Because MZ twins are identical and, if reared together, may be treated more similarly than DZ twins, one could argue that the higher concordance rate for MZ twins than DZ twins may have as much to do with environmental influences as genetic influences. An even more informative method used in behavioral genetic studies involves sampling *MZ twins reared together (MZT)*, *MZ twins reared apart (MZA)*, *DZ twins reared together (DZT)*, and *DZ twins reared apart (DZA)*. In this way, it is easier to separate genetic and environmental influences. For example, the following findings would suggest genetic influences in the manifestation of the behaviors or features under study: (a) the concordance rates for MZT and MZA twins are significantly greater than those for DZT and DZA twins, respectively; (b) the concordance rate for MZA twins approaches that of MZT twins; and (c) the concordance rate of DZA twins approaches that of DZT twins. These findings would suggest that genetics plays an important role because similarity/concordance is a

function of the amount of genetic material shared, and being raised in different environments does not have an appreciable effect on similarity.

We have presented only a brief and rather simplistic overview of behavioral genetics. Interest in this field has waxed and waned over the years, and at times the field has been the target of attacks from a variety of groups (Plomin et al., 2008). However, it is important to keep several points in mind. First, concordance rates or similarity indices less than 100% (or 1.00) *necessarily* implicate environmental influences. Therefore, behavioral genetics methods are tools for identifying and quantifying environmental as well as genetic factors in behavior. Second, finding that a behavior or characteristic is genetically influenced does not mean that it is immutable or unchangeable. Genetics *and* the environment interact in complex ways to produce behavior.



Radius Images/Jupiter Images

The twin method compares similarity of characteristics or features among monozygotic twins to that of dizygotic twins.

**TABLE 7-3 Average Familial IQ Correlations (R)**

Relationship	Weighted Average Correlation	Number of Pairs
<b>Reared-together biological relatives</b>		
MZ twins	0.86	4,672
DZ twins	0.60	5,546
Siblings	0.47	26,473
Parent/offspring	0.42	8,433
Half-siblings	0.31	200
Cousins	0.15	1,176
<b>Reared-apart biological relatives</b>		
MZ twins	0.72	65
Siblings	0.24	203
Parent/offspring	0.22	814
<b>Reared-together nonbiological relatives</b>		
Siblings	0.32	714
Adoptive parent/offspring	0.19	1,397

NOTE: MZ = monozygotic; DZ = dizygotic. Weighted average correlation was determined using sample-size-weighted average of  $z$  transformations.

SOURCE: Adapted with permission from "Familiar Studies of Intelligence: A Review" by T. J. Bouchard, Jr., and M. McGue, 1981, *Science* Vol. 212, p. 1056. Copyright © 1981 by the American Association for the Advancement of Science.

A landmark review by Bouchard and McGue (1981) summarizes many of these behavioral genetics studies of intelligence. Table 7-3 presents some of the data. As can be seen, similarity in intelligence appears to be a function of the amount of genetic material shared (monozygotic twins are more similar in intelligence than dizygotic twins or siblings). It is notable that this pattern also holds true for biological relatives reared apart. McGue et al. (1993) conclude:

When taken in aggregate, twin, family, and adoption studies of IQ provide a demonstration of the existence of genetic influences on IQ as good as can be achieved in the behavioral sciences with nonexperimental methods. Without positing the existence of genetic influences, it simply is not possible to give a credible account for the consistently greater IQ similarity among monozygotic (MZ) twins than among like-sex dizygotic (DZ) twins, the significant IQ correlations among biological relatives even when they are reared apart, and the strong

association between the magnitude of familial IQ correlation and the degree of genetic relatedness. (p. 60)

In general, estimates of the percentage of IQ variance associated with genetic factors range from 30% to 80% (Deary et al., 2010). In general, it appears that IQ heritability estimates vary as a function of the age of the sample; these estimates are maximal in older age groups (Deary et al., 2010; Hunt, 2011; McGue et al., 1993).

Given the evidence that intelligence scores are influenced by genetic factors, does this mean that IQ is not malleable? No. This is the source of much confusion and controversy. Recall that heritability estimates are not 100%. This suggests that the environment plays some role in the development of intelligence. As McGue et al. (1993) state, behavioral genetics studies of IQ "strongly implicate the existence of environmental influences: The correlation among reared-together MZ twins is less than unity; biological relatives who were reared together are more similar than biological relatives who were

reared apart; and there is a significant correlation between the IQs of nonbiologically related but reared-together relatives” (pp. 60–61).

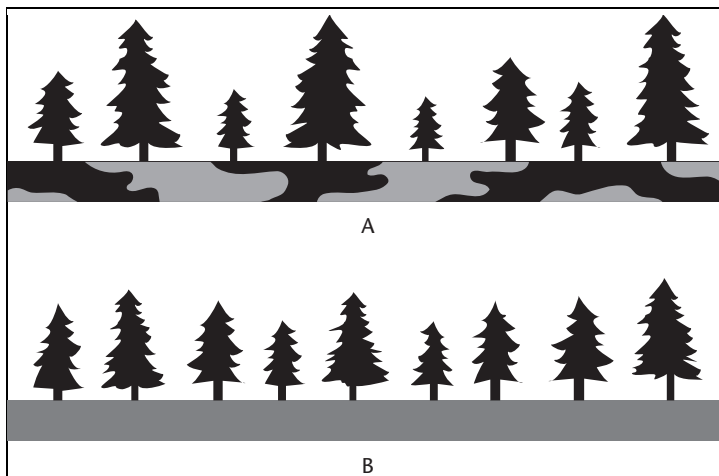
Even if heritability estimates were 100%, this does not rule out the possibility that IQ scores may change. Some “genetically determined” traits, such as height, can be influenced by environmental circumstances, and genetic disorders can be controlled or even cured by environmental intervention. In fact, heritability of intelligence does not appear to be stable across the life span; it ranges from about 20% in infancy, to 60% in young adulthood, to 80% in old age (Deary et al., 2010; Petrill, 2005).

This indicates that the environment plays a greater role in intelligence in children than in adults, raising the possibility that interventions at younger ages might be able to increase IQ scores. Although some short-term gains or changes have been noted, in general the research examining the efficacy of psychosocial interventions for improving IQ scores has been mixed (Kamphaus, 1993; Neisser et al., 1996). Despite these sometimes disappointing results, the general notion that favorable environments should be provided so as to allow individuals to realize their innate potential seems both plausible and a worthy goal (see Box 7-3).

### BOX 7-3 The Concept of Heritability

The concept of evergreens in A varies in height. The degree to which they vary from each other is called the variance. What produces this variance? Some is probably due to genetics. To find out how much, we equate environmental conditions such as soil, water, and sunlight (indicated by different shadings of the ground). We now take a random group of seedlings chosen from A. We plant them in this equated environment (B) and wait patiently until they mature. We note that

the size variation in B is less than it was in A. This reflects the fact that environmental conditions in B are equal for all the trees so that any environmental sources of variance have been eliminated. The remaining variance in B is entirely produced by genetic factors. Therefore, the heritability of height for A is the variance in B (the variation attributable to genetic factors) divided by the variance in A (the total variation in the population).



SOURCE: Adapted from *Psychology*, by Henry Gleitman, by permission of W. W. Norton & Company, Inc. Copyright © 1981 by W. W. Norton & Company, Inc.

In summary, genetic versus environmental influences are not either/or choices. Clearly, both play some role in the development and expression of intelligence. Behavioral geneticists do not claim that environment plays no role in IQ; rather, their data clearly implicate environmental factors and should serve as a stimulus for more research on the nature and effect of these factors on the development of intelligence (Deary et al., 2010; Petrill, 2005).

### Stability of IQ Scores and the “Flynn” effect.

As indicated earlier, one method of assessing the reliability of a measure is by computing a test–retest correlation. This gives us a sense of how stable scores are over time. As noted by Schuerger and Witt (1989), IQ scores tend to be less stable for young children and more stable for adults. This also fits well with the notion that IQ scores are more influenced by the environment (e.g., school) at younger rather than older ages. Further, and not too surprisingly, a longer test–retest interval (e.g., 10 years vs. 1 year) results in lower reliability/stability estimates. Figure 7–3 depicts stability of IQ scores as a function of age.

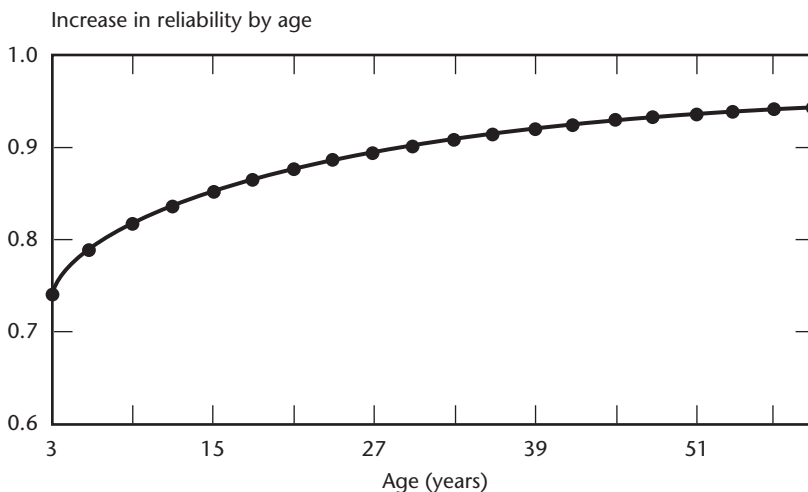
The implication of these findings is clear. Clinicians cannot assume that a single IQ test score will accurately characterize an individual’s level of intelligence throughout his or her life span. IQ scores do

tend to change, and this is especially true for young children. For this reason, clinicians often describe the individual’s “present level of intellectual functioning” in their test reports. A variety of influences (e.g., illness or motivational and emotional changes) may affect an individual’s score.

Finally, it is worth briefly introducing the *Flynn effect* (Flynn, 1984; Flynn & Weiss, 2007). This refers to the empirical finding that from 1972 on, Americans’ IQ scores have on average increased 3 points each decade. There are a number of possible explanations for this effect, ranging from people are getting smarter to contemporary humans are exposed more to IQ tests or at least similar types of cognitive tasks in everyday life (Hunt, 2010). Whether the Flynn effect reflects better educational outcome or not, clinicians must be sure to use the most recent normative data to ensure appropriate comparisons to one’s peers and cohort.

## THE CLINICAL ASSESSMENT OF INTELLIGENCE

In this section, we briefly describe several of the most frequently used intelligence tests for children and adults.



**FIGURE 7-3** Graph depicting the relationship between age and stability.

## The Stanford-Binet Scales

For many years, the Binet scales were the preferred tests. They underwent many revisions after Binet's work in 1905. Terman's revision in 1916 was followed by the 1937 Revised Stanford-Binet (Terman & Merrill, 1937). The 1960 version of the Stanford-Binet (Terman & Merrill, 1960) gave way to a 1972 test kit with revised norms, followed by the fourth edition of the scales published in 1986 (Thorndike, Hagen, & Sattler, 1986). The most recent revision of the scale appeared in 2003, the *Stanford-Binet Fifth Edition*, or SB-5 (Roid, 2003).

**Description.** Like the 1986 version, the SB-5 is based on a hierarchical model of intelligence. Specifically, the Stanford-Binet Fifth Edition (SB-5) assesses five general cognitive factors, and each factor is tapped by both verbal and non-verbal subtest activities (Roid & Pomplun, 2005):

1. *Fluid reasoning* involves the ability to solve new problems and is measured by the following subtests;
2. *Quantitative reasoning* involves the ability to solve numerical and word problems as well as to understand fundamental number concepts;
3. *Visual-spatial processing* involves the ability to see relationships among objects, to recognize spatial orientation, and to conduct pattern analysis;
4. *Working memory* involves the ability to process and hold both verbal and non-verbal information and then to interpret it;
5. *Knowledge* involves the ability to absorb general information that is accumulated over time through experience at home, school, work, or the environment in general.

Each subtest is composed of items at varying levels of difficulty, from age 2 to adulthood. This revision uses an adaptive testing procedure called multistage testing. The examiner first gives the two routing subtests, the Object-Series Matrices subtest and the Vocabulary subtest. These are called routing subtests because the examinee's performance on these two subtests, a non-verbal and a verbal subtest, respectively, help to determine the

entry point (i.e., which item to start with) for each remaining subtest. This initial estimate of ability provides a more appropriate entry or starting point on subsequent subtests, and it is likely to result in more efficient testing than relying exclusively on chronological age as a guide for a starting point. Thus, not all examinees of the same age are given the same items. Other unique features of the SB-5 include the infrequent use of time limits on items, no time bonus points are possible, and the use of teaching items (practice items) as new tasks are introduced (Roid & Pomplun, 2005).

**Standardization.** Final standardization of the SB-5 included 4,800 participants, ages 2–96 years. Using 2001 U.S. Census figures, participants were sampled according to geographic region, community size, ethnic group, age group, and gender. Socioeconomic status was considered as well. In addition, the SB-5 was administered to approximately 1,400 individuals from special populations (e.g., those with mental retardation, learning disabilities, attention deficit disorder, or speech/hearing impairments) to ensure the clinical utility of the scores.

**Reliability and Validity.** Psychometric analyses support the reliability and the validity of SB-5 scores (Roid & Pomplun, 2005). Internal consistency reliabilities ranged from .95 to .98 for IQ scores, and from .90 to .92 for the index scores of the five factors. Test–retest reliabilities across all age groups were generally high, in the .80s for factor scores and in the .90s for IQ scores.

As for the validity of SB-5 composite scores, a variety of supportive evidence has been obtained (Roid & Pomplun, 2005). For example, the correlation between SB-5 IQ scores and scores on the 1986 Stanford-Binet Fourth Edition (SB-4) was .90. Correlations between the SB-5 and several Wechsler scales (described next) were .84 for children and .82 for adults, and correlations between SB-5 scores and scores on achievement tests were substantial as well. Therefore, using the criterion of relationship to other accepted tests of intelligence and achievement, the validity of the new Stanford-Binet is supported. Finally, participants with learning disabilities, mental

retardation, or attention deficit disorder could be reliably classified and distinguished from their peers based on SB-5 scores. All in all, the validity of the SB-5 looks promising.

### The Wechsler Scales

Earlier versions of the Stanford-Binet had a number of disadvantages that led David Wechsler in 1939 to develop the Wechsler-Bellevue Intelligence Scale. This was a test designed for adults—one that would offer items whose content was more appropriate for and more motivating to adults than the school-oriented Binet. In contrast to the Stanford-Binet, whose items were arranged in age levels, the Wechsler-Bellevue Intelligence Scale grouped its items into subtests. For example, all arithmetic items were put into one subtest and arranged in order of increasing difficulty. In addition, there was a Performance Scale and a Verbal Scale (consisting of five and six subtests, respectively). A separate IQ for each scale could be calculated, along with a Full Scale IQ. The systematic inclusion of performance items helped remedy the overemphasis on verbal skills that limited the utility of the earlier Stanford-Binet with special populations.

Wechsler used a deviation IQ concept. This approach, as we have seen, assumes that intelligence is normally distributed and compares individuals with their age peers. In effect, it compares the performance of a 15-year-old with that of other 15-year-olds. This method statistically establishes an IQ of 100 as the mean for each age group. As a result, an IQ of 100 means the same thing for any person, regardless of the person's age.

### The WAIS-IV

**Description.** A new version of the Wechsler-Bellevue, known as the Wechsler Adult Intelligence Scale (WAIS), first appeared in 1955. A revised edition (WAIS-R) was published in 1981. The *Wechsler Adult Intelligence Scale Third Edition (WAIS-III)*, was introduced in 1997, and the most recent version, the WAIS-IV, was published in 2008 (Lichtenberger & Kaufman, 2009; Wechsler, 2008).



Stock Montage

**FIGURE 7-4** David Wechsler published the Wechsler-Bellevue Intelligence Scale in 1939. Subsequent revisions of this test have become the most widely used techniques to assess intellectual functioning.

One major change, first introduced in the WAIS-III and continued in the WAIS-IV, is the inclusion of *reversal items* in several subtests. On these subtests, all examinees begin with the same two basal items. Depending on the level of performance on the basal items, the preceding items are administered in reverse sequence until a perfect score is achieved for two consecutive items. The purpose of this change was to determine the examinee's ability level as efficiently as possible without having to administer items markedly below that ability level. Another innovation is the WAIS-IV's ability to provide *Index scores* in addition to the Full Scale IQ score. By administering 15 subtests (including the new subtests of Visual Puzzles, Figure Weights, and Cancellation; see below), the following four Index scores can be calculated: Verbal Comprehension, Perceptual Reasoning, Working Memory, and Processing Speed. These Index scores reflect the major ability factors that underlie the WAIS-IV subtest scores. Thus, the

Index scores provide a more detailed evaluation of the examinee's strengths and weaknesses across tasks.

Following are brief descriptions of the 15 WAIS-IV subtests, with the corresponding Index scale to which the subtest belongs indicated in parentheses.

1. *Vocabulary (Verbal Comprehension)*. Here, the examinee must define words that increase in difficulty. This subtest correlates highly with Full Scale IQ, and some feel that it comes close to measuring what is usually termed *g*.
2. *Similarities (Verbal Comprehension)*. This subtest consists of a series of items, and for each one, the examinee must explain how two objects are alike. The subtest requires the basic ability to form abstractions and develop concepts.
3. *Arithmetic (Working Memory)*. These items are similar to arithmetic problems that appear in most school textbooks. The items are administered orally, and the examinee is not allowed to use paper and pencil.
4. *Digit Span (Working Memory)*. This subtest is a measure of short-term memory and attention. Three sets of digits are read aloud by the examiner. For the first list, the examinee must repeat the digits in the order that they were read. For the second list, the digits must be repeated backward. Finally, for the third list, the digits must be repeated back to the examiner in ascending order.
5. *Information (Verbal Comprehension)*. These short questions tap knowledge that one would be expected to have acquired as a result of everyday living and cultural interactions.
6. *Comprehension (Verbal Comprehension, supplemental subtest)*. The items of this subtest require the examinee to explain why certain procedures are followed, to interpret proverbs, and to determine what should be done in a given situation. The items measure common sense and practical judgment in solving a problem. This is a supplementary subtest for IQ scores.
7. *Letter-Number Sequencing (Working Memory, supplemental subtest)*. This subtest consists of items that assess working memory and attention. A combination of numbers and letters is read, and the examinee must first recall the numbers in ascending order and then the letters in alphabetical order. Each item consists of three trials of different combinations of numbers and letters. This is a supplementary subtest for IQ scores.
8. *Picture Completion (Perceptual Reasoning, supplemental subtest)*. This subtest consists of colored cards, each showing a picture with a part missing. The examinee must identify the missing part. This requires concentration and the ability to note details and incongruities. This is a supplementary subtest for IQ scores.
9. *Coding (Processing Speed)*. This code-substitution task requires the examinee to fill in the appropriate code in the blanks under a long series of numbers, using a key. The subtest requires the examinee to work in a direct, single-minded fashion.
10. *Block Design (Perceptual Reasoning)*. The examinee must assemble up to nine blocks to match the designs on a set of cards. The task involves visual-motor coordination and analytic synthesizing ability.
11. *Matrix Reasoning (Perceptual Reasoning)*. This subtest consists of items that measure visual information processing and abstract reasoning skills.
12. *Symbol Search (Processing Speed)*. This subtest consists of items that ask the respondent to indicate whether a stimulus symbol appears in the array that is present.
13. *Visual Puzzles (Perceptual Reasoning)*. This new subtest requires the examinee to choose from a list correct pieces of a puzzle that when placed together reconstruct the puzzle picture that is presented.
14. *Figure Weights (Perceptual Reasoning, supplemental subtest)*. This new subtest asks the examinee to look at a two-dimensional representation of a scale with missing weights and then select the weights necessary to keep the scale balanced. This is a supplementary subtest for IQ scores.
15. *Cancellation (Processing Speed, supplemental subtest)*. This new subtest requires the examinee to

go through a list of colored shapes and mark the targeted shapes. This is a supplementary subtest for IQ scores.

### Obtaining the Full Scale IQ Score and Index Scores.

Raw scores from each subtest are converted to scaled scores—standardized scores for a given age group. The Full Scale IQ and Index scores are then computed by adding together scaled scores from select subtests and converting these sums to IQ equivalents. The supplemental subtest scores are only used in these calculations if they were used to substitute for one or more of the core subtests. Table 7-4 lists the WAIS-IV subtests that are used to calculate the Full Scale IQ and each of the Index scores: Verbal Comprehension, Perceptual Reasoning, Working Memory, and Processing Speed.

**Standardization.** The WAIS-IV was standardized on a sample of 2,200 adults, including equal numbers of men and women in each of 13 age groups ranging from age 16 to 90 years. The sample was stratified according to age, sex, race/ethnicity, education level, and geographic regions using 2005 U.S. Census Bureau data as a guide.



**FIGURE 7-5** Simulated item from the WAIS-IV Picture Completion subtest.

SOURCE: Simulated item similar to those found in Wechsler Adult Intelligence Scale(R), Fourth Edition (WAIS-IV) Copyright (c) 2008 NCS Pearson, Inc. Reproduced with permission. all rights reserved. "Wechsler Adult Intelligence Scale" and "WAIS" are trademarks, in the US and/or other countries, of Pearson Education, Inc. or its affiliate(s).

**Reliability and Validity.** The average Full Scale IQ split-half reliability coefficient across age groups was .98, and the average split-half reliability coefficients across age groups for the Verbal Comprehension, Perceptual Reasoning, Working Memory, and Processing Speed Index scores range from .90 to .96. Test-retest reliabilities over an average of three weeks range from .74 to .90 across age groups for the various subtests.

Data support the validity of WAIS-IV scores (Wechsler, 2008). Relevant subtest scores from other tests of cognitive ability (e.g., the WAIS-III and WISC-IV) are significantly correlated with targeted subscale scores derived from the new WAIS-IV. For example, the WAIS-IV Working Memory Index is highly correlated with scales from other measures tapping attention and concentration, and the WAIS-IV Verbal Comprehension Index correlates significantly with scores from external measures of language fluency and language comprehension. Finally, as further support for the factorial validity of the WAIS-IV, a series of exploratory and confirmatory factor analyses largely supported the predicted four factors of the WAIS-IV (Verbal Comprehension, Perceptual Reasoning, Working Memory, and Processing Speed) as well as the predicted associations between the WAIS-IV subtests and these factors.

This case example demonstrates how an overreliance on global IQ scores (Full Scale IQ) can be misleading. Although Mr. Ryan's global scores were in the average range, a more in-depth examination of his individual subtest scores and Index scores suggests cognitive limitations. For this reason, it is important to calculate and interpret discrepancies among subtest scores, Full Scale IQ score, and Index scores to give a rich clinical picture of examinees' cognitive abilities.

### The WISC-IV

The Wechsler Intelligence Scale for Children (WISC) was first developed in 1949, revised in 1974 (WISC-R), and again in 1991 (WISC-III; Wechsler, 1991). The latest version, the *Wechsler Intelligence Scale for Children Fourth Edition (WISC-IV)*, was published in 2003 (Wechsler, 2003). Appropriate for

**TABLE 7-4 WAIS-IV Subtests and Their Respective IQ or Index Scores**

Subtest	IQ Score or Index Score				
	Full Scale IQ	Verbal Comprehension	Perceptual Reasoning	Working Memory	Processing Speed
Vocabulary	√	√			
Coding	√				√
Similarities	√	√			
Block Design	√		√		
Arithmetic	√			√	
Matrix Reasoning	√		√		
Digit Span	√			√	
Information	√	√			
Picture Completion			○		
Comprehension		○			
Figure Weights			○		
Symbol Search	√				√
Visual Puzzles	√		√		
Letter-Number Sequencing				○	
Cancellation					○

NOTE: √ indicates that scaled scores for the respective subtest are used to calculate that IQ score or Index score. ○ indicates that scaled scores for the respective subtest can be used in place of specified Index subtests if they are not administered.

children ages 6 through 16 years, the WISC-IV consists of ten core and five supplementary subtests. Like its predecessors, the WISC-IV is in many ways a downward extension of the Wechsler adult intelligence scales (Zhu & Weiss, 2005).

**Description.** The WISC-IV has a hierarchical structure in which individual subtests define four major indices that comprise the Full Scale IQ. Figure 7-6 presents this model.

1. The *Verbal Comprehension Index (VCI)* includes the Similarities, Vocabulary, and Comprehension subtests; Information and Word Reasoning are the supplementary VCI subtests. The VCI is an index of verbal reasoning and comprehension.
2. The *Perceptual Reasoning Index (PRI)* consists of the Block Design, Picture Concepts, and Matrix Reasoning subtests, whereas the Picture Completion subtest is now a supplemental subtest for the PRI. The PRI is similar to the Performance IQ index used in older Wechsler tests except there is much less emphasis on speeded performance and on motor skill.
3. The *Working Memory Index (WMI)* consists of the Digit Span and Letter-Number Sequencing subtests, and the Arithmetic subtest is now used as a supplemental subtest for the WMI. The WMI is similar to the WISC-III's (Wechsler, 1991) Freedom from Distractibility Index, and the WMI measures a child's ability to hold information in consciousness, perform some

### A Brief Case Report: Intellectual Evaluation

The following brief excerpt is from a report written by a clinical psychologist in response to a referral by a primary care physician, who requested that her patient be evaluated for cognitive limitations, especially in the area of short-term memory and attention. The patient reportedly had been experiencing difficulty at his new job as a forklift driver in a warehouse. Specifically, he was not meeting his quotas and was “forgetting” some of the tasks assigned to him. Here, we present only the WAIS-IV test results and interpretation.

*Patient:* RYAN, Adam (fictitious name)

*Age:* 28; *Education:* High School Diploma

*Marital Status:* Single

*Test Behavior:* Mr. Ryan was cooperative with all aspects of the testing, working diligently on all tasks that were presented. He did mention spontaneously that he was “getting in trouble” a lot because of his forgetfulness. It was also apparent that Mr. Ryan was distressed and bothered by his performance on several subtests requiring that he hold new information and then either repeat it back (Digit Span) or perform operations on the information (Arithmetic).

*Intellectual Functioning:* Based on his WAIS-IV scores, Mr. Ryan is currently functioning in the Average range of intelligence, with a Full Scale IQ of 100. An examination of subtest scores and Index scores, however, revealed a great deal of variability. A complete listing of his obtained scores appears below:

#### *Verbal Comprehension Subtests*

Vocabulary	12
Similarities	13

Information	11
(Comprehension)	(12)

#### *Working Memory Subtests*

Arithmetic	7
Digit Span	6
(Letter-Number Sequencing)	(5)

#### *Perceptual Reasoning Subtests*

Block Design	10
Matrix Reasoning	10
Visual Puzzles	10
(Picture Completion)	(12)
(Figure Weights)	(10)

#### *Processing Speed Subtests*

Symbol Search	9
Coding	9
(Cancellation)	(10)

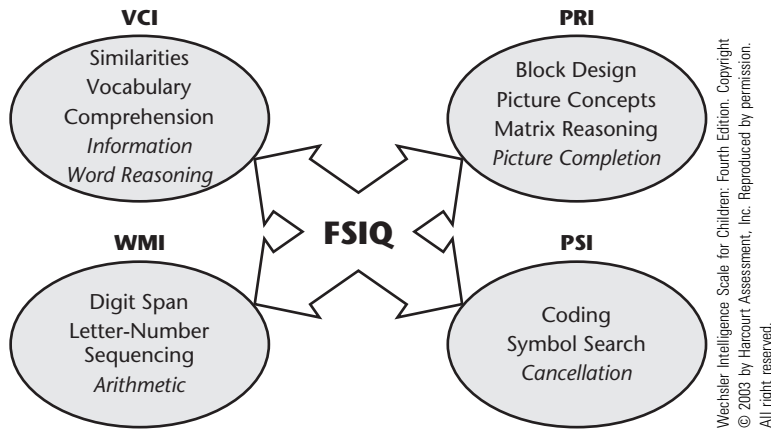
#### *Composite Scores*

Full Scale IQ	100
Verbal Comprehension Index	110
Perceptual Organization Index	103
Working Memory Index	75
Processing Speed Index	93

Although his scores related to verbal comprehension, perceptual reasoning, and processing speed place him in the Average range of functioning, Mr. Ryan’s scores reflective of working memory place him in the Borderline range of functioning. He demonstrated weaknesses on those subtests requiring attention, short-term memory, and the processing of new information.

- operation, and produce a result (e.g., repeat backward digits presented by the examiner).
4. The *Processing Speed Index (PSI)* consists of the Coding and Symbol Search subtests, with the new Cancellation subtest serving as a supplemental PSI subtest. The PSI, which also appeared in the WISC-III, assesses speed of information processing and involves timed tasks.

**Standardization.** Normative data for the WISC-IV were obtained from a standardization sample of 2,200 cases representative of the U.S. population of children. Using year 2000 U.S. Census Bureau data, cases were selected to represent the U.S. population of children proportionally by race/ethnicity, geographic region, and parent education. The sample included 200 children (100 girls and 100 boys) in each of 11 age groups (ages 6 to 16 years).



**FIGURE 7-6** Organization of the WISC-IV.

NOTE: Supplemental subtests are shown in italics.

SOURCE: Text describing organization of the Wechsler Intelligence Scale for Children, Fourth Edition (WISC-IV). Copyright (c) 2003 NCS Pearson, Inc. Reproduced with permission. All rights reserved. "Wechsler Intelligence Scale for Children" and "WISC" are trademarks, in the US and/or other countries, of Pearson Education, Inc. or its affiliate(s).

**Reliability and Validity.** Wechsler (2003) reported that the average (across age groups) split-half reliabilities for the Verbal Comprehension Index, Perceptual Reasoning Index, Working Memory Index, Processing Speed Index, and Full Scale of the WISC-IV were .94, .92, .92, .88, and .97, respectively. The average split-half reliabilities for the individual subtests ranged from .70 to .90. The test-retest reliabilities (mean interval between testing = 32 days) across three different age groups were all fairly high. As for validity, WISC-IV scores are highly correlated with scores from other measures of intelligence (e.g., the WISC-III). Further, results from a series of studies in which the WISC-IV was administered to several special groups of children (e.g., gifted children, children with learning disabilities, children with motor impairment) were generally consistent with expectations, given prior research on these populations and given the content of the WISC-IV subtests and indices (Wechsler, 2003).

Finally, initial factor analyses reveal that four factors (corresponding to the VCI, PRI, WMI, and PSI) account for the relations among the 15 subtest scores. Therefore, these analyses support the theoretical model and organization of the WISC-IV (Wechsler, 2003).

### The WPPSI-III

The Wechsler Preschool and Primary Scale of Intelligence (WPPSI) was developed in 1967, followed by the WPPSI-II in 1989 and the current WPPSI-III in 2002. The scale is quite similar to the WISC-IV but geared specifically towards the assessment of intellectual ability among much younger youth. Two sets of subscales are included. One set is designed for youth ages 2 years, 6 months to 3 years, 11 months; a second set of subscales is designed for youth ages 4 years to 7 years, 3 months.

At present, the WPPSI-III yields only three indices, the Full Scale IQ, Verbal IQ, and Performance IQ. For youth ages 4 years and older, the WPPSI also yields a Processing Speed Index. Versions of many of the same subscales used in the WAIS and the WISC tests also are used in the WPPSI (e.g., Information, Block Design, Object Assembly, Coding, Matrix Reasoning, etc). The WPPSI-III also includes several subscales designed specifically for younger children (e.g., Receptive Vocabulary, Word Reasoning, Picture Concepts).

**Standardization, Reliability, and Validity.** Data used to standardize the WPPSI-III included 1,700 children between the ages of 2 years, 6 months and

7 years, 3 months. Reliabilities for the composite scores exceeded .89. The WPPSI was standardized at the same time as a popular measure of achievement (the Wechsler Individual Achievement Test Third Edition–WIAT-III), allowing for close comparisons between intellectual ability and achievement and strong validity support.

### The Clinical Use of Intelligence Tests

In the preceding sections, we have described several of the more commonly used intelligence tests. It is time to take a closer look at how such tests are used in the clinical setting.

#### The Estimation of General Intellectual Level.

The most obvious use of an intelligence test is as a means for arriving at an estimate of the patient's general intellectual level. Frequently, the goal is the determination of how much general intelligence (g) a given person possesses. Often, the question is stated a bit differently—for example, What is the patient's intellectual potential? Posing the question in this way suggests that perhaps the person is not functioning as well as his or her potential would indicate. The potential can form a baseline against which to measure current achievements, thus providing information about the patient's current level of functioning. This can be especially useful when attempting to determine whether a child's academic difficulties are due to cognitive or mental health difficulties, or whether a child's academic achievement

is substantially lower than their cognitive ability (i.e., in extreme cases, this is referred to as a Learning Disability). Intellectual ability test results, when available, also can be used to help determine how well an individual may be able to recover cognitive abilities following a head trauma, illness, or surgery that compromises intellectual performance.

Many pitfalls and fallacies are associated with the pursuit of these goals, however. The following is an example.

This example is but the tip of the iceberg. It does suggest, however, that obtaining an IQ is not the end of a clinician's task—it is only the beginning. The IQ score must be interpreted. Only through knowledge of the patient's learning history and by observations made during the testing situation can that score be placed in an appropriate interpretive context and adequately evaluated.

**Prediction of Academic Success.** As mentioned previously, there are data that demonstrate a relationship between intelligence test scores and school success (Hunt, 2011; Neisser et al., 1996; Ones et al., 2005). To the extent that intelligence should logically reflect the capacity to do well in school, we are justified in expecting intelligence tests to predict school success. Not everyone would equate intelligence with scholastic aptitude, but the fact remains that a major function of intelligence tests is to predict school performance. One must remember, however, that intelligence and academic success are not conceptually identical.

### The Case of Harold

Harold was being routinely evaluated prior to transfer to a special class for advanced junior high school students. Rather surprisingly, his Full Scale WISC-IV IQ turned out to be 107. This score was in the average range but below the cutoff point for admission to the class. It was also considerably below what his teachers had estimated based on his classroom performance. A closer look at his subtest scores revealed that his performances on Block Design and Coding were significantly below those on the other subtests. A follow-up interview with Harold was quite revealing. Since early childhood, he had

suffered from muscular weakness in both arms and hands. This weakness prevented him from making fine, quick motor responses. However, he had developed a number of clever compensations to prevent others from guessing his limitation. For example, what had appeared to be slow, deliberate, even confused responses on Block Design were really not that at all. He was feigning confusion to mask his difficulty with fine motor functions. Clearly, then, Harold's IQ score had been unduly affected by a motor weakness that had nothing to do with his ability to perform intellectually.

**The Appraisal of Style.** As we have noted, what is important is not only whether the client succeeds or fails on particular test items but also how that success or failure occurs. One of the major values of individual intelligence tests is that they permit us to observe the client or patient at work. Such observations can help us greatly in interpreting an IQ. For example, did this child do as well as possible? Was there failure avoidance? Did the child struggle with most items, or was there easy success? Was the child unmotivated, and could this have detracted from the child's performance? Such questions and the ensuing interpretations breathe life into an otherwise inert IQ score.

The following simulated questions from the WAIS-IV and a hypothetical patient's responses to them are examples of the data that can be obtained beyond the sheer correctness or incorrectness of a response.

QUERY: Who wrote *Paradise Lost*? (Information subtest)

ANSWER: Probably a Catholic. But since the Pope began changing things around, they retitled it.

QUERY: What is the advantage of keeping money in a bank? (Comprehension subtest)

ANSWER: There isn't. There's so damn many crooks. But they'll get theirs someday.

QUERY: In what ways are a lion and a tiger alike? (Similarities subtest)

ANSWER: Well, now, that's a long story. Do they look alike? They really can't breed together, you know.<sup>1</sup>

Some clinicians have ventured considerably beyond making a few limited personality inferences that would inject some added meaning into IQs and have based mental disorder diagnoses on the Stanford-Binet and Wechsler scales. They believed that by examining patterns of scores (known as intertest scatter), they could apply diagnostic labels to patients (e.g., schizophrenia or depression). Over

the years, however, studies purporting to show the validity of these interpretations of intertest scatter could rarely be replicated. Thus, diagnoses cannot be reliably inferred from patterns of test performance (Kamphaus, Winsor, Rowe, & Kim, 2005).

### Some Final Observations and Conclusions

In the preceding pages, we have discussed definitions and theories of intelligence, descriptions of intelligence tests, and the uses of intelligence tests. We can now make some general concluding statements.

**IQ Is an Abstraction.** Because the IQ does not signify that a person will perform in all situations at a constant level, we talk about "present functioning" rather than innate potential. Many would argue that intelligence, like an attitude, is not a thing. Rather, it is an abstraction that may enable clinicians to accurately predict certain behaviors. A clinician who observes that Molly gets A's in class, is highly regarded by her instructors, and solves problems faster than her peers will probably conclude that Molly is intelligent. To reach that conclusion, the clinician will have abstracted a common element of Molly's behavior in several situations. The clinician can now use that abstraction to predict that Molly will again be successful in related future situations. Despite the notion that intelligence is an abstraction rather than an entity located in a specific region of the brain, and despite the difficulties in distinguishing between what people cannot do and what they choose not to do, most people tend to believe that a "true" IQ exists and that intelligence tests are the best way to assess it. However, it is good to be reminded that "... we have nothing even vaguely close to a 'tape measure' of intelligence." (Sternberg et al., 2005, p. 47).

**Generality Versus Specificity of Measurement.** Given all the caveats, qualifications, and disclaimers, the reader may wonder why clinical psychologists

1. These simulated items were provided courtesy of The Psychological Corporation. The answers are based on responses to actual items.

use general tests of intelligence at all. In many ways, this question can be reduced to cost–benefit terms. If one is especially pressed for time, or if the diagnostic issues do not revolve specifically around intellectual matters, then one would probably be better advised either to skip such general tests or to use a short form.

However, it is important to recognize exactly what a general test of intellectual functioning, such as a Stanford–Binet or a Wechsler, can do. It can provide a broad, general index of intellectual functioning across a range of situations. Because the Full Scale IQ is a general index, it may predict moderately

well to many diverse situations that depend significantly on intellectual skills. However, it may not predict to any specific situation at an acceptable level. Thus, if the goal is solely to predict scholastic success in Situation Y, then one would be better advised to use a more specific measure than a Wechsler test or at least to use a Wechsler test whose subtests contain elements similar to the performance one hopes to predict. Often, however, the clinician may need a basis for choosing remedial or clinical options. With standardized procedures, the clinical psychologist can compare the patient with similar persons who have performed in the same situation.

## CHAPTER SUMMARY

The assessment of intelligence has a long history in clinical psychology. Compulsory education and psychologists' ability to measure mental abilities contributed to the development and success of the field of intelligence testing. However, by the end of the 1960s, the validity of these tests was being challenged. To this day, there are many controversies about how intelligence is defined and how it is measured. Contemporary clinical psychologists appear to believe in both a general factor of intelligence, *g*, and specific abilities that underlie the general intelligence factor. Intelligence scores are correlated with school success, occupational status, and job performance. In addition, there are group differences in intelligence test scores between males and females and among ethnic/racial groups. Although intelligence test scores

are influenced by genetic factors, environment does play some role in the development of intelligence. IQ scores are more stable for adults than they are for children.

We have discussed four major intelligence tests in use today. The Stanford–Binet, Fifth Edition assesses children, adolescents, and adults; the Wechsler Adult Intelligence Scale, Fourth Edition assesses adolescents and adults; the Wechsler Intelligence Scale for Children, Fourth Edition assesses children; and the Wechsler Preschool and Primary Scale of Intelligence, Third Edition assesses preschool children. Intelligence test results are used to quantify overall levels of general intelligence as well as specific cognitive abilities. This versatility allows clinical psychologists to use intelligence test scores for a variety of prediction tasks (e.g., school achievement).

## KEY TERMS

**behavioral genetics** A research specialty that evaluates both genetic and environmental influences on the development of behavior.

**chronological age** What we commonly refer to as age; years of life.

**concordance rate (or similarity index)** An index of similarity between individuals. The simplest form of concordance rate is the percentage of instances in which two individuals exhibit similar behaviors or characteristics.

**concurrent validity** The extent to which test scores correlate with scores on other relevant measures administered at the same time.

**construct validity** The extent to which test scores correlate with other measures or behaviors in a logical and theoretically consistent way. Construct validity requires a demonstration of all aspects of validity.

**content validity** The degree to which test items adequately measure all aspects of the construct of interest.

**crystallized ability** One of two higher-order factors of intelligence conceived by Cattell. Crystallized ability refers to the intellectual capacities obtained through culture-based learning.

**deviation IQ** A concept introduced by Wechsler to address problems observed when applying the ratio IQ to older individuals. An individual's performance on an IQ test is compared to that of her or his age peers.

**dizygotic (DZ) twins** Fraternal twins, or twins that share about 50% of their genetic material.

**equivalent-forms reliability** The extent to which an individual obtains similar scores on equivalent, or parallel, forms of the same test.

**fluid ability** One of two higher-order factors of intelligence conceived by Cattell. Fluid ability refers to a person's genetically based intellectual capacity.

**Flynn effect** This refers to the empirical finding that Americans' IQ scores have on average increased 3 points each decade since 1972.

**g** The term introduced by Charles Spearman to describe his concept of a general intelligence.

**genotype** The genetic makeup of an individual.

**Index scores** Scores that correspond to the major ability factors that underlie the WAIS-IV subtest scores (i.e., Verbal Comprehension, Perceptual Organization, Working Memory, and Processing Speed).

**intelligence** There is no universally accepted definition of intelligence. However, many definitions of intelligence emphasize the ability to think

abstractly, the ability to learn, and the ability to adapt to the environment.

**intelligence quotient** A term developed by Stern in 1938 to address problems with using the difference between chronological age and mental age to represent deviance. Typically, a deviation IQ score is used.

**internal consistency reliability** The extent to which the items of a test "hang together" (most often assessed by computing Cronbach's alpha).

**interrater (or interjudge) reliability** The level of agreement between two or more raters who have evaluated the same individual independently. Agreement can refer to consensus on behaviors, attributes, and so on.

**mental age** A term introduced by Binet as an index of mental performance. This idea was based on the notion that individuals of a certain age should have mastered certain abilities.

**monozygotic (MZ) twins** Identical twins, or twins that share 100% of their genetic material.

**phenotype** The observable characteristics of an individual. The phenotype is a product of both the genotype and the environment.

**predictive validity** The extent to which test scores correlate with scores on other relevant measures administered at some point in the future.

**Primary Mental Abilities** Seven factors of intelligence derived by Thurstone on the basis of his factor analytic work: Number, Word Fluency, Verbal Meaning, Perceptual Speed, Space, Reasoning, and Memory.

**reversal items** A feature on several subtests of the WAIS-III that allows the examiner to determine the examinee's ability level without having to administer items markedly below that ability level.

**split-half reliability** The extent to which an individual's scores on one half of a test (e.g., the even-numbered items) are similar to his or her scores on the other half (e.g., the odd-numbered items).

**stability of IQ scores** The similarity of IQ scores measured at different points in time.

Based on test–retest correlations, IQ scores tend to be less stable for young children than for adults.

**Stanford-Binet Fifth Edition (SB-5)** An intelligence test based on a hierarchical model of intelligence. The SB-5 measures five general cognitive factors (fluid reasoning, quantitative reasoning, visual-spatial processing, working memory, and knowledge), each of which includes both verbal and non-verbal subtest activities.

**Structure of the Intellect model** A model proposed and tested by Guilford which asserts that the components of intelligence may be organized into three dimensions: operations (e.g., memory), contents (e.g., symbolic), and products (e.g., relations). In Guilford’s model, a particular mental operation is applied to a specific type of content, resulting in a product.

**test–retest reliability** The extent to which an individual makes similar responses to the same test stimuli on repeated occasions.

**theory of multiple intelligences** A theory forwarded by Gardner that posits the existence of six intelligences: linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, and personal.

**triarchic theory of intelligence** A theory proposed by Sternberg which maintains that people function on the basis of three aspects of intelligence: componential (analytical thinking), experiential (creative thinking), and contextual (“street smarts,” or the ability to successfully manipulate one’s environment).

**twins reared apart** MZ or DZ twins separated from each other shortly after birth; such twins

share genetic material but not specific environmental influences.

**twins reared together** MZ or DZ twins reared in the same family environment; such twins share both genetic material and specific environmental influences. Comparing the concordance rates of twins reared apart and twins reared together can help tease apart the genetic and environmental influences on a particular behavior or characteristic.

**validity** The extent to which an assessment technique measures what it is supposed to measure. There are several forms of validity.

**Wechsler Adult Intelligence Scale Fourth Edition (WAIS-IV)** An adult intelligence test comprised of subtests that tap four areas of cognitive functioning: verbal comprehension, perceptual reasoning, working memory, and processing speed. The WAIS-IV yields a Full Scale IQ, in addition to Index scores for these four areas.

**Wechsler Intelligence Scale for Children Fourth Edition (WISC-IV)** An intelligence test designed for children between the ages of 6 and 16. The WISC-IV scores include the Verbal Comprehension Index, Perceptual Reasoning Index, Working Memory Index, Processing Speed Index, and Full Scale IQ.

**Wechsler Preschool and Primary Scale of Intelligence Third Edition (WPPSI-III).** An intelligence test designed for children between the ages of 2 years, 6 months and 7 years, 3 months. The WPPSI-III scores include the Verbal IQ, Performance IQ, Processing Speed, and Full Scale IQ.

## WEB SITES OF INTEREST

To visit any of the following Web sites, go to [www.wadsworth.com](http://www.wadsworth.com) and click Links.

7-1 APA’s Intelligence Topics Web Page  
<http://www.apa.org/topics/intelligence/index.aspx>

7-2 Sir Francis Galton  
<http://www.galton.org>

7-3 Human intelligence: Historical influences and current controversies  
<http://www.indiana.edu/~intell/>

# 8



## Personality Assessment

### FOCUS QUESTIONS

1. What are the advantages and disadvantages of objective tests?
2. What are the major strategies of test construction? Briefly describe each of these.
3. What are the similarities and differences between objective and projective measures?
4. Why are the reliability and validity of projective measures so difficult to assess?
5. What does and what does not constitute evidence for test bias?

### CHAPTER OUTLINE

#### Objective Tests

Advantages  
Disadvantages  
Methods of Construction for Objective Tests  
The MMPI and the MMPI-2

BOX 8-1: *Clinical Psychologist Perspective:*  
*Yossef S. Ben-Porath, Ph.D.*

A Summary Evaluation of the MMPI and MMPI-2

The Revised NEO-Personality Inventory  
*NEO-PI-R Case Illustration*

#### Projective Tests

The Nature of Projective Tests  
Measurement and Standardization  
The Rorschach

*Rorschach Case Illustration 1*

*Rorschach Case Illustration 2*

The Thematic Apperception Test

*TAT Case Illustration*

Sentence Completion Techniques

#### Illusory Correlation

#### Incremental Validity and Utility

#### The Use and Abuse of Testing

BOX 8-2: *Graduate Student Perspective:*  
*Danielle L. Burchett*

### CHAPTER SUMMARY

### KEY TERMS

### WEB SITES OF INTEREST

For years, it has been popular to bemoan the sorry state of psychological testing. Supposedly, “no one” uses such tests any longer. Many academics argue that testing in general—and projective testing in particular—is not valid. Except perhaps for the MMPI-2, they say, objective tests are also out of style. Others advise that textbooks such as this one should drastically reduce the coverage of personality assessment. There is only one thing wrong with the foregoing claims and advice: They do not reflect the real world of clinical practice. In fact, psychological assessment continues to be a high-profile activity of both today’s practicing clinicians and clinical researchers (Butcher, 2010). Results from surveys of clinicians reinforce the conclusion that projective tests, the Wechsler scales, and the Minnesota Multiphasic Personality Inventory-2 continue to be highly popular and that many clinicians do depend on psychological tests (Camara, Nathan, & Puente, 2000; Watkins, Campbell, Nieberding, & Hallmark, 1995). As we shall see later in this book, testing in such specialty areas as forensic psychology, neuropsychological assessment, and health psychology actually seems to be on the upswing. Even in the case of projective testing (the favorite “whipping boy” of many who claim that testing is a dying field), the usage trends remain fairly strong.

Perhaps, then, the reports of the demise of personality assessment are a bit exaggerated (Exner, 1995). Table 8-1 gives an idea of the kinds of tests in use today and the frequency of their use. This table presents a rank-ordering of the top 20 assessment procedures used by a randomly selected sample of clinical psychologists in terms of percentage who use the test in a 1995 survey (Watkins et al., 1995) and in a 2000 survey (Camara, Nathan, & Puente, 2000). As can be seen, across both surveys, intelligence tests and the MMPI-2 are used frequently, but so are several projective tests.

However, there are other important considerations besides frequency of usage. Personality assessment measures must show high levels of reliability and validity to be useful to clinical psychologists. Furthermore, in addition to good psychometric properties, tests should be selected and used based on research findings and viable theories about psychological problems, as well as a test’s clinical utility and contribution with other sources of information to produce good outcomes (Hunsley & Mash, 2007). A long history of relatively uncritical use of certain personality measures does not justify their use today. Therefore, in this chapter, we not only describe some of the more popular objective and projective personality measures but we critically evaluate their psychometric properties and clinical utility as well. Another related issue concerns accountability (Wood, Garb, Lilienfeld, & Nezworski, 2002). In this age of managed care and increased public scrutiny of the profession, our assessments must be shown to be clinically useful, cost-effective, scientifically sound, and fair and unbiased (Whipple & Lambert, 2011).

## OBJECTIVE TESTS

We begin our survey of personality assessment with an examination of objective tests. *Objective personality measures* involve the administration of a standard set of questions or statements to which the examinee responds using a fixed set of options. Many objective tests use a true/false or yes/no response format; others provide a dimensional scale (e.g., 0 = strongly disagree; 1 = disagree; 2 = neutral; 3 = agree; 4 = strongly agree). Objective tests have both advantages and disadvantages.

### Advantages

Objective tests of personality or self-report inventories have had a central role in the development of clinical psychology (Butcher, 2010). The historical

**TABLE 8-1 Top 20 Assessment Procedures Used by Clinical Psychologists**

Test or Procedure	Percentage of Clinical Psychologists (1995) <sup>a</sup>	Rank Order (2000) <sup>b</sup>
Clinical Interview	95	n/r
Wechsler Adult Intelligence Scale-Revised (WAIS-R)	93	1
Minnesota Multiphasic Personality Inventory-2 (MMPI-2)	85	2
Sentence Completion Methods	84	15
Thematic Apperception Test (TAT)	82	6
Rorschach	82	4
Bender-Gestalt	80	5
Projective Drawings	80	8
Beck Depression Inventory	71	10
Wechsler Intelligence Scale for Children-III (WISC-III)	69	3
Wide Range Achievement Test-Revised (WRAT-R)	68	7
Wechsler Memory Scale-Revised	65	9
Peabody Picture Vocabulary Test-Revised (PPVT-R)	50	20
Millon Clinical Multiaxial Inventory-II (MCMI-II)	49	10
WPPSI-R	44	n/r
Children's Apperception Test	42	16
Vineland Social Maturity Scale	42	18
Millon Adolescent Personality Inventory	40	16
Strong Interest Inventory	39	n/r
Stanford-Binet Intelligence Scale	38	n/r

<sup>a</sup>Percentage of clinical psychologists who indicated that they used test or procedure at least "occasionally."

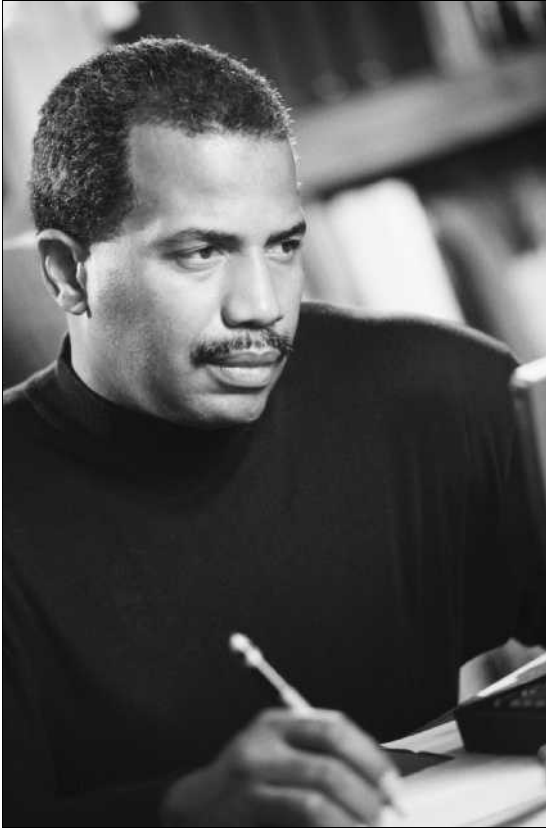
<sup>b</sup>Rank order of frequency of percentage of clinical psychologists who indicated that they used test.

SOURCES: Adapted from Watkins et al. (1995), Table 4, p. 57; adapted from Camara et al. (2000), Table 5, p. 148.

role of inventories, as well as their current prominence, is due in large part to their obvious advantages. First of all, they are economical. After only brief instructions, large groups can be tested simultaneously, or a single patient can complete an inventory alone. Even computer scoring and interpretation of these tests are possible. Second, scoring and administration are relatively simple and objective. This in turn tends to make interpretation easier and seems to require less interpretive skill on the part of the clinician. Often, a simple score along a single dimension (e.g., functional–dysfunctional) or on a single trait (e.g., depression, psychopathy) is possible. This apparent simplicity obviously attracts

many clinicians. However, as we shall see, rarely does such simple interpretation culminate in the validity claimed for it. In fact, this apparent simplicity can frequently lead to rather widespread misuse by ill-trained testers. A final attraction of self-report inventories, particularly for clinicians who are disenchanted with the problems inherent in projective tests, is their apparent objectivity and reliability.

Of course, as is so often the case, in the process of achieving the foregoing advantages and economies, clinical psychology seems to have traded one set of problems for another. Whether the trade-off is worthwhile is ultimately determined by one's values and one's theoretical orientation.



PhotoDisc

Objective paper-and-pencil tests are economical, easy to administer, and easy to score.

### Disadvantages

The items of many inventories are often behavioral in nature. That is, the questions or statements concern behaviors that may (or may not) characterize the respondent. Those interested in identifying motives or personality may glean little understanding through such items. For example, although two individuals may endorse the same behavioral item (“I have trouble getting to sleep”), they may do so for entirely different reasons.

Some inventories contain a mixture of items dealing with behaviors, cognitions (i.e., thoughts and beliefs), and emotions (i.e., feelings). Yet inventories often provide a single overall score, which may reflect various combinations of these behaviors,

cognitions, and emotions. Therefore, two individuals who achieve the same score may actually be quite different, even in reference to the personality trait or construct in question. Thus, the same score on a measure may have several alternative interpretations.

Other difficulties involve the transparent meaning of some inventories’ questions, which can obviously facilitate faking on the part of some patients. Some tests tend to depend heavily on the patient’s self-knowledge. In addition, the forced-choice approach prevents individuals from qualifying or elaborating their responses so that some additional information may be lost or distorted. In other instances, the limited understanding or even the limited reading ability of some individuals may lead them to misinterpret questions (a misinterpretation not necessarily attributable to personality determinants) or to answer questions in a random fashion.

### Methods of Construction for Objective Tests

Now that we have some appreciation of the advantages and limitations of objective tests, it is instructive to turn our attention to the various methods of construction used in developing these tests. Over the years, a variety of strategies for constructing self-report inventories have been proposed (e.g., see Butcher, 2010).

**Content Validation.** The most straightforward approach to measurement is for clinicians to decide what it is they wish to assess and then to simply ask the patient for that information. For example, the Woodworth Personal Data Sheet used in World War I was a kind of standardized psychiatric interview. Content was determined by surveying the psychiatric literature to identify the major manifestations of “neuroses” and “psychoses.” Items were then constructed that would tap those manifestations. Consequently, if the domain of neurosis or psychosis (as defined by the psychiatric literature) was adequately sampled, then the test could be assumed to be valid. “Do you sleep well at night?” “Do you get angry easily?” and “Are you easily insulted?” were considered good items if they

related to what prevailing psychiatric opinion regarded as maladjustment.

Ensuring content validity, however, involves much more than deciding what you want to assess and then making up some items that appear to do the job. Rather, more sophisticated *content validation* methods involve (a) carefully defining all relevant aspects of the variable you are attempting to measure; (b) consulting experts before generating items; (c) using judges to assess each potential item's relevance to the variable of interest; and (d) using psychometric analyses to evaluate each item before you include it in your measure (Haynes, Richard, & Kubany, 1995; Nunnally & Bernstein, 1994).

However, as Wiggins (1973) observes, several potential problems are inherent in the content validity approach to test construction. First, can clinicians assume that every patient interprets a given item in exactly the same way? Second, can patients accurately report their own behavior or emotions? Third, will patients be honest, or will they attempt to place themselves in a good light (or even a bad light at times)? Fourth, can clinicians assume that the "experts" can be counted on to define the essence of the concept they are trying to measure? Most of these seem to be general problems for the majority of inventories, regardless of whether they depend on content sampling to establish their validity.

**Empirical Criterion Keying.** In an attempt to help remedy the foregoing difficulties, the *empirical criterion keying* approach was developed. The most prominent example of this general method is the original Minnesota Multiphasic Personality Inventory (MMPI). In this approach, no assumptions are made as to whether a patient is telling the truth or the response really corresponds to behavior or feelings. What is important is that certain patients describe themselves in certain ways. As Meehl (1945) put it, "Thus if a hypochondriac says that he has 'many headaches' the fact of interest is that he says this" (p. 9).

The important assumption inherent in this approach is that members of a particular diagnostic group will tend to respond in the same way. Consequently, it is not necessary to select test items in a

rational, theoretical fashion. All that is required is to show on an empirical basis that the members of a given diagnostic group respond to a given item in a similar fashion. For example, in contrast to non-clinical respondents, if most individuals diagnosed with psychopathy agree with the item "I grew up in a house that had three steps on the front porch," then that item is a good one because it is endorsed by members of the psychopathic group. Thus, independent of an item's surface content, the test response becomes a "sign" of one's diagnostic status. The utility of an item is thus determined solely by the extent to which it discriminates among known groups. The test response is not necessarily a *sample* of behavior because the content of the item may not be directly associated with the symptoms that characterize members of that diagnostic group.

Of course, the criterion keying method has its problems. Foremost is the difficulty of interpreting the meaning of a score. For example, suppose that some patients diagnosed with schizophrenia are answering items intended to place them somewhere along the adjusted-maladjusted dimension. Suppose also that most of these patients happen to come from less educated families than do the participants in a comparison group. When these patients with schizophrenia endorse the item "I almost never read books," that endorsement may reflect their poor educational background rather than their psychopathology. Although demonstrating that the test can discriminate among various patient groups is one aspect of establishing the validity of a test, the sole use of the empirical criterion keying method to select items for a test is not recommended (Strauss & Smith, 2009).

**Factor Analysis.** These days, the majority of test developers use a factor analytic (or internal consistency) approach to test construction (Clark & Watson, 1995; Floyd & Widaman, 1995; Reise, Waller, & Comrey, 2000). The Guilford Inventories (Guilford, 1959) are excellent historical examples of a factor analytic approach. Here, the idea is to examine the intercorrelations among the individual items from many existing personality inventories. Succeeding factor analyses will then reduce or "purify" scales

thought to reflect basic dimensions of personality. The *exploratory* factor analytic approach is atheoretical. One begins by capturing a universe of items and then proceeds to reduce them to basic elements—personality, adjustment, diagnostic affiliation, or whatever—in an attempt to arrive at the core traits and dimensions of personality. *Confirmatory* factor analytic approaches are more theory driven, seeking to confirm a hypothesized factor structure (based on theoretical predictions) for the test items (Floyd & Widaman, 1995; Reise et al., 2000). Although a detailed explanation of confirmatory factor analysis procedures is beyond the scope of this book, it is important to note that an increasing number of clinical psychologists are employing confirmatory factor analysis in the development and evaluation of objective assessment measures.

The strength of the factor analytic approach to test construction is the emphasis on an empirical demonstration that items purporting to measure a variable or dimension of personality are highly related to one another. However, a limitation of this approach is that it does not in and of itself demonstrate that these items are actually measuring the variable of interest; we only know that the items tend to be measuring the same “thing.”

**Construct Validity Approach.** This approach combines many aspects of the content validity, empirical criterion keying, and factor analytic approaches (Clark & Watson, 1995; Strauss & Smith, 2009). In this approach, scales are developed to measure specific concepts from a given theory. In the case of personality assessment, the

intent is to develop measures anchored in a theory of personality. Validation is achieved when it can be said that a given scale measures the theoretical construct in question. The selection of items is based on the extent to which they reflect the theoretical construct under study. Item analysis, factor analysis, and other procedures are used to ensure that a homogeneous scale is developed. Construct validity for the scale is then determined by demonstrating, through a series of theory-based studies, that those who achieve certain scores on the scale behave in non-test situations in a fashion that could be predicted from their scale score. Because of its comprehensiveness, the *construct validity approach* to test construction is both the most desirable and the most labor-intensive. In fact, establishing the construct validity of a test is a never-ending process, with empirical feedback used to refine both the theory and the personality measure (G. T. Smith & McCarthy, 1995; Strauss & Smith, 2009).

To summarize and illustrate, Table 8-2 outlines the validity of an item that purports to measure depression according to each of the four test-construction strategies just discussed. We now turn to a discussion of several of the major objective personality measures available to clinical psychologists.

### The MMPI and the MMPI-2

The MMPI was long the best example of the empirical keying approach to test construction. Seventy years after its publication by Hathaway

**TABLE 8-2 Strategies for Determining the Validity of Inventory Item  
“I Wish I Could Be Happier”**

Strategy	Item Is Valid If
Content validity	“Authorities” assert that the item is representative of the syndrome of depression.
Empirical criterion keying	This item discriminates between depressed and nondepressed groups.
Factor analysis	The item has been shown through factor analysis to be significantly related to a homogeneous and independent cluster of items that purport to measure depression.
Construct validity	The item measures the depression construct as theoretically defined (depression involves a negative view of oneself—in this case, seeing oneself as unhappy).

and McKinley in 1943, it is still considered the pre-eminent self-report inventory (Butcher, 2010). The MMPI has been used for virtually every predictive purpose imaginable, ranging from likelihood of episodes of psychosis to marriage suitability. What is even more staggering, Graham (2006) estimates that more than 10,000 studies on the MMPI have been published. Despite all its success over the years, it was decided that the MMPI needed updating and restandardization. The result was the new *MMPI-2* (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989).

**Description: MMPI.** When Hathaway and McKinley developed the MMPI, their basic purpose was to identify the psychiatric diagnoses of individuals. Items were assembled from previously published tests of personality, from case histories, and from clinical experience. This pool of items was administered to non-clinical individuals (more than

700 visitors to University of Minnesota hospitals) and psychiatric patients (more than 800). The following psychiatric categories were used: hypochondriasis (Hs), depression (D), hysteria (Hy), psychopathic deviate (Pd), paranoia (Pa), psychasthenia (Pt), schizophrenia (Sc), and hypomania (Ma). Two additional scales, masculinity–femininity (Mf) and social introversion (Si) were added later. It is important to note that these scale names reflect a diagnostic classification system that was used in the 1940s and 1950s but is now antiquated. To translate all these diagnostic labels into more meaningful terms, refer to Table 8-3.

The original MMPI was composed of 550 items to which the patient answers “true,” “false,” or “cannot say.” Only those items that differentiated a given clinical group from a non-clinical group were included. For example, items were retained if they distinguished individuals with depression from non-clinical individuals, or individuals with schizophrenia from non-clinical

**TABLE 8-3 Simulated MMPI Items**

Clinical Scales	Simulated Items (Answered True)
<b>Hypochondriasis (Hs)</b> (Excessive concern with bodily functions)	“At times I get strong cramps in my intestines.”
<b>Depression (D)</b> (Pessimism, hopelessness, slowing of action and thought)	“I am often very tense on the job.”
<b>Hysteria (Hy)</b> (Unconscious use of physical and mental problems to avoid conflicts or responsibility)	“Sometimes there is a feeling like something is pressing in on my head.”
<b>Psychopathic Deviate (Pd)</b> (Disregard of social custom, shallow emotions, inability to profit from experience)	“I wish I could do over some of the things I have done.”
<b>Masculinity–Femininity (Mf)</b> (Items differentiating between traditional sex roles)	“I used to like to do the dances in gym class.”
<b>Paranoia (Pa)</b> (Abnormal suspiciousness, delusions of grandeur or persecution)	“It distresses me that people have the wrong ideas about me.”
<b>Psychasthenia (Pt)</b> (Obsessions, compulsiveness, fears, guilt, indecisiveness)	“The things that run through my head sometimes are horrible.”
<b>Schizophrenia (Sc)</b> (Bizarre, unusual thoughts or behavior, withdrawal, hallucinations, delusions)	“There are those out there who want to get me.”
<b>Hypomania (Ma)</b> (Emotional excitement, flight of ideas, overactivity)	“Sometimes I think so fast I can’t keep up.”
<b>Social Introversion (Si)</b> (Shyness, disinterest in others, insecurity)	“I give up too easily when discussing things with others.”

SOURCE: Minnesota Multiphasic Personality Inventory (MMPI). Copyright © 1942, 1943, (renewed 1970) by the University of Minnesota. Adapted items reproduced by permission of the University of Minnesota Press.

individuals, or individuals with psychopathic features from non-clinical individuals. No attempt was made to select items that differentiated one diagnostic category from another. As a result, some items tend to be highly correlated with each other, and the same item may appear in several different scales.

There was an individual form of the test in which the items were printed on cards; here, the individual separated the cards according to the “yes–no–cannot say” categories. There was also a group form with items printed in a test booklet; here, the answers were marked on an answer sheet. Although the test was originally designed for people age 16 and older, the MMPI has been used with individuals considerably younger. The test was machine scored or hand scored. Indeed, it was possible to completely administer, score, and interpret the MMPI by computer.

**Description: MMPI-2.** The original MMPI standardization sample had been criticized for many years as unrepresentative of the general U.S. population. Participants came largely from the Minneapolis area. All were White, with an average of 8 years’ education; they were typically 35 years old, married, and from small towns. The language of many of the items had become obsolete, and some items contained sexist language. Other items made inappropriate references to Christian religious beliefs and sometimes seemed to overemphasize sexual, bowel, and bladder functions. Several items even had poor grammar and punctuation. Finally, many people felt the items did not adequately address behaviors such as suicide or drug use. All in all, the time seemed ripe for revision (Graham, 2006).

For restandardization, all 550 items were retained, but 82 were rewritten (though most changes were slight). The original meaning of items was preserved, but the language was made more contemporary. In addition, 154 new items were added to the item pool, bringing the total to 704 items. After adjustments, the final version of the MMPI-2 now includes 567 of the larger pool of 704 items. However, only the first 370 items in the test booklet are administered when only the traditional validity and clinical scales are of interest.

Participants for the restandardization sample came from Minnesota, Ohio, North Carolina, Washington,

Pennsylvania, Virginia, and California, and the sample was based on U.S. census data from 1980. The final sample contained 1,138 men and 1,462 women. The racial composition was as follows: White, 81%; African American, 12%; Hispanic, 3%; Native American, 3%; Asian American, 1%. Participants ranged in age from 18 to 85 years and in formal education from 3 years or less to 20 years or more. About 3% of the men and 6% of the women reported being in treatment for mental health problems at the time of testing.

The authors of the MMPI-2 state that it can be used with individuals who are at least 13 years old and/or can read at an eighth-grade level. It can be administered individually or in groups. Unlike the MMPI, the MMPI-2 has only one booklet form. It can be computer scored, and non-English-language versions of the test are available. Finally, a version of the MMPI-2 specifically developed for adolescents (MMPI-A; Butcher et al., 1992) is also available. Butcher (2010) estimates that over 19,000 articles and books have been published on the MMPI, MMPI-2, and MMPI-A, to date.

**Validity Scales.** A potential problem with self-report inventories, including the MMPI-2, is their susceptibility to distortion through various test-taking attitudes or response sets. For example, some respondents may wish to place themselves in a favorable light; others may “fake bad” to increase the likelihood of receiving aid, sympathy, or perhaps a discharge from military service; still others have a seeming need to agree with almost any item regardless of its content. Obviously, if the clinician is not aware of these response styles in a given patient, the test interpretation can be in gross error.

To help detect malingering (faking bad), other response sets or test-taking attitudes, and carelessness or misunderstanding, the MMPI-2 continues to incorporate the traditional four *validity scales* that were included in the original MMPI.

1. *? (Cannot Say) Scale.* This is the number of items left unanswered.
2. *F (Infrequency) Scale.* These 60 items were seldom answered in the scored direction by the

standardization group. A high F score may suggest deviant response sets, markedly aberrant behavior, or other hypotheses about extra test characteristics or behaviors.

3. *L (Lie) Scale*. This includes 15 items whose endorsement places the respondent in a very positive light. In reality, however, it is unlikely that the items would be truthfully so endorsed. For example, “I like everyone I meet.”
4. *K (Defensiveness) Scale*. These 30 items suggest defensiveness in admitting certain problems. These items purportedly detect faking good,

but they are more subtle than either L or F items. For example, “Criticism from others never bothers me.”

In addition to the four traditional validity scales, three “new” validity scales can be scored from the MMPI-2.

5. *Fb (Back-page Infrequency) Scale*. These 40 items occurring near the end of the MMPI-2 are infrequently endorsed.
6. *VRIN (Variable Response Inconsistency) Scale*. This consists of 67 pairs of items with either

### BOX 8-1 Clinical Psychologist Perspective: Yossef S. Ben-Porath, Ph.D.

Dr. Yossef Ben-Porath is a Professor of Psychology at Kent State University. He specializes in psychological assessment, particularly the use of the MMPI instruments, the MMPI-2 and MMPI-A, and the recently introduced MMPI-2-RF (Restructured Form) in clinical and forensic settings. In addition, he studies the use of computers in psychological assessment and how individuals cope with various forms of stress. Dr. Ben-Porath is the author of numerous articles, book chapters, and books on psychological assessment, and he frequently leads workshops on the clinical applications of the MMPI instruments. He is a co-author of the new, 338-item version of the test. Finally, he currently serves as associate editor for the journal *Psychological Assessment*. We had a chance to ask Dr. Ben-Porath several questions concerning his background, activities, and predictions for the future.

#### What originally got indiscriminantly clinical psychology?

I became interested in clinical psychology as an undergraduate psychology major at the University of Haifa in Israel. Coursework in abnormal and personality psychology piqued my interest, and opportunities to become involved in research projects in this area led to my decision to pursue graduate training in clinical psychology. One of my undergraduate professors, Dr. Moshe Almagor, had recently earned his Ph.D. at the University of Minnesota and was doing research in the area of clinical personality assessment. I found this research intriguing because of its applied nature and its implications for clinical practice. Eventually, I too received my graduate training in clinical psychology at the University of Minnesota.

#### Describe what activities you are involved in as a clinical psychologist.

My primary activities as a clinical psychologist are related to my duties as a faculty member in the Department of Psychology at Kent State University. At Kent, I teach various psychology undergraduate and graduate classes, I supervise the research activities of students ranging from undergraduate students doing honors research to graduate students working on their doctoral dissertations, and I conduct my own research. I also serve as co-director of a series of continuing education training seminars designed to bring clinicians up-to-date on recent developments with the MMPI instruments. In addition to my university work, I have a part-time clinical practice in forensic psychology. My clinical activities involve conducting various court-ordered evaluations, including examinations of defendants' competence to stand trial and pleas of not guilty by reason of insanity, and commitment evaluations. I also consult to various government and law enforcement agencies on use of the MMPI instruments in screening candidates for public safety positions.

#### What are your particular areas of expertise or interest?

My primary interest is in clinical assessment. My area of expertise is in use of the MMPI instruments in applied psychological assessment. My research is designed to provide empirical data to guide psychologists who use these tests in a variety of applied settings. Most recently I completed a major project that resulted in the introduction of a new version of the MMPI, the MMPI-2-RF. My co-author, Auke Tellegen, and I spent several years exploring ways to modernize the

similar or opposite content. High VRIN scores suggest random responding to MMPI-2 items.

7. *TRIN (True Response Inconsistency) Scale.* This consists of 23 item pairs that are opposite in content. High TRIN scores suggest a tendency to give true responses indiscriminately; low TRIN scores suggest a tendency to give false responses indiscriminately.

These seven MMPI-2 validity scales provide a means for understanding the test respondent's motivations and test-taking attitudes. For example, attempts to present oneself in an overly favorable

light will likely be detected by the L (Lie) or K (Defensiveness) scale (Baer & Miller, 2002; Baer, Wetter, & Berry, 1992), whereas the tendency to exaggerate one's problems or symptoms usually results in elevations on the F (Infrequency) and Fb (Back-page Infrequency) scales (Berry, Baer, & Harris, 1991; Rogers, Bagby, & Chakraborty, 1993; Wetter, Baer, Berry, Robison, & Sumpter, 1993; Wetter, Baer, Berry, Smith, & Larsen, 1992). Finally, the VRIN and TRIN scales are useful indicators of random responding or answering true (or false) to most items, respectively (Berry et al., 1992; Tellegen & Ben-Porath, 1992).

instrument by using modern psychometric techniques to develop new scales for the test.

#### **What are the trends you see for clinical psychology?**

The primary trend I see for clinical psychology is a movement away from direct clinical service delivery. Cost-containment pressures of managed care, coupled with the absence of clear empirical evidence that doctoral-level clinical psychologists are more effective than less costly service deliverers such as master's-level counselors and social workers will likely result in fewer clinical psychologists' working as full-time therapists in either community agencies or private practices. Instead, clinical psychologists will be called upon increasingly to apply their training and expertise in research to assist in program development and evaluation. Specifically, clinical psychologists will become involved in developing methods to identify treatment needs and to evaluate treatment progress and outcome at the agencies or organizations that employ them. In addition, clinical psychologists will likely become increasingly involved in forensic practice that requires the highest possible level of training and expertise.

#### **What are some future trends you see in MMPI research?**

The most exciting trend I foresee for MMPI-2 research and application is the increasing incorporation of computer technology in administration, scoring, and interpretation of the test. Presently, computer software exists to accomplish all three of these tasks. However, most testing with the MMPI instruments is still conducted by paper and pencil and most interpretation is done by individual clinical psychologists. When

a computer is used to administer the test, it serves as a proxy for the conventional test booklet. In the future, the MMPI instruments will be administered adaptively in a manner that reduces the number of items to those that are necessary to answer specific assessment questions posed by the psychologist. Computers will become essential in interpretation because of the ever-increasing volume of data that must be considered in generating an empirically based test interpretation.



Dr. Yossef S. Ben-Porath, Psych Prof @ Kent State Univ.

Yossef S. Ben-Porath

**Short Forms.** Over the years, a variety of short forms of the MMPI have appeared. These scales typically shorten the MMPI to considerably less than the traditional 550 items. Although economies in screening or rapid classification may be achieved by their use, some loss in interpretive power can also be expected. As for the MMPI-2, many continue to question the use of short forms (e.g., Butcher, 2010; Butcher, Graham, & Ben-Porath, 1995). More generally, short forms of any psychological test should, perhaps, rarely be developed and, if they are, should be subjected to quite stringent standards of reliability of validity as a stand-alone measure (G. T. Smith, McCarthy, & Anderson, 2000).

**Interpretation Through Patterns: Profile Analysis.** Because the original scales were developed to predict psychiatric categorization, the initial use of the MMPI depended on simple interpretations based on elevated scale scores. That is, if an Sc scale score was significantly elevated, this suggested a diagnosis of schizophrenia. However, clinical experience quickly taught that such compartmentalized interpretations were gross oversimplifications. Some non-clinical respondents achieve high Sc scores, and so do other diagnostic groups.

Interpretation has now shifted to an examination of patterns, or “profiles,” of scores. For example, individuals who produce elevations on the first three clinical scales (Hs, D, Hy) tend to present with somatic complaints and depressive symptoms and often receive somatoform, anxiety, or depressive disorder diagnoses. Elevations on scales 6 (Pa) and 8 (Sc) suggest extreme suspiciousness and potential psychotic thought processes; these characteristics are found among individuals diagnosed with paranoid schizophrenia.

**Interpretation Through Content.** Lest the reader conclude that only diagnostic labels can result from the analysis of a profile, consider the following excerpt from a pretherapy workup based on the MMPI-2 profile shown in Figure 8-1 (Butcher, 1990):

Ed approached the testing in a frank and open manner, producing a valid MMPI-2 profile.... He related a number of psychological adjustment problems and seemingly was seeking help in overcoming them. The

MMPI-2 clinical profile highlights a number of problems and symptoms that Ed was experiencing at the time of his first treatment session. He reported being depressed and anxious about his situation and related feeling tense, lonely, and insecure. He appeared to be having great difficulty concentrating on his work and was indecisive. He had no zest for life and was preoccupied with his inability to accomplish personal goals. The relatively high score on the psychopathic deviate scale (Pd) reflects rebellious attitudes and family conflict (the Harris-Lingoes Family Problems Scale, Pd1, was  $T = 69$ ). He appeared to be a somewhat passive young man who reported being shy and isolated. (p. 12)

Thus, a major change and improvement in the clinical use of the MMPI and MMPI-2 have been the shift away from differential psychiatric diagnosis based on the evaluation of a single score to a more sophisticated profile analysis of scale scores considered as measures of personality traits.

For the MMPI-2, a variety of content scales have been developed as well (Butcher, Graham, Williams, & Ben-Porath, 1990). For example, certain items can help identify fears, health concerns, cynicism, the Type A personality, and so on. Such scales enable the clinician to move beyond simple diagnostic labels to a more dynamic level of interpretation. Take the following example from Graham (2006):

*Family Problems (FAM)*

High scores on the FAM indicate persons who

1. Describe considerable discord in their current families and/or families of origin
2. Describe their families as lacking in love, understanding, and support
3. Resent the demands and advice of their families
4. Feel angry and hostile toward their families
5. See marital relationships as involving unhappiness and lack of affection (p. 149)

**Supplementary Scales.** In addition to the standard validity scales, the clinical scales, and the content scales, the MMPI-2 item pool has been used to develop numerous other scales. Many years ago,



by MMPI-2 items may suggest certain personality traits or styles, it was not developed with personality constructs in mind. Does it help with personality description, psychotherapy planning, or the host of other predictions that the clinician must confront in day-to-day interactions with the patient? Many would question the MMPI-2's contribution to ongoing clinical decisions once the initial diagnostic category has been selected. However, Butcher (1990, 1995c, 2010) would argue that the MMPI-2 is a valuable aid in planning and evaluating the effects of treatment.

**Reliability and Validity.** As noted earlier, there have been more than 19,000 published studies and books concerning the MMPI family of measures. Many of these publications have evaluated the reliability and validity of MMPI-2 scores. Aside from the comments already made, we do not have the temerity to “briefly” summarize this voluminous research. However, we do wish to make a few comments about findings addressing the reliability and validity of this instrument's scores.

Concerning reliability, the MMPI-2 clinical scale scores have been evaluated in terms of internal consistency as well as test–retest reliability. Perhaps not surprisingly (given the way the instrument was originally constructed), many of the clinical scales do not have good internal consistency. Only three of the ten clinical scales (scales 7, 8, and 0) show good internal consistency across both men and women (defined as an alpha of .80 or above) (Butcher et al., 2001). Recall that items for scales were selected primarily for their ability to discriminate between groups, and not as a function of their ability to measure a unitary dimension or construct. In contrast to internal consistency results, the MMPI-2 clinical scale scores do show good test–retest reliability over time, in this case a one-week interval (Butcher et al., 2001).

The evaluation of the MMPI-2's validity is more complicated. As is true with all measures, we must evaluate the validity of scores for certain prediction tasks. The ultimate question, then, is not whether the MMPI-2 is valid. Rather, for what specific purposes are its scores valid? MMPI-2 scores

have been shown to relate significantly to relevant external correlates such as emotional states, antisocial behaviors, stress reactivity, worry, paranoia, and introversion, for example, across a number of populations and settings (Graham, 2006). Furthermore, MMPI-2 profiles (patterns of score elevations) also appear to show validity in identifying characteristic moods, cognitions, and behaviors of patients who produce respective “code types” (Graham, 2006).

Two other issues related to the validity of MMPI-2 scores are important as well. Although presented in the context of developing “new” MMPI-2 supplementary scales, Butcher et al. (1995) noted the necessity of establishing the incremental validity of a scale as well as the validity of cutoff scores (thresholds). *Incremental validity* is supported if scale scores provide information about a person's behavior, personality features, or psychopathology features that is not provided by other measures. Do MMPI-2 scores convey information relevant to psychopathology or personality that cannot be provided by other measures? This issue of incremental validity tends to be neglected for all psychological tests, including the MMPI-2 (Hunsley & Mash, 2007).

As for the *validity of cutoff scores*, it is important to keep in mind that the optimal cutoff score (in terms of maximizing correct decisions as to which patients have the disorder or trait in question, given their scores on the measure) will vary depending on the nature of the population of patients sampled. The cutoff scores provided in test manuals were derived for a certain population, which may or may not be similar to the population of patients with which a clinician is working. MMPI-2 cutoffs (*T* score of 65 or greater) were derived using the distribution of scores from the normative sample. Therefore, these cutoffs may or may not be appropriate in certain clinical contexts.

**Personnel Selection and Bias.** Recent developments in our society have also created problems for the MMPI-2. Lack of trust in our social institutions and the concerns of minorities have both been reflected in criticisms of the test. For example, the MMPI-2 has often been lauded for its empirical

criterion keying approach, which works well for those who understand it. But what about people who know nothing of criterion keying or psychometrics but want to work for Corporation X? Suppose these individuals fail to get a job after taking an MMPI-2. What shall we tell them when they demand to know what items such as “I used to keep a diary” or “My sex life is satisfactory” have to do with hiring? For the person seeking therapy, a test such as the MMPI-2 may be acceptable. However, for one who takes the test in a personnel setting, it may be regarded as an invasion of privacy (Butcher, 1971).

In fact, given recent court rulings as well as the requirements specified by the Americans with Disabilities Act, it may not be advisable to use popular personality/psychopathology tests like the MMPI-2 in most preemployment screening situations (Camara & Merenda, 2000). Tests that contain items that inquire about religious beliefs, political orientation, or sexual orientation have been ruled violations of privacy, and courts have ruled that applicants for jobs can only be screened for mental disabilities once a preliminary job offer has been made (Camara & Merenda, 2000). In this latter context, psychological tests are viewed as a type of “medical examination,” and if a mental disability is uncovered, it is up to the employer to demonstrate how such a disability directly and adversely affects performance of the job in question.

Given the nature of the original sample that the MMPI was validated on, questions have also been raised as to whether the instrument may be “biased” against certain ethnic and racial groups. This has been a rather contentious debate over the years (e.g., Gynther, 1972; Gynther & Green, 1980; Pritchard & Rosenblatt, 1980). Some studies have found significant differences in scores between racial groups, whereas others have not. It is important to keep in mind, however, that a significant difference between mean scores for groups of people does *not*, in and of itself, indicate test bias. Rather, *test bias* refers to a situation in which different decisions or predictions are made for members of two groups even when they obtain the same score (Anastasi, 1988). We will return to the general issue of test bias later in this chapter.

To our knowledge, there have been only a relatively small number of published studies that evaluate the possibility of test bias for the MMPI-2. It is encouraging that, to date, these few studies have not found evidence suggesting that the use of the MMPI-2 for certain purposes results in bias against certain ethnic or racial groups (e.g., Arbisi, Ben-Porath, & McNulty, 2002; Timbrook & Graham, 1994; Wood et al., 2002).

**Concerns About the MMPI-2.** The reasons that prompted the revision of the MMPI were, in the main, laudable. Without doubt, though, some clinicians were nervous about the MMPI-2 revision. Some of these concerns have diminished as clinical psychologists became more familiar with the revision. Nevertheless, here is a sample of the complaints and reservations that have been voiced about the MMPI-2.

1. The normative sample, compared to U.S. Census Bureau data, is too highly educated. Only 5% of MMPI-2 normative respondents have less than a college education, and 45% of the normal respondents in the sample are college educated! Schooling can account for much of the variance in the scores of psychiatric patients.
2. Is all the old MMPI research applicable to the new MMPI-2?
3. Were “unnecessary” revisions made?
4. Criteria for the inclusion of “normal” respondents are puzzling.
5. Some respondents who are administered both versions of the test show psychological problems on one version but not on the other.
6. Scores are generally lower on the MMPI-2 compared to the MMPI.
7. Validity of the new content scales is unclear.
8. It is not clear how reliable MMPI-2 scores are over extended periods of time.
9. Internal consistency of several MMPI-2 scales is quite low.
10. There remains too much item overlap among the scales, making study results hard to interpret.

Despite these limitations and concerns, the MMPI and MMPI-2 remain the “benchmarks” for self-report inventories measuring psychopathology or personality. However, as is true for any instrument, it is important that clinical psychologists appreciate the potential limitations as well as the strengths of this popular measure.

### The Revised NEO-Personality Inventory

**Description.** The *Revised NEO-Personality Inventory (NEO-PI-R)* (Costa & McCrae, 1992) is a self-report measure of personality features that comprise an influential model of personality known as the *Five-Factor Model (FFM)* (Goldberg, 1993). The FFM has evolved over the past four decades (Digman, 1990) and has roots in both the lexical tradition (the analysis of trait adjectives found in English and other languages) and the factor analytic tradition in personality research. As operationalized by the NEO-PI-R, the five factors or domains are Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. Each domain has six facets or subscales—personality traits that represent various aspects of each domain. Table 8-4 presents the facets that represent each domain.

The NEO-PI-R consists of 240 items (8 items for each of the 30 facets, or 48 items for each of the five domains). Individuals rate each of the 240 statements on a 5-point scale (strongly disagree, disagree, neutral, agree, strongly agree). Research that led to development of the NEO-PI-R began in the 1970s. At that time, there was no clear consensus regarding which personality model or system provided the most useful and comprehensive description

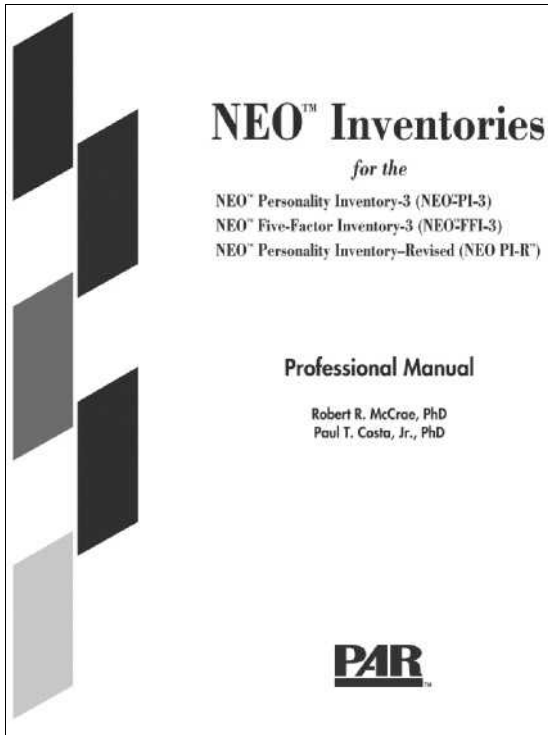
of personality features. Costa and McCrae became convinced that there was more agreement among the various competing personality models regarding higher-order dimensions (e.g., Neuroticism or Extraversion) than there was for the lower-level traits that comprise these (the facets of each dimension). For this reason, Costa and McCrae adopted a “top-down” approach in constructing their inventory. They began by selecting those higher-order factors or dimensions of personality believed to be of greatest import and utility (based on reviews of the literature as well as their own empirical research). They then identified those traits, or facets, that comprised each major dimension. The original version of their instrument assessed only three of the five factors (Neuroticism, Extraversion, and Openness); the NEO-PI-R assesses all five domains of the FFM and includes facet scales for each.

The NEO-PI-R was developed using a rational-empirical test construction strategy that emphasized construct validity. Each personality trait to be included was identified, defined, and then analyzed so that items measuring various aspects of the trait could be generated. Final item selection was based on empirical performance; that is, the most reliable and valid items were retained. In addition, factor analyses were performed to ensure that items loaded on their respective factors.

Approximately half of the NEO-PI-R items are reverse scored; that is, lower scores are more indicative of the trait in question. This was done to address a potential acquiescence (or nay-saying) bias that may present problems for inventories in which all or most items are keyed in the same direction. In such inventories, high scores may be due either to acquiescence or to the actual level of

**TABLE 8-4 Domains and Facets of Personality Measured by the NEO-PI-R**

Domain	Facets
Neuroticism	Anxiety, Hostility, Depression, Self-Consciousness, Impulsiveness, Vulnerability
Extraversion	Warmth, Gregariousness, Assertiveness, Activity, Excitement Seeking, Positive Emotions
Openness to Experience	Fantasy, Aesthetics, Feelings, Actions, Ideas, Values
Agreeableness	Trust, Straightforwardness, Altruism, Compliance, Modesty, Tender-Mindedness
Conscientiousness	Competence, Order, Dutifulness, Achievement Striving, Self-Discipline, Deliberation



The NEO-PI-R is a popular measure of personality and personality pathology.

the trait in question so that interpretation of a high score is problematic. One of the more controversial aspects of the NEO-PI-R is its lack of a validity scale (or set of scales) to evaluate respondents' test-taking approaches. Instead, the NEO-PI-R has three individual items that assess the validity of responses. One item asks respondents to indicate if they have responded to the items in an honest and accurate manner, another asks if they have answered all items, and the last assesses whether responses have been placed in the correct spaces.

**Norms.** Adult norms are based on a total of 500 men and 500 women drawn from several samples of community residents. The normative sample closely approximates U.S. Census Bureau projections for 1995 in the distribution of age and racial groups. The NEO-PI-R manual presents normative data for college students as well.

**Reliability and Stability.** NEO-PI-R scores show excellent levels of both internal consistency and test-retest reliability. Internal consistency coefficients range from .86 to .92 for the domain scales and from .56 to .81 for the facet scales. A study of clinical outpatients reported 6-month test-retest reliability coefficients that ranged from .76 to .84 for the domain scores (Trull, Useda, Costa, & McCrae, 1995). Test-retest reliability has been impressively high over time periods as long as 6 years.

**Factor Structure.** Factor analyses have, in general, supported the hypothesized five-factor structure of the NEO-PI-R. This is true whether individual item scores or facet scores were used in the analyses (Costa & McCrae, 1992).

**Validity.** The NEO-PI-R manual (Costa & McCrae, 1992) presents a variety of evidence attesting to the validity of the instrument's scores. Domain and facet scores from the NEO-PI-R have been shown to relate in predictable ways to personality trait scores from a variety of personality measures, peer reports, and adjective checklists.

**Clinical Applications.** Although the NEO-PI-R was developed from a model of "normal" personality, investigators have begun to assess this instrument's usefulness in clinical samples. Because Axis II personality disorders involve, by definition, maladaptive personality traits (i.e., extreme variants of personality traits that are common in all individuals), these disorders represent an obvious application for FFM instruments such as the NEO-PI-R. Several studies have supported the utility of NEO-PI in characterizing personality disorders (e.g., Samuel & Widiger, 2008; Widiger & Trull, 2007). Further, investigators have begun to evaluate the utility of FFM instruments such as the NEO-PI-R in assessing personality characteristics of individuals with Axis I mood, anxiety, and substance use disorders (e.g., Trull & Sher, 1994). Taken together, these studies suggest that the NEO-PI-R and related instruments hold some promise in the area of clinical assessment.

**Alternate Forms.** A 60-item short form of the NEO-PI-R, known as the NEO-Five Factor Inventory (NEO-FFI), may be useful when a relatively short measure of the five major personality dimensions is desired; the NEO-FFI does not contain facet scales. Another version of the NEO-PI-R, known as Form R, is used for observer ratings. It contains the 240 items of the self-report version, reworded to reflect the gender of the target person being rated. Form R scores can be used to validate or supplement self-report scores (Costa & McCrae, 1992).

**Limitations of the NEO-PI-R.** Several authors have suggested limitations of the NEO-PI-R in clinical assessment (Ben-Porath & Waller, 1992; Block, 1995; Tellegen, 1993). First, the NEO-PI-R has been criticized for its relative lack of validity items. In contrast to the MMPI-2 and other

self-report measures, the NEO-PI-R does not devote a number of test items to assessing response styles that may influence interpretations of the obtained scores. Second, the use of the NEO-PI-R for clinical diagnostic purposes remains to be demonstrated. Although the initial studies that have shown associations between NEO-PI-R scores and mental disorder diagnoses are encouraging, the NEO-PI-R may not be especially well suited for the general purpose of clinical diagnosis because its development was guided by a model of “normal” personality. Third, too little research has been conducted on the use of the NEO-PI-R in treatment planning to warrant the routine use of this measure in clinical settings at this time. Finally, several psychometric criticisms have been leveled at the NEO-PI-R, including the intercorrelation among certain domain scores and the placement of certain facets within particular domains (e.g., the placement of

### NEO-PI-R Case Illustration

Bruehl (1994) presents a case study of a 45-year-old, White, divorced woman who received an Axis I diagnosis of Major Depressive Disorder and an Axis II diagnosis of Borderline Personality Disorder. “Betty” presented for treatment because of her concerns over parenting her daughter, who had recently been arrested for drug possession and suspended from high school. Betty had a history of sexual abuse in childhood, of poor family and peer relationships, of physical abuse in adulthood, and of intense and labile emotions. Table 8-5 presents the results of her NEO-PI-R administration.

As can be seen, Betty produced elevations on all Neuroticism facets, scored in the low range on several Extraversion and Agreeableness facets, and produced several elevations on Openness facets. Several interpretive statements regarding Betty’s NEO-PI-R scores illustrate how these scores can be useful in understanding a client and in treatment planning.

... Betty’s elevated Neuroticism and low Agreeableness were consistent with what would be expected based on the DSM-III-R criteria for BDL [Borderline Personality Disorder].

... The strength of the psychotherapeutic relationship was slow to develop because of Betty’s low levels of Warmth and Trust ...

... The transference issues observed in therapy related primarily to Betty’s low Trust and high Hostility. As might be expected given her low Straightforwardness, she expressed her anger and lack of trust passively ...

... Betty’s low Compliance suggested that it was important to watch for control issues in therapy. On the few occasions when therapeutic “homework” assignments were attempted and agreed on, Betty failed to complete them ...

... Her low Compliance seemed to interact with her low Trust and high Hostility to cause interpersonal difficulties in therapy. These same issues were responsible for her problems in previous intimate relationships with close friends, family members, and husbands ...

... Information provided by the NEO-PI-R also suggested strengths that improved treatment progress. Betty’s high level of Openness to Ideas did reflect in part pathological aspects, but it also reflected an ability to be more cognitively flexible ... she was very open to looking at her problems in different ways and considering alternative ways for understanding and addressing these problems. (Bruehl, 1994, pp. 195–196)

**TABLE 8-5 Revised NEO-Personality Inventory Personality Profile for "Betty"**

Scale	Range	Clinical Implications
<i>Neuroticism</i>	Very high	
Anxiety	High	Nervous/ruminative
Angry Hostility	Very high	Rageful/bitter
Depression	Very high	Gloomy/despondent
Self-Consciousness	High	Insecure/ashamed
Impulsiveness	High	Spontaneous/unpredictable
Vulnerability	High	Overwhelmed/defenseless
<i>Extraversion</i>	Low	
Warmth	Low	Cold
Gregariousness	Low	Shy/withdrawn
Assertiveness	Average	
Activity	Average	
Excitement Seeking	High	Adventurous
Positive Emotions	Low	Placid/disinterested
<i>Openness</i>	High	
Fantasy	Very high	Imaginative/dissociative
Aesthetics	Average	
Feelings	Average	
Actions	Average	
Ideas	High	Cognitively flexible
Values	High	Open-minded
<i>Agreeableness</i>	Low	
Trust	Low	Cynical/suspicious
Straightforwardness	Low	Deceptive/manipulative
Altruism	Average	
Compliance	Low	Aggressive/oppositional
Modesty	Average	
Tender-Mindedness	Average	
<i>Conscientiousness</i>	Average	
Competence	High	Perfectionistic
Order	Average	
Dutifulness	Low	Unreliable/irresponsible
Achievement Striving	High	Driven
Self-Discipline	Average	
Deliberation	Low	Hasty

SOURCE: Bruehl, 1994.

Impulsiveness and Hostility within the Neuroticism domain). In summary, although promising, the utility of the NEO-PI-R in routine clinical assessment remains to be demonstrated.

## PROJECTIVE TESTS

*Projective techniques* have a long and rich history. William Shakespeare wrote about the projective qualities of clouds, and William Stern used clouds as test stimuli before Rorschach and his inkblots. Sir Francis Galton (1879) suggested word-association methods, and Kraepelin made use of them. Binet and Henri (1896) experimented with pictures as projective devices. Alfred Adler asked patients to recall their first memory, which is also a kind of projective approach.

However, the real impetus for projective techniques can be traced to Hermann Rorschach's classic 1921 monograph, in which he described the use of inkblots as a method for the differential diagnosis of psychopathology. Later in the 1920s, David Levy brought the inkblot test to America, and it was not long before Beck, Klopfer, and Hertz all began teaching Rorschach courses. In 1935, Morgan and Murray introduced the Thematic Apperception Test (TAT), and in 1938, Murray carefully described the process of projection. The term *projective* really came into popular use following L. K. Frank's widely discussed 1939 paper on projective methods.

### The Nature of Projective Tests

For some, the definition of a projective test resides in Freudian notions regarding the nature of ego defenses and unconscious processes. However, these do not seem to be essential characteristics. Over the years, many definitions have been offered (Anderson & Anderson, 1951; Lindzey, 1961; Murstein, 1963; Semenoff, 1976; Wiggins, 1973; Zubin, Eron, & Schumer, 1965). Perhaps the easiest solution is a pragmatic one that comes from consulting the English and English (1958) psychological

dictionary, which defines a projective technique as "a procedure for discovering a person's characteristic modes of behavior by observing his behavior in response to a situation that does not elicit or compel a particular response."

Projective techniques, taken as a whole, tend to have the following distinguishing characteristics (Rotter, 1954):

1. In response to an unstructured or ambiguous stimulus, examinees are *forced to impose their own structure* and, in so doing, reveal something of themselves (such as needs, wishes, or conflicts).
2. The stimulus material is *unstructured*. This is a very tenuous criterion, even though it is widely assumed to reflect the essence of projective techniques. For example, if 70% of all examinees perceive Card V on the Rorschach as a bat, then we can hardly say that the stimulus is unstructured. Thus, whether a test is projective or not depends on the kinds of responses that the individual is encouraged to give and on how those responses are used. The instructions are the important element. If a patient is asked to classify the people in a set of TAT cards as men or women, then there is a great deal of structure—the test is far from ambiguous. However, if the patient is asked what the people on the card are saying, the task has suddenly become quite ambiguous indeed.
3. The method is *indirect*. To some degree or other, examinees are not aware of the purposes of the test; at least, the purposes are disguised. Although patients may know that the test has something to do with adjustment–maladjustment, they are not usually aware in detail of the significance of their responses. There is no attempt to ask patients directly about their needs or troubles; the route is indirect, and the hope is that this very indirectness will make it more difficult for patients to censor the data they provide.
4. There is *freedom of response*. Whereas questionnaire methods may allow only for a "yes" or a "no," projectives permit a nearly infinite range of responses.

5. Response interpretation deals with *more variables*. Since the range of possible responses is so broad, the clinician can make interpretations along multiple dimensions (needs, adjustment, diagnostic category, ego defenses, and so on). Many objective tests, in contrast, provide but a single score (such as degree of psychological distress) or scores on a fixed number of dimensions or scales.

### Measurement and Standardization

The contrasts between objective tests and projective tests are striking. The former, by their very nature, lend themselves to an actuarial interpretive approach. Norms, reliability, and even validity seem easier to manage. The projectives, by their very nature, seem to resist psychometric evaluation. Indeed, some clinicians reject even the suggestion that a test such as the Rorschach should be subjected to the indignities of psychometrics; they would see this as an assault upon their intuitive art. In this section, we offer several general observations about the difficulties involved in evaluating the psychometric properties of projective tests.

**Standardization.** Should projective techniques be standardized? There are surely many reasons for doing so. Such standardization would facilitate communication and would also serve as a check against the biases and the interpretive zeal of some clinicians. Furthermore, the enthusiastic proponents of projectives usually act as if they have norms (implicit though these may be) so that there seems to be no good reason not to attempt the standardization of those norms. Of course, research problems with projectives can be formidable.

The dissenters argue that interpretations from projectives cannot be standardized. Every person is unique, and any normative descriptions will inevitably be misleading. There are so many interacting variables that standardized interpretive approaches would surely destroy the holistic nature of projective tests. After all, they say, interpretation is an “art.”

**Reliability.** Even the determination of reliability turns out not to be simple. For example, it is surely too much to expect an individual to produce, word

for word, exactly the same TAT story on two different occasions. Yet how many differences between two stories are permissible? Of course, one can bypass test responses altogether and deal only with the reliability of the personality interpretations made by clinicians. However, this may confound the reliability of the test with the reliability of the judge. Also, test–retest reliability may be affected by psychological changes in the individual, particularly when dealing with patient populations. It is true that clinicians can opt for establishing reliability through the use of alternate forms. However, how do they decide that alternate forms for TAT cards or inkblots are equivalent? Even split-half reliability is difficult to ascertain because of the difficulty of demonstrating the equivalence of the two halves of each test.

**Validity.** Because projectives have been used for such a multiplicity of purposes, there is little point in asking general questions: Is the TAT valid? Is the Rorschach a good personality test? The questions must be more specific: Does the TAT predict aggression in situation A? Does score X from the Rorschach correlate with clinical judgments of anxiety?

With these issues in mind, we turn now to a discussion of several of the more popular projective tests.

### The Rorschach

Although the origins of the *Rorschach* lie in Europe, its subsequent development and elaboration occurred in the United States (Butcher, 2010; Exner, 1993). Disenchantment with objective inventories probably facilitated this development (Shneidman, 1965). However, the general rise of the psychodynamic, psychoanalytic movement and the emigration of many of its adherents from Europe to the United States in the 1930s were also important.

What has confused many and perhaps impeded efforts to demonstrate reliability and validity is the fact that there are several different general Rorschach approaches. For example, in the past, Klopfer, Beck,

Hertz, Piotrowski, and Rapaport each offered Rorschach systems (Exner, 1993). The systems differ in the manner in which they administer, score, and interpret the results of the test and in the instructions they provide to examinees. This has created many problems in interpreting the results of research studies and in generalizing from one study to another. In addition, Exner and Exner (1972) discovered that 22% of the clinicians they surveyed did not formally score the Rorschach at all, and 75% reported that when they did use a scoring system, it was a highly idiosyncratic one. However, it is now virtually a requirement for research publication that Rorschach protocols be scored in a systematic fashion and that adequate interscorer agreement be demonstrated (Weiner, 1991). At a minimum, we expect that Rorschach responses should be scored similarly by independent raters.

**Description.** The Rorschach consists of ten cards on which are printed inkblots that are symmetrical from right to left. Five of the ten cards are black and white (with shades of gray), and the other five are colored. A simulated Rorschach card is shown in Figure 8-2.

**Administration.** There are various techniques for administering the Rorschach. However, for many clinicians, the process goes something like this. The clinician hands the patient the first card and says, “Tell me what you see—what it might be for you. There are no right or wrong answers. Just tell me what it looks like to you.” All of the subsequent cards are administered in order. The clinician takes down verbatim everything the patient says. Some clinicians also record the length of time it takes the patient to make the first response to each card as well as the total time spent on each card. Some patients produce many responses per card, and others produce very few. The clinician also notes the position of the card as each response is given (right side up, upside down, or sideways). All spontaneous remarks or exclamations are also recorded.

Following this phase, the clinician moves to what is called the Inquiry. Here, the patient is



**FIGURE 8-2** Inkblot similar to those employed by Rorschach.

reminded of all previous responses, one by one, and asked what it was that prompted each response. The patient is also asked to indicate for each card the exact location of the various responses. This is also a time when the patient may elaborate or clarify responses.

**Scoring.** Although Rorschach scoring techniques vary, most employ three major determinants. *Location* refers to the area of the card to which the patient responded—the whole blot, a large detail, a small detail, white space, and so on. *Content* refers to the nature of the object seen (an animal, a person, a rock, fog, clothing, etc.). *Determinants* refer to those aspects of the card that prompted the patient’s response (the form of the blot, its color, texture, apparent movement, shading, etc.). Some systems also score Popular responses and Original responses (often based on the relative frequency of certain responses in the general population). Currently, Exner’s Comprehensive

### Rorschach Case Illustration 1

The examinee is an 18-year-old "normal" male college student.

	Response	Inquiry	Scoring
<b>Card I</b>	Looks like a crab or a sea animal of some kind	Claws make it look like a crab.	D F+ A (large detail, good form, animal object)
<b>Card VIII</b>	A flower of some kind. Possibly an iris.	The petals have that shape. And the colors of it, I guess.	W FC PI (whole card, form predominant over color, plant)

System of scoring is the most frequently used (Exner, 1974, 1993). Although the specifics of this scoring system are beyond the scope of this chapter (a total of 54 indices are calculated in Exner's Structural Summary), a number of resources are available that provide details on the Comprehensive System (including Exner, 1991, 1993).

The actual scoring of the Rorschach involves such things as compiling the number of determinants, computing their percentages based on the total number of responses, and computing the ratio of one set of responses to another set (e.g., computing the total number of movement responses divided by the number of color responses). Indeed, the

layperson is often surprised to learn that orthodox scoring of the Rorschach is much more concerned with the formal determinants than with the actual content of the responses. However, many contemporary clinicians do not bother with formal scoring at all, preferring to rely on the informal notation of determinants. Furthermore, these clinicians tend to make heavy use of content in their interpretations. Case illustrations 1 and 2 may help provide an idea of what is involved in the administration and scoring of a Rorschach.

As we observed earlier, Rorschach interpretation can be a complex process. For example, a patient's overuse of form may suggest conformity. Poor form,

### Rorschach Case Illustration 2

The following unscored set of responses was provided by a 42-year-old woman who was diagnosed by a psychiatrist as "anxiety reaction, chronic, severe" following a traumatic accident in her home. It is important to note that this diagnosis was arrived at by an examination of all the data available and not by use of the Rorschach alone.

<b>Card I</b>	Bat. (Anything else?) It's on a web.
<b>Card II</b>	A couple of bears.
<b>Card III</b>	I don't know. (See anything at all?) A couple of little birds.
<b>Card IV</b>	Looks like a bearskin of some kind, stretched out.
<b>Card V</b>	A butterfly.
<b>Card VI</b>	The middle looks like a lampstand or a pipestand.
<b>Card VII</b>	Looks like an island. (Anything else?) A ship in port. A vessel of some kind.

**Card VIII** A couple bears climbing a tree. (Anything else?) No.

**Card IX** I don't know what that looks like.

**Card X** Looks like something I've seen in the bottom of the ocean. A crawfish.

An excerpt from the clinician's report observed: "On the Rorschach, the patient's performance was constricted and conforming. Her responses seemed to be influenced by anxiety factors. There was a noticeable tendency for her to avoid the threatening aspects of the test (lack of structure) by giving only a few responses and then making them into popular or conforming ones. Her tendency to respond to the test in terms of animals or inanimate objects suggests some disturbance in social relationships or else a potential for withdrawal."

coupled with unusual responses, may hint at psychosis. Color is said to relate to emotionality, and if it is not accompanied by good form, it may often indicate impulsivity. Extensive use of white spaces has been interpreted as indicative of oppositional or even psychopathic qualities. Use of the whole blot points to a tendency to be concerned with integration and to be well organized. Extensive use of details is thought to be correlated with compulsivity or obsessional tendencies. But content is also important. Seeing small animals might mean passivity. Responses of blood, claws, teeth, or similar images could suggest hostility and aggression. Even turning a card over and examining the back might lead to an interpretation of suspiciousness. However, it is important that the reader treat these as examples of potential interpretations or hypotheses and not as successfully validated facts!

We conclude our discussion of the Rorschach with some general evaluative comments. As previously mentioned, the most comprehensive approach to scoring was developed by Exner (1974, 1993). His system incorporates elements from the scoring systems of other clinicians. Exner and his associates have offered a substantial amount of psychometric data, evidence of stable test–retest reliability, and construct validity studies. It is a promising, research-based approach that warrants careful attention from clinicians who choose to use the Rorschach. However, it is also important to note that many of the reliability and validity studies cited by Exner have been challenged (Wood, Nezworski, Lilienfeld, & Garb, 2003; Wood, Nezworski, & Stejskal, 1996). Next we discuss current perspectives on the reliability and validity of Rorschach scores.

**Reliability and Validity.** Research-oriented clinical psychologists have questioned the reliability of Rorschach scores for years (Wood et al., 2003). As we mentioned previously, at the most basic level, one should be confident that Rorschach responses can be scored reliably across raters. If the same Rorschach responses cannot be scored similarly by different raters using the same scoring system, then it is hard to imagine that the instrument would have much utility in clinical prediction situations. Unfortunately, the extent to which Rorschach scoring

systems meet acceptable standards for this most basic and straightforward form of reliability remains contentious. For example, in a rather heated exchange, Meyer (1997a, 1997b) reported that evidence indicates “excellent” interrater reliability for Exner’s scoring system, but Wood, Nezworski, and Stejskal (1997) remained unconvinced by his new reliability analyses and results.

Although interscorer reliability is important to address, we must also evaluate the consistency of an individual’s scores across time or test conditions as well as the reliability of score interpretations. Weiner (1995) argues that frequent retests (even on a daily basis) are possible because “the basic structure and thematic focus of their Rorschach data tends to remain the same” (p. 335). However, we are not aware of a large body of empirical studies that support the stability of Rorschach summary scores. The limited available evidence does tend to support the stability over time of summary scores believed to reflect trait-like dispositions (Meyer, 1997a; Weiner, Spielberger, & Abeles, 2002), but more evidence is needed to address this question.

Of crucial importance is the reliability of clinicians’ interpretations. This important but relatively neglected type of reliability is crucial for measures like the Rorschach. It is quite probable that two clinicians trained together over several years can achieve reliability in their interpretations. However, what about two clinicians with no common training? The proliferation of formal scoring systems, coupled with the tendency of so many clinicians to use freewheeling interpretive approaches, makes the calculation of this type of reliability difficult.

As for validity of Rorschach scores and interpretations, there have been many testimonials over the years. When skilled, experienced clinicians speak highly of an instrument, those in the field listen. But at some point, these testimonials must give way to hard evidence. From the vast Rorschach literature, it is apparent that the test is not equally valid for all purposes. In a very real sense, the problem is not one of determining whether the Rorschach is valid, but of differentiating the conditions under which it is useful from those under which it is not. For many years, a procedure involving interpretation

of a Rorschach with almost no other information about the patient was used to assess Rorschach validity. Even when Rorschach response protocols are submitted for analysis in this manner, however, identifying cues are often present. For example, the Rorschach protocols of 10-year-olds may be combined in one study with those of 60-year-olds. Sometimes the protocols are sent to former teachers or to friends so that there may be a higher-than-usual level of agreement. Just knowing that the protocols came from Hospital X may provide important cues about the nature of the patients.

Other studies have used a matching technique—specifically, the matching of Rorschach protocols with case histories—to assess the validity of Rorschach interpretations. However, there are also problems with these studies. Correct matching may be a function of one or two strikingly deviant variables. Consequently, what has really been validated? There have even been instances in which the person who had administered the Rorschach was subsequently asked to match it with the correct case history. Thus, a correct match may have been determined by the recall of patient characteristics observed during the testing.

Despite the questions raised about the validity of the Rorschach, several surveys have placed the Rorschach in a favorable light. For example, Parker et al. (1988), in a broad survey of Rorschach studies, found the average validity coefficient across a variety of Rorschach scales to be .41. Also, both interjudge reliability and test–retest reliability were in the mid-.80s. Still, many remain critical of the quality of the individual studies that have been cited as supporting the validity of Rorschach scores (e.g., Wood et al., 1996; Wood et al., 2003; Wood, Lilienfeld, Nezworski, Garb, Allen, & Wildermuth, 2010). Perhaps most important, a recent reanalysis of the studies included in Parker et al.'s (1988) meta-analysis arrived at a different conclusion. Garb et al. (1998), using data from the same studies reviewed by Parker et al., reported significantly lower validity estimates for Rorschach scores (validity coefficient of .29 vs. the previous estimate of .41). Further, the revised, corrected estimate of Rorschach validity was significantly lower than that of the MMPI

(.48). These findings, in addition to findings that fail to support the incremental validity of Rorschach scores (Archer & Krishnamurthy, 1997; Garb, 1984, 1998), led the authors to “recommend that less emphasis be placed on training in the use of the Rorschach” (p. 404). Indeed, in recent years, clinical psychology programs have progressively offered less training in projective techniques.

The debate over the utility of the Rorschach in clinical assessment continues (Meyer, 1999, 2001; Wood et al. 2003). Advocates (Viglione & Hilsenroth, 2001; Weiner et al. 2002) argue that the Rorschach is useful when the focus is on the unconscious functioning and problem-solving styles of individuals. However, critics remain skeptical of the clinical utility of Rorschach scores (Hunsley & Bailey, 2001; Hunsley & Mash, 2007) or their incremental validity (Dawes, 1999; Garb, 2003).

**Rorschach Inkblot “Method.”** Weiner (1994) has argued that the Rorschach is best conceptualized as a *method* of data collection, not a test.

The Rorschach is not a test because it does not test anything. A test is intended to measure whether something is present or not and in what quantity.... But with the Rorschach, which has traditionally been classified as a test of personality, we do not measure whether people have a personality or how much personality they have. (p. 499)

Several implications follow. First, Weiner argues that data generated from the Rorschach method can be interpreted from a variety of theoretical positions. These data suggest how the respondent typically solves problems or makes decisions (cognitive structuring processes) as well as the meanings that are assigned to these perceptions (associational processes). Weiner calls this an “integrationist” view of the Rorschach because the method provides data relevant to both the structure and dynamics of personality. According to Weiner, a second, practical implication is that viewing the Rorschach as a method allows one to fully use all aspects of the data that are generated, resulting in a more thorough diagnostic evaluation.

The influence and utility of this reconceptualization remain to be seen. In any case, empirical data supporting the utility and incremental validity of data generated by the Rorschach “method” are still necessary before its routine use in clinical settings can be advocated.

### The Thematic Apperception Test

The *Thematic Apperception Test (TAT)* was introduced by Morgan and Murray in 1935. It purports to reveal patients’ basic personality characteristics through the interpretation of their imaginative productions in response to a series of pictures. Although the test is designed to reveal central conflicts, attitudes, goals, and repressed material, it actually produces material that is a collage of these plus situational influences, cultural stereotypes, trivia, and so on. The clinician’s job is to separate the wheat from the chaff.

Most clinicians use the TAT as a method of inferring psychological needs (for achievement, affiliation, dependence, power, sex, etc.) and of disclosing how the patient interacts with the environment. In contrast to the Rorschach, the TAT is used to infer the content of personality and the mode of social interactions. With a TAT, clinicians are likely to make specific judgments, such as “This patient is hostile toward authority figures, yet seeks their affection and approval.” The TAT is less likely to be used to assess the degree of maladjustment than to reveal the locus of problems, the nature of needs, or the quality of interpersonal relationships.

**Description.** There are 31 TAT cards (one is a blank card); most depict people in a variety of situations, but a few contain only objects. Some are said to be useful for boys and men, some for girls and women, and some for both genders. Murray suggested that 20 of the 31 cards be selected for a given examinee. As a test, the TAT does not appear to be as ambiguous or unstructured as the Rorschach. However, though the figures in the pictures may clearly be people, it is not always clear what their gender is, exactly who the figures are, what they are doing, or what they are thinking.

Several additional instruments based on the TAT have been developed for administration to youth. The Roberts Apperception Test includes cards with animated drawings of adults and children. These cards typically do not portray gender in an ambiguous fashion, and often the drawing clearly depicts a specific activity (e.g., a conflict). The Children’s Apperception Test is quite similar to the Roberts Apperception Test, however all cards depict animals engaged in anthropomorphic activities. Since children often enjoy telling stories, and often are asked to make up stories based on pictures in school assignments, these tests are usually enjoyed by youth. However, many clinicians use them to develop rapport with children and perhaps generate initial hypotheses about the child’s thinking processes. Formal scoring of the Roberts Apperception Test or Children’s Apperception Test is rarely conducted.

**Administration.** In practice, clinicians typically select somewhere between 6 and 12 TAT cards for administration to a given patient. Although the exact instructions used vary from clinician to clinician, they go something like this: “Now, I want you to make up a story about each of these pictures. Tell me who the people are, what they are doing, what they are thinking or feeling, what led up to the scene, and how it will turn out. OK?” The patient’s productions are transcribed verbatim by the clinician (or sometimes tape-recorded). In some instances, patients may be asked to write out their stories, but this can result in shorter-than-normal stories.

**Scoring.** Many scoring techniques have been proposed over the years (Exner, 1983; Lilienfeld, Wood, & Garb, 2000; Shneidman, 1965). It seems that most clinicians have chosen to accept the judgment that quantified scoring systems cause clinically useful evidence to be distorted or lost and use such systems only for research purposes. Interestingly, the TAT has never been as soundly criticized as has the Rorschach. This may be partially due to the fact that there has never been much interest in or emphasis on scoring the TAT; it is hard to carry out empirical studies that fail to support underutilized scoring systems.

### TAT Case Illustration

**Card 3BM** Looks like a little boy crying for something he can't have. (Why is he crying?) Probably because he can't go somewhere. (How will it turn out?) Probably sit there and sob himself [sic] to sleep.

**Card 3GF** Looks like her boyfriend might have let her down. She hurt his feelings. He's closed the door on her. (What did he say?) I don't know.

**Card 9GF** Girl looks like somebody's run off and left her. She's ready for a dance. Maid is watching to see where she goes. (Why run off?) Probably because she wasn't ready in time.

**Card 10** Looks like there's sorrow here. Grieving about something. (About what?) Looks like maybe one of the children's passed away.

**Card 13MF** Looks like his wife might have passed away and he feels there's nothing more to do.

**Card 20** Looks like a man that's ready to rob something. Hiding behind a high fence of some kind. Has his hand in his pocket with a gun ready to shoot if anybody comes out.

An excerpt from the clinician's report offers this analysis. "The TAT produced responses that were uniformly indicative of unhappiness, threat, misfortune, or lack of control over environmental forces. None of the test responses were indicative of satisfaction, happy endings, and so on. In this test, as in the Rorschach, impoverished and constricted responses are evident which probably indicate anxiety and depression.... In summary, the test results point to an individual who is anxious and, at the same time, depressed. Feelings of insecurity, inadequacy, and lack of control over environmental forces are apparent, as are unhappiness and apprehension. These factors result in a constriction of performance that is largely oriented toward avoiding threat and that hampers sufficient mobilization of energy to perform at an optimal level."

The following examples illustrate several TAT themes and the interpretations or analyses made from them. They are verbatim responses from the same 42-year-old woman described in Case Illustration 2 of the Rorschach section.

Lindzey, Bradford, Tejessy, and Davids (1959) compiled a dictionary of interpretive generalizations that might be made from TAT stories based on a survey of nearly 200 publications. The sheer volume of possible TAT interpretations from the various story cues is tremendous. This highlights the difficulty of assessing TAT validity—namely, validity with respect to what? Following are a few of the interpretive generalizations culled from the literature by Lindzey et al. (1959):

Paranoid symptomatology indicated by:

Stereotyped phrases used throughout a record. (Rapaport, 1946, p. 449)

Anxiety indicated by: ... plots emphasizing sudden physical accidents and

emotional trauma, such as loss of wife, mother, sweetheart, job, a house burning down, or a stock crash. (Rotter, 1946, p. 88)

Dependency in adolescents indicated by ... three or more references to one or more members of the family. (Symonds, 1949, p. 87)

Patients with sexual problems may: ... avoid the picture on the wall in Picture #4 or refuse to discuss the nude female in Picture #13. (Stein, 1948, p. 42)

Unfortunately, these propositions have received relatively little research attention. Further, we are not aware of any research suggesting that information obtained from the TAT is significantly related to treatment outcome. Given the TAT's purported ability to identify interpersonal styles that might influence choices regarding the therapist's treatment approach, this is somewhat surprising.

**Reliability and Validity.** As with the Rorschach, let us conclude this section with a summary evaluation of the TAT. It is very difficult to evaluate the reliability and validity of the TAT in any formal sense (Lilienfeld et al., 2000). There are so many variations in instructions, methods of administration, number of cards used, and type of scoring system (if any) that hard conclusions are virtually impossible. The same methodological issues arise when studying reliability. For example, personality changes may obscure any conclusions about test-retest reliability, or there may be uncertainty about equivalent forms when trying to assess alternate-forms reliability. It is possible to investigate theme reliability, but since one cannot expect word-for-word similarity from one occasion to the next, one is usually studying the reliability of judges' interpretations. When there is an explicit, theoretically derived set of scoring instructions (e.g., B. J. Fitzgerald, 1958), interjudge agreement can reach acceptable proportions. Interjudge reliability can also be achieved when quantitative ratings are involved (Harrison, 1965). But broad, global interpretations can present problems.

Some attempts have been made to establish the validity of the TAT. Methods have included (a) comparison of TAT interpretations with case data or with therapist evaluations of the patient; (b) matching techniques and analyses of protocols with no additional knowledge about the patient; (c) comparisons between clinical diagnoses derived from the TAT and psychiatrists' judgments; and (d) establishment of the validity of certain general principles of interpretation (e.g., the tendency of the person to identify with the hero of the story or the probability that unusual themes are more significant than common ones).

In their review of the research evidence supporting the TAT, Lilienfeld et al. (2000) concluded that, although there is preliminary, modest support for the ability of certain TAT scores to assess need for achievement and for object relations, it is not clear that the routine use of the TAT is warranted. Adequate norms for TAT scores are lacking, and more important, clinicians typically do not compute scores but rather rely on qualitative impressions of

the stories provided by respondents (Hunsley & Mash, 2007).

Therefore, typical clinical use of the TAT suggests that it remains basically a subjective instrument. Although it is possible to identify general principles of interpretation, these can serve only as guides—not as exact prescriptions for interpretation. Adequate interpretation depends on some knowledge of the patient's background. As the clinician examines the test protocol, attention must be paid to the frequency with which thematic elements occur, the unusualness of stories, the manner in which plots are developed, misrecognitions, the choice of words, identifications with plot characters, and so on. The clinician will want to look closely at the nature of the TAT heroes or heroines and at their needs and goals. The situations described by the respondent are also important, as is the general emotional ambiance of the themes.

### Sentence Completion Techniques

A very durable and serviceable, yet simple, technique is the sentence completion method. The most widely used and best known of the many versions is the Rotter Incomplete Sentences Blank (Rotter, 1954; Rotter & Rafferty, 1950). The *Incomplete Sentences Blank (ISB)* consists of 40 sentence stems—for example, “I like ...,” “What annoys me ...,” “I wish ...,” and “Most girls ...” Each of the completions can be scored along a 7-point scale to provide a general index of adjustment–maladjustment (e.g., Jessor, Liverant, & Opochinsky, 1963). The ISB has great versatility, and scoring techniques for a variety of variables have been developed (e.g., Fitzgerald, 1958). Similar versions of sentence completion techniques have been developed for use with young children and with adolescents.

The ISB has several advantages. The scoring is objective and reliable, due in part to extensive scoring examples provided in the manual. The ISB can be used easily and economically, and it appears to be a good screening device. Although it can be scored objectively, it also allows considerable freedom of response. Thus, the ISB falls somewhere between the two extremes of the objective–projective

**Sentence Completion Test**

Instructions: Finish each of the following sentences in any way you wish.

1. I secretly wish \_\_\_\_\_.
2. What worries me is \_\_\_\_\_.
3. Secretly, I need \_\_\_\_\_.
4. In the evening \_\_\_\_\_.
5. My mom \_\_\_\_\_.
6. I want \_\_\_\_\_.
7. My classes \_\_\_\_\_.
8. I fear \_\_\_\_\_.
9. I get angry when \_\_\_\_\_.
10. Men \_\_\_\_\_.
11. Tomorrow \_\_\_\_\_.
12. My best friend \_\_\_\_\_.
13. My nerves \_\_\_\_\_.
14. I have fantasies about \_\_\_\_\_.
15. For sure \_\_\_\_\_.
16. Higher education \_\_\_\_\_.
17. Getting married \_\_\_\_\_.
18. If only I could \_\_\_\_\_.
19. My dad \_\_\_\_\_.
20. People \_\_\_\_\_.
21. I would eventually like to \_\_\_\_\_.
22. My dad thinks my mom \_\_\_\_\_.
23. I wish I could forget \_\_\_\_\_.
24. Many of my friends \_\_\_\_\_.
25. My biggest wish \_\_\_\_\_.
26. My best friend doesn't know \_\_\_\_\_.

**Example of a sentence completion test.**

dimension. It represents a fairly direct approach to measurement that does not require the degree of training that is necessary, for example, to score the Rorschach. Some clinicians may be disturbed by the ISB's relative lack of disguise. Perhaps because of

this, the ISB does not typically provide information that could not be gleaned from a reasonably extensive interview. In many ways, then, the ISB provides a cognitive and behavioral picture of the patient rather than a "deep, psychodynamic" picture.

## ILLUSORY CORRELATION

The interpretation of projective test responses depends heavily on the psychodiagnostician's experience. Observations are accumulated regarding the presence of certain test responses that supposedly occur in connection with certain personality characteristics. As a result, the clinician "learns" to associate these test responses with specific personality characteristics. They become "signs" of these underlying personality characteristics. However, a great deal of research evidence fails to support the meaningfulness of many of these diagnostic signs. Little and Shneidman (1959) found, for example, that eminent clinicians performed only slightly better than chance in making valid statements about patients on the basis of their test responses. Chapman and Chapman (1969) believe that one reason for this poor performance lies in the tendency to rely on *illusory correlations* between test responses and personality characteristics. Chapman and Chapman found that in the case of the Rorschach, clinicians tended to focus on test responses that have a high associative value with male homosexuality. Thus, when they observed such test responses of males as "This looks like a man bending over" or "This is an anal opening," they quickly but mistakenly assumed they had evidence for the presence of homosexual tendencies. At the same time, they overlooked valid signs that had low associative strength, such as threatening animals or animals that are humanized (e.g., a headless monster or a woman with butterfly wings). Although the "diagnosis" of homosexuality is not relevant to the practice of contemporary clinical psychology because homosexuality is not considered a mental disorder (as it was in *DSM-II*, 1968), the important point is that illusory correlation based on associative strength can introduce a powerful source of error.

## INCREMENTAL VALIDITY AND UTILITY

As mentioned in the discussion of the MMPI-2, *incremental validity* refers to the degree to which a procedure adds to the prediction obtainable from

other sources (Hunsley & Mash, 2007; Meehl & Rosen, 1955; Sechrest, 1963).

For an assessment procedure to be of real value, it must tell clinicians something of importance that they cannot get from merely inspecting the *base rates* (prevalence rates) for the population of interest. If a clinician in a state facility for those with mental retardation reports via the WISC-IV that a certain patient should be given a diagnosis of mental retardation, this hardly comes as a surprise because we already know that almost all of the institutional populace has mental retardation. If, however, the test can tell the clinician something about the patient's patterning of abilities that will assist in planning vocational training, then some incremental validity may be ascribed to the testing procedure. Discovering from a Rorschach that a 70-year-old widower "seems to be grappling with intense feelings of loneliness" hardly represents a breakthrough in incremental validity, even though the statement may be entirely true. Asserting that the TAT themes of a patient with schizophrenia reveal adjustment difficulties or that the Rorschach responses of a patient known to be depressed are suggestive of dysphoria and sadness adds little if anything to existing knowledge, even though it may appear that something correct and profound has been said.

A recent review of studies that assessed the incremental validity of popular psychological measures (Garb, 2003) revealed the following:

1. Several studies offer tentative support for the incremental validity of select MMPI-2 scales in the prediction of personality disorder and aggression and in the differentiation between depressed patients and substance abuse patients.
2. NEO-PI-R scores have been shown to provide incremental predictive ability in the assessment of personality disorder, maternal responsiveness to infants, and violence.
3. Studies support the incremental validity of Rorschach measures of thought disorder, a feature of psychosis, whereas there is little support for the incremental validity of other Rorschach scores.
4. The incremental validity of the TAT or projective drawings has not been adequately investigated.

5. There is some support for the incremental validity of the Sentence Completion Test.

Finally, it should be noted that a given assessment instrument must demonstrate incremental validity over other, more economical measures (e.g., short self-report inventories) to justify its use (Yates & Taub, 2003). Otherwise, the extra effort for the same information wastes the clinician's and the patient's time.

## THE USE AND ABUSE OF TESTING

We have long been a test-oriented society. Whether the question concerns personnel selection, intellectual assessment, or measuring the "real me," many people turn to tests. Some consult the Internet for these tests and others consult skilled clinicians, but the abiding curiosity and the inflated set of expectations about tests seem constant. And quite often, such high expectations lead to abuse.

Testing is big business. Psychological, educational, and personnel corporations sell many thousands of tests each year. So many of our lives are touched in so many ways by assessment procedures that we have become accustomed to them and hardly notice them. Admission to college, employment, discharge from military service, imprisonment, adoption, therapeutic planning, computer dating, and special classes all may depend on test performance. Any enterprise that becomes so large and affects such large numbers of people invites careful scrutiny.

**Protections.** The American Psychological Association's (2002) ethical standards require that psychologists use only techniques or procedures that lie within their competence. These ethical standards, the growth of state certification and licensing boards, and the certification of professional competence offered by the American Board of Professional Psychology all combine to increase the probability that the public's interests will be protected.

In addition, the purchase of testing materials is generally restricted by the publisher to individuals

or institutions that can demonstrate their competence in administering, scoring, and interpreting tests. In effect, then, the sale of tests is not open but is dependent on the user's qualifications. However, neither professional guidelines nor publishers' restrictions are totally successful. Tests still sometimes find their way into the hands of unscrupulous individuals. Ethical standards are not always sufficient either. The marketers for each test bear some responsibility as well. Normative data and instructions for administration and scoring should be included in every test manual. All in all, enough data should be included to enable the user to evaluate the reliability and validity of the test.

**The Question of Privacy.** Most people assume that they have the right to reveal as little or as much as they like about their attitudes, feelings, fears, or aspirations. Of course, with subtle or indirect assessment procedures, an examinee cannot always judge with complete certainty whether a given response is desirable. But whatever the nature of a test, the individual has the right to a full explanation of its purposes and of the use to which the results will be put.

The examinee must be given only tests relevant to the purposes of the evaluation. If an MMPI-2 is included in a personnel-selection battery, it is the psychologist's responsibility to explain and document the relevance of the test (Camara & Merenda, 2000). Informed consent to the entire assessment process should be obtained, and individuals should be fully informed of their options. This applies even to those who have initiated the contact (as by voluntarily seeking clinical services).

**The Question of Confidentiality.** Issues of trust and confidentiality loom large in our society. The proliferation of computer processing facilities and huge electronic data banks makes it very easy for one government agency to gain access to personal records that are in the files of another agency or a company. Credit card agencies, the FBI, the CIA, the IRS, and other organizations create a climate in which no one's records or past seems to be confidential or inviolable. Although information revealed

**BOX 8-2 Graduate Student Perspective: Danielle L. Burchett**

Danielle L. Burchett is a 6th-year doctoral candidate in clinical psychology at Kent State University and a pre-doctoral intern at Patton State Hospital. She received her B.S. from California Polytechnic State University–San Luis Obispo and M.A. from Kent State University. Danielle studies underreporting and overreporting of psychological symptoms on personality assessment instruments, especially on the MMPI-2 and MMPI-2-RF. After graduation, she hopes to become a forensic psychologist so that she may conduct forensic assessments in competency to stand trial and sanity at the time of the offense cases. Danielle provided the following insights regarding her graduate school experience.

**What got you interested in clinical psychology?**

All my life, I've loved psychological thrillers. But, I really had no idea what psychology was about until I took introductory psychology in college. With the help of an outstanding professor, I came to love the subject. It then dawned on me that I could actually study and work with some of the populations that have been (often inaccurately) depicted on the big screen. From that point on, I couldn't believe people would want any other career path than my own.

**What did you do as an undergraduate to prepare for graduate school in clinical psychology?**

Knowing the competition would be fierce, I tried to get as much clinical, research, and teaching experience

as possible. I got clinical experience as a peer counselor, conducted a little bit of research and did a presentation at a small conference, and worked as a teacher's aide and tutor.

**What was the application process like for you?**

It was grueling! The process was like a demanding part-time job, except that I paid money rather than getting a paycheck. I almost cried during the GREs because I thought I was performing horribly. I came very close to canceling my scores before I even looked at them. Luckily, I did better than I thought and didn't have to take the test a second time.

**What was the interviewing process like for you?**

My in-person interviews were pleasant. All of the professors were very friendly and helpful. Phone interviews were another story. One professor called me and expected an interview right then and there. Needless to say, I was *not* prepared, and I completely botched the interview.

**Looking back, what activities or experiences were most important in preparing you for your graduate school program?**

I figured out ways to look unique. For example, I decided to get a statistics minor because I figured few applicants would have one. It also helped me to have a bit of research, teaching, and clinical experience.

to psychiatrists and clinical psychologists is typically regarded as privileged, there are continuing assaults on the right to withhold such information. For example, the *Tarasoff* decision of the California Supreme Court makes it clear that information provided by a patient in the course of therapy cannot remain privileged if that information indicates that the patient may be dangerous. If the "sanctity" of the therapy room is less than unassailable, it is certain that personnel records, school records, and other test repositories are even more vulnerable. Clinical psychologists employed in industrial settings are also unable to ensure absolutely the privacy of test results. Clinicians can become caught in the middle of tugs of war between union and management over grievance claims. In addition, when people are treated

under insurance or medical assistance programs, their diagnoses are sometimes entered into computer records to which many companies may obtain access.

When an individual is tested, every effort should be made to explain the purposes of the testing, the use to which the results will be put, and the people or institutions that will have access to the results. If the individual gives informed consent, the testing can proceed. However, if it subsequently becomes desirable to release the results to someone else, the individual's consent must be obtained. It is clear that not all clients wish to have their mental health records released, and even when they sign consent forms, they often seem to do so either out of a fear that they will be denied services or out of sheer obedience to authority.

From it, I determined that an academic career is a better fit for me than an applied one. This was crucial as I decided where to apply.

**Any additional hints for applying to graduate school in clinical psychology?**

Get input from professors about your personal statement. I was too shy and embarrassed about my writing to ask for input. After the process was over, I realized that my unpolished and overly personal essay was probably a detriment to my application. Finally, I hope you appreciate the competitive nature of the process. If you are not accepted to your favorite (or any) schools, stay positive! I've found that despite my plans, things often work out for the better. Where I ended up is a better fit for me than many places I thought highly of but was not admitted.

**Finally, tell us about the work you have conducted in Personality Assessment while in graduate school.**

During graduate school, my research has focused on inaccurate reporting of symptoms on self-report personality assessment instruments. Sometimes people hide symptoms they have, and sometimes they exaggerate or fabricate symptoms they don't. My research has focused on how well the current scales work to detect this inaccurate responding.



Danielle Burchett

Danielle L. Burchett

**The Question of Discrimination.** Since the rise of the civil rights movement, most people have become increasingly aware of the ways in which society has both knowingly and unknowingly discriminated against minorities. Within psychology, attacks have centered on the ways in which tests discriminate against minorities. For example, the original standardization of the Stanford-Binet contained no African American samples. Since then, many tests have been published whose attempts to include racially unbiased samples have been questioned. It is often charged that most psychological tests are really designed for White middle-class populations and that other groups are being tested with devices that are inappropriate for them.

Sometimes the minority group members' lack of exposure to tests and test situations may be a major source of the problem. Such inexperience, inadequate motivation, and discomfort in the presence of an examiner from another race all may affect test performance. Often, too, test materials are prepared or embedded in a racially unfair context. For example, the TAT cards may all depict White characters, or the items on an intelligence test may not be especially familiar to an African American child. The problem here is that the test items themselves, the manner in which they are presented, or the circumstances surrounding a test may work to the disadvantage of the minority individual.

**Test Bias.** It is important to remember that significant differences between mean scores on a test for different groups do not in and of themselves indicate test bias or discrimination. Rather, test bias or discrimination is a validity issue. That is, if it can be demonstrated that the validity of a test (e.g., in predicting criterion characteristics or performance) varies significantly across groups, then a case can be made that the test is “biased” for that purpose. In other words, a test is biased to the extent that it predicts more accurately for one group than for another group.

An example can illustrate these considerations. Let us assume that the authors developed a personality inventory measuring the trait “hostility.” As part of the standardization project for this test, the authors discovered that men scored significantly higher than women on this test. Does this indicate that the test is biased? Not necessarily. The authors found, in a series of validity studies, that the relationship (correlation) between hostility inventory scores and the number of *verbal* fights over the succeeding 2 months was quite similar for both men and women. In other words, the predictive validity coefficients for the two groups were comparable; similar hostility scores “meant” the same thing (predicted a comparable number of verbal fights) for men and women. On the other hand, it is quite possible that the strength of the correlation between hostility scores and *physical* fights over the next 2 months is significantly greater for men than for women. In this case, the use of the test to predict physical aggression in women would be biased if these predictions were based on the known association between hostility scores and physical fights found in men.

Several general points should be clear. First, differences in mean scores do not necessarily indicate test bias. In the previous example, there may be good reasons men score higher on average than women on a measure of hostility (e.g., hormonal differences or other biological factors may lead to higher levels of hostility for men). In fact, to find no difference in mean scores might call into question the validity of the test in this case. Second, the pronouncement of a test as “valid,” although

frequently seen in the clinical psychology literature, is incorrect. Tests may be valid (and not biased) for some purposes but not for others. Finally, one can “overcome” test bias by using different (and more appropriate) prediction equations for the different groups. In other words, bias comes into play when the clinical psychologist makes predictions based on empirical associations that are characteristic of another group (e.g., men) but not of the group of interest (e.g., women). The goal is to investigate the possibility of differential validity and, if found, to use the appropriate prediction equation for that group.

**Computer-Based Assessment.** Computers have been used for years to score tests and to generate psychological profiles. Now they are also used to administer and interpret responses to clinical interviews, IQ tests, self-report inventories, and even projective tests. The reasons given for using computers include cutting costs, enhancing clients’ attention and motivation, and standardizing procedures across clinicians. However, it is important to remember that computer systems can easily be misused, either by those who are poorly trained or by those who endow computers with a sagacity that transcends the quality and utility of the information programmed into them.

The increasing use of Internet-mediated psychological assessment raises a number of issues (Buchanan, 2002; Naglieri et al., 2004). First, relatively few studies have demonstrated that Internet-based versus traditional psychological tests possess the same psychometric qualities. For example, online tests may be less reliable or less valid for certain predictions than their traditional counterparts. Second, online assessment may also be subject to confounding factors like a lack of control over the testing situation, distractions, or technical problems. Finally, other concerns like test security and implications for those from culturally and linguistically diverse backgrounds reinforce the ethical responsibilities of clinical psychologists in both administering and interpreting scores from Internet-administered tests. In the end, it is always necessary to establish the reliability and validity of

an online version of a psychological test rather than assume these qualities can be generalized from the traditional test (Buchanan, 2002).

The use of *computer-based test interpretations (CBTIs)* is also a controversial issue (e.g., Snyder, 2000). CBTIs are prompted once a respondent's test scores are entered into a software package. Although CBTIs have the advantages of generating interpretive findings quickly, of minimizing subjectivity in selecting interpretations of scores, and of accessing large databases and processing potentially complex score patterns, there are a number of limitations as well (Snyder, 2000). First, many CBTI systems have not been adequately scrutinized from a scientific standpoint, and thus, inaccurate interpretations may result. Second, the impression of "scientific" precision may lead clinicians to indiscriminantly use CBTI material when it is not relevant or not appropriate. Therefore, like other forms of assessment, CBTIs themselves must be shown to be reliable (i.e., similar interpretations should be generated for similar scores), valid (i.e., interpretations should be accurate), and clinically useful (i.e., interpretations should aid in the clinical understanding and treatment planning for the respondent).

Guidelines have been proposed for how best to evaluate the reliability and validity of CBTIs (Snyder, Widiger, & Hoover, 1990) as well as how best to use CBTIs in clinical work (Butcher, 1995b). Butcher (1990, 1995b), for example, has outlined seven steps in providing MMPI-2 feedback to clients.

1. Provide historical information about the MMPI-2.
2. Briefly describe how the MMPI-2 scales were developed as well as the vastness of the empirical literature on the MMPI/MMPI-2.
3. Briefly describe the validity scales and what they indicate about the client's approach to the testing.
4. Describe the clinical hypotheses that have been generated based on the MMPI-2 profile, couching this in terms of how the client presented him- or herself and how he or she is viewing the problems (if any) at this time.
5. Discuss any significant elevations on the content scales because what these items measure is intuitively apparent.
6. Invite the client to ask questions about his or her scores and clarify any confusing issues.
7. Discuss how the client feels the test results fit or do not fit her or his experience. (adapted from Butcher, 1995b, p. 82)

Interestingly, results from several studies suggest that MMPI-2 test feedback may actually serve as a type of clinical intervention (Butcher, 2010). In the Finn and Tonsager (1992) study, one group of student clients at a university counseling center received MMPI-2 test feedback while they were on a waiting list at the clinic; a second group did not take the MMPI-2. The first group showed improvement on measures of both psychopathology symptoms and self-esteem, whereas the control group did not. Although it is possible that the "therapeutic effect" observed may be attributable just to taking the MMPI-2 (i.e., not necessarily the feedback), future research in this area seems warranted. This study is laudable because it attempted to demonstrate the clinical utility of the MMPI-2.

Ultimately, the success of any clinical assessment instrument will depend on whether the information provided by the test is useful for planning, conducting, and evaluating treatment.

## CHAPTER SUMMARY

Clinical psychologists frequently engage in personality assessment. However, the utility of even the most popular measures continues to be questioned. The managed care environment has placed even

more pressure on personality testing advocates to justify the use of popular measures.

In this chapter, we have discussed several test construction strategies and concluded that the

construct validity approach should be adopted when developing a measure. We have also reviewed several objective and projective personality assessment techniques. The MMPI-2 is the major objective personality test, and a wealth of data supports its use in clinical assessment. Although several concerns have been expressed about this newest version, in general it has been widely accepted and represents perhaps the most important measure in the field. Among projective techniques, we focused most of our discussion on the Rorschach. In many respects, clinical psychologists' allegiance to this test divides the field along the lines of believers versus nonbelievers. Academic clinical psychologists tend to be highly critical of the Rorschach, and the acrimonious debate over its legitimacy and merits rages on.

We have concluded with a discussion of the use and abuse of testing. The American Psychological Association publishes its *Standards for Educational and Psychological Testing* (for the most recent updated information on the newest version, see Web site 8-4 at the end of the chapter). These standards will continue to promote the ethical use of tests. Issues of protection, privacy, confidentiality, discrimination, and test bias must be considered by clinical psychologists involved in the development and use of personality tests. Finally, we have discussed the contemporary trend of computer-based testing and interpretation. It is likely that technological advances will continue to influence the way psychological tests are developed, administered, and interpreted.

## KEY TERMS

**base rates** Prevalence rates.

**computer-based assessment** The use of computers to administer (and possibly interpret) responses to clinical interviews, IQ tests, self-report inventories, and so on.

**computer-based test interpretations (CBTIs)**

The interpretive profiles generated by computer scoring programs for various psychological tests. The use of such profiles has been the subject of intense debate.

**construct validity approach** An approach to test construction in which scales are developed based on a specific theory, refined using factor analysis and other procedures, and validated by showing (through empirical study) that individuals who achieve certain scores behave in ways that could be predicted by their scores.

**content validation** The process by which one ensures that a test will adequately measure all aspects of the construct of interest. Methods of content validation include carefully defining all relevant aspects of the construct, consulting experts, having judges assess the relevance of each

potential item, and evaluating the psychometric properties of each potential item.

**empirical criterion keying** An approach to test development that emphasizes the selection of items that discriminate between normal individuals and members of different diagnostic groups, regardless of whether the items appear theoretically relevant to the diagnoses of interest.

**factor analytic approach** A statistical method often used in test construction to determine whether potential items are or are not highly related to each other.

**Five-Factor Model (FFM)** A comprehensive model of personality that comprises the dimensions of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness as well as six facets belonging to each dimension.

**illusory correlation** In the context of projective testing, the phenomenon by which certain test responses become associated with specific personality characteristics. These responses come to be viewed as signs of the trait in question and may be given undue weight when interpreting the test.

**Incomplete Sentences Blank (ISB)** The best known and most widely used of the sentence completion techniques, consisting of 40 sentence stems.

**incremental validity** The extent to which a scale score provides information about a person's behavior, personality features, or psychopathology features that is not provided by other measures.

**MMPI-2** A measure of psychopathology that was developed using the empirical criterion keying approach. The MMPI-2 consists of 567 true–false items and provides scores on ten clinical scales, seven validity scales, and several content and supplementary scales. Interpretation of the MMPI-2 is usually based on an analysis of the entire profile rather than on selected scores. Like the MMPI before it, the MMPI-2 has been used for many different purposes across multiple settings, and it remains one of the primary self-report inventories of personality and psychopathology.

**objective personality measures** Personality assessment tools in which the examinee responds to a standard set of questions or statements using a fixed set of options (e.g., true or false, dimensional ratings).

**projective techniques** Psychological testing techniques that use people's responses to ambiguous test stimuli to make judgments about their adjustment–maladjustment. Proponents believe that examinees “project” themselves onto the stimuli, thus revealing unconscious aspects of themselves.

**Revised NEO-Personality Inventory (NEO-PI-R)** A self-report measure of the FFM that consists of 240 statements, each of which is rated on a 5–point scale. This test yields scores on all five domains of the FFM (Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness) as well as the six facets corresponding to each domain.

**Rorschach** A projective technique that interprets people's responses to a series of ten inkblots.

**sentence completion method** A simple projective technique in which people are asked to complete, in writing, a number of sentence stems (e.g., “I often believe ...”).

**test bias** The situation in which different decisions or predictions are made for members of two groups, even when they obtain the same score on an instrument.

**Thematic Apperception Test** A projective technique that purports to reveal patients' personality characteristics by interpreting the stories they produce in response to a series of pictures.

**validity of cutoff scores (thresholds)** The extent to which a particular cutoff score accurately classifies people as either possessing or not possessing the disorder or trait in question.

**validity scales** Test scales that attempt to shed light on the respondent's test-taking attitudes and motivations (e.g., to present themselves in an overly favorable light, to exaggerate their problems or symptoms, to engage in random responding).

## WEB SITES OF INTEREST

To visit any of the following Web sites, go to [www.wadsworth.com](http://www.wadsworth.com) and click Links.

8-1 Frequently Asked Questions (FAQs) on Psychological Tests  
<http://www.apa.org/science/programs/testing/find-tests.aspx>

8-2 APA Statement on the Use of Secure Psychological Tests in the Education of Graduate and Undergraduate Psychology Students  
<http://www.apa.org/science/leadership/tests/test-security.aspx>

- 8-3 Psychological Testing and Assessment  
<http://www.apa.org/science/programs/testing/index.aspx>
- 8-4 Update on APA's revised Standards for Educational and Psychological Testing  
<http://www.apa.org/science/about/psa/2011/01/testing.aspx>

- 8-5 Society for Personality Assessment  
<http://www.personality.org/index.php>

# 9

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## Behavioral Assessment

### FOCUS QUESTIONS

1. Why is behavioral assessment an ongoing process?
2. What are the major differences between behavioral assessment and traditional assessment?
3. What factors affect the reliability and validity of observations?
4. What is the SORC model, and how is it applied to clinical problems?
5. What is the importance of cognitive variables in behavioral assessment?

### CHAPTER OUTLINE

#### The Behavioral Tradition

Sample Versus Sign  
Functional Analysis  
Behavioral Assessment as an Ongoing Process

#### Behavioral Interviews

BOX 9-1: *Clinical Psychologist Perspective:*  
*Stephen N. Haynes, Ph.D.*

#### Observation Methods

Naturalistic Observation  
Examples of Naturalistic Observation  
Controlled Observation  
Controlled Performance Techniques  
Self-Monitoring  
Variables Affecting Reliability of Observations  
Variables Affecting Validity of Observations

Suggestions for Improving Reliability and Validity of Observations  
Contemporary Trends in Data Acquisition

#### Role-Playing Methods

#### Inventories and Checklists

#### Cognitive-Behavioral Assessment

BOX 9-2: *Clinical Psychologist Perspective:*  
*Karen D. Rudolph, Ph.D.*

#### Strengths and Weaknesses of Behavioral Assessment

#### CHAPTER SUMMARY

#### KEY TERMS

#### WEB SITES OF INTEREST

In the traditional view, personality is a system of constructs that greatly influences behavior. Whether the construct is neuroticism, introversion, paranoia, or resilience, this view is concerned with relatively stable personal characteristics that contribute to behavior. It follows, then, that to understand or predict behavior one must assess underlying variables. This is, of course, an oversimplification that masks a good deal of disagreement because the underlying constructs that are important to a psychoanalytic clinician are likely to be quite different from those that are important to a cognitive-behavioral theorist.

Behavior therapists and assessors, however, do not look at personality in the traditional fashion. They see personality more in terms of behavioral tendencies in specific situations (Yoman, 2008). The focus shifts from a search for underlying personality characteristics to one that looks for the interaction between behaviors and situations. This kind of conceptualization leads some to view personality much like a set of abilities (Wallace, 1966). For such people, personality becomes a set of abilities or skills rather than a constellation of predispositions (e.g., needs or traits) that convey the essence of the person. Aggression and dependence are skills, much as riding a bicycle is a skill. The focus turns to adjectival properties rather than to nouns. For example, behavior therapists are interested in aggressive behavior, not aggression.

Behavioral assessment is especially relevant for work with children and adolescents. Most personality theorists agree that youth have not yet developed a set of stable personality traits. However, they may exhibit important constellations of observable behaviors that are important to measure when diagnosing and treating psychological symptoms. Thus, personality assessment is rarely conducted with youth, but behavioral assessment is quite common.

## THE BEHAVIORAL TRADITION

Before we examine specific methods of *behavioral assessment*, let us consider three broad ways in which it differs from traditional assessment.

### Sample Versus Sign

In traditional assessment, a description of the situation is much less important than the identification of the more enduring personality characteristics. In behavioral assessment, the paramount issue is how well the assessment device samples the behaviors and situations in which the clinician is interested. How well the test is disguised or how deeply into the recesses of personality it reaches become irrelevant questions. Years ago, Goldfried (1976) described the difference between a *sign* and a *sample* orientation to testing:

When test responses are viewed as a sample, one assumes that they parallel the way in which a person is likely to behave in a nontest situation. Thus, if a person responds aggressively on a test, one assumes that this aggression also occurs in other situations as well. When test responses are viewed as signs, an inference is made that the performance is an indirect or symbolic manifestation of some other characteristic. An example is a predominance of Vista responses on the Rorschach, in which the individual reports that his percepts are viewed as if they were seen from a distance. In interpreting such a response, one does not typically conclude that the individual is in great need of optometric care, but rather that such responses presumably indicate the person's ability for self-evaluation and insight. For the most part, traditional assessment has employed a sign as opposed to sample approach to test interpretation. In the case of behavioral assessment only the sample approach makes sense. (pp. 283–284)

## Functional Analysis

Another central feature of behavioral assessment is traceable to B. F. Skinner's (1953) notion of *functional analysis*. This means that exact analyses are made of the stimuli that precede a behavior and the consequences that follow it. Assessing the manner in which variations in stimulus conditions and outcomes are related to behavior changes makes possible a more precise understanding of the causes of behavior (Yoman, 2008). The major thesis is that behaviors are learned and maintained because of consequences that follow them. Thus, to change an undesirable behavior, the clinician must (a) identify the stimulus conditions that precipitate it and (b) determine the reinforcements that follow. Once these two sets of factors are assessed, the clinician is in a position to modify the behavior by manipulating the stimuli and/or reinforcements involved.

Crucial to a functional analysis is careful and precise description. The behavior of concern must be described in observable, measurable terms so that its rate of occurrence can be recorded reliably. With equal precision, the conditions that control it must also be specified. Both *antecedent conditions* and *consequent events* are thus carefully elaborated. Such events as time, place, and people present when the behavior occurs are recorded, along with the specific outcomes that follow the behavior of concern.

Suppose, for example, a child is aggressively disruptive in the classroom. A psychodynamic assessment might be directed toward analyzing the needs that the child is trying to satisfy. The hope is that once these needs are identified, they can be modified and the undesirable behavior eliminated. A behavioral assessment would ignore such hypothesized internal determinants as "needs" and focus instead on the target: aggressive behavior. It might be discovered that the child usually takes objects (e.g., a pencil) from another child (i.e., behaves aggressively) when the teacher is paying attention to others in the classroom. When the aggressiveness occurs, the teacher almost invariably turns her attention to the disruptive child. A functional analysis, then, reveals that lack of attention (*stimulus*) is followed by taking a pencil from another child (*behavior*), which in turn is followed by attention (*consequence*). Once this pattern of relationships is

established, steps can be taken to change it and thereby modify the undesirable behavior. As an example, the child might be put in a room alone following the disruptive behavior. This treatment would be expected to alter the behavior because it is no longer followed by consequences that the child finds reinforcing. This scenario may not seem much different from what many parents would do intuitively. The difference, however, resides in the care and precision with which relationships are identified and in the exact specification of the target behaviors. Table 9-1 summarizes a number of differences between psychodynamic and behavioral approaches to assessment.

Most behavioral therapists have broadened the method of functional analysis to include "organismic" variables as well. *Organismic variables* include physical, physiological, or cognitive characteristics of the individual that are important for both the conceptualization of the client's problem and the ultimate treatment that is administered. For example, it may be important to assess attitudes and beliefs that are characteristic of individuals who are prone to experience depressive episodes because of their purported relationship to depression as well as their suitability as targets for intervention. A useful model for conceptualizing a clinical problem from a behavioral perspective is the *SORC model* (Kanfer & Phillips, 1970):

- S = stimulus or antecedent conditions that bring on the problematic behavior
- O = organismic variables related to the problematic behavior
- R = response or problematic behavior
- C = consequences of the problematic behavior

Behavioral clinicians use this model to guide and inform them regarding the information needed to fully describe the problem and, ultimately, the interventions that may be prescribed.

## Behavioral Assessment as an Ongoing Process

As pointed out by Peterson and Sobell (1994) and others (e.g., Yoman, 2008), behavioral assessment in a clinical context (like most good assessment) is

**TABLE 9-1 Differences Between Behavioral and Traditional Approaches to Assessment**

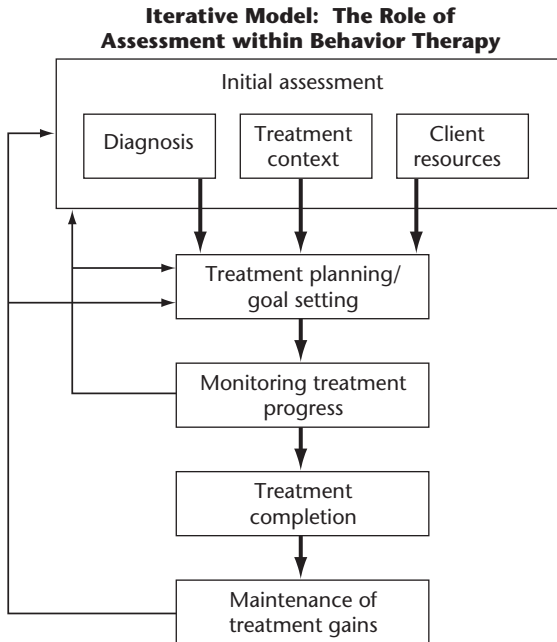
	Behavioral	Psychodynamic
<i>I. Assumptions</i>		
1. Conception of personality	Personality constructs mainly employed to summarize specific behavior patterns, if at all.	Personality as a reflection of enduring underlying states or traits.
2. Causes of behavior	Maintaining conditions sought in current environment.	Intrapsychic (within the individual).
<i>II. Implications</i>		
1. Role of behavior	Important as a sample of person's repertoire in specific situation.	Behavior assumes importance only insofar as it indexes underlying causes.
2. Role of history	Relatively unimportant, except, for example, to provide a retrospective baseline.	Crucial in that present conditions seen as a product of the past.
3. Consistency of behavior	Behavior thought to be specific to the situation.	Behavior expected to be consistent across time and settings.
<i>III. Uses of data</i>		
	To describe target behaviors and maintaining conditions.	To describe personality functioning and etiology.
	To select the appropriate treatment.	To diagnose or classify.
	To evaluate and revise treatment.	To make prognosis; to predict.
<i>IV. Other characteristics</i>		
1. Level of inferences	Low.	Medium to high.
2. Comparisons	More emphasis on intraindividual or idiographic.	More emphasis on interindividual or nomothetic.
3. Methods of assessment	More emphasis on direct methods (e.g., observations of behavior in natural environment).	More emphasis on indirect methods (e.g., interviews and self-report).
4. Timing of assessment	More ongoing; prior, during, and after treatment.	Pre- and perhaps posttreatment, or strictly to diagnose.
5. Scope of assessment	Specific measures and of more variables (e.g., of target behaviors in various situations, of side effects, context, strengths as well as deficiencies).	More global measures (e.g., of cure or improvement) but only of the individual.

SOURCE: Adapted from "Some Relationships Between Behavioral and Traditional Assessment," by D. P. Hartmann, B. L. Roper, and D. C. Bradford, *Journal of Behavioral Assessment*, 1979, 1, 4. Copyright © 1979 by Plenum Publishers. Reprinted by permission.

not a one-shot evaluation performed before treatment is initiated. Rather, it is an ongoing process that occurs before, during, and after treatment. Behavioral assessment is important because it informs the initial selection of treatment strategies, provides a means of feedback regarding the efficacy of the treatment strategies employed as they are enacted in the treatment process, allows evaluation of the overall effectiveness of treatment once

completed, and highlights situational factors that may lead to recurrence of the problematic behavior(s).

Figure 9-1 illustrates behavioral assessment at various stages of treatment (Peterson & Sobell, 1994). First, diagnostic formulations provide descriptions of maladaptive behaviors, or potential targets for intervention. Second, the patient's context or environment (social support system, physical



**FIGURE 9-1** Model of the role of behavioral assessment within behavior therapy.

SOURCE: Peterson, L., & Sobell, L. C. (1994). Introduction to the state-of-the-art review series: Research contributions to clinical assessment. *Behavior Therapy*, 25, 523-531. Copyright © 1994 by Elsevier. Reprinted with permission.

environment) is important to assess because of the relevance to treatment planning and the setting of realistic treatment goals. An evaluation of client resources, such as skills, level of motivation, beliefs, and expectations, is also important. As noted by Peterson and Sobell (1994), the initial assessments of diagnosis/maladaptive behaviors, treatment context, and client resources will naturally lead to a data-based initial treatment plan. This plan involves collaborative (patient and therapist) goal setting as well as mutually agreed-upon criteria to indicate improvement. Formal assessments of treatment progress serve as ongoing feedback as well as avenues for building the patient's self-efficacy as progress is made. Assessment following completion of treatment provides objective data regarding the patient's end-state functioning, which can then be compared to data from the pretreatment assessment. Finally, thorough assessment throughout all these

stages will provide information regarding the likelihood of symptom recurrence, including identification of "high-risk" environments that may lead to relapse.

Peterson and Sobell (1994) argue that this model of behavioral assessment has great potential to bridge the often wide gap between behavioral research and clinical practice. As we shall discuss in Chapter 14, the field of behavior therapy is unique in its emphasis on data-based decision making throughout all phases of treatment. Therefore, behavioral assessment is not a luxury but a necessity.

With these notions in mind, we now turn to an examination of some of the more common behavioral assessment methods.

## BEHAVIORAL INTERVIEWS

Obviously, one cannot begin a functional analysis or develop a program of behavioral treatment before one has at least a general notion of what the problem is. Yoman (2008) makes the case that an important first step in functional analysis is to define the "ultimate outcomes" of desired behavior change. In other words, the behavior therapist asks the client about the hoped-for results and, for each successive response, queries about the intended result of that change. This interview will result in a chain of behavior changes and results or consequences that can then inform the therapist about how short-term consequences of behavior change may be tied to long-term consequences or "ultimate outcomes." Typically, ultimate outcomes involve consequences like happiness, life satisfaction, or making the world a better place (Yoman, 2008). By going through such an exercise, the client's priorities for behavior therapy become clearer, and the therapist can identify his or her own skills and expertise that can be helpful as well as map out short-term obstacles to achieving these end goals.

To conduct the formal functional analysis, the behavioral clinician is likely to turn to that old standby, the interview, which is the clinician's best and most durable friend. During *behavioral*

**BOX 9-1 Clinical Psychologist Perspective: Stephen N. Haynes, Ph.D.**

Dr. Stephen N. Haynes is a Professor and former Department Chair and Director of the Clinical Psychology Program at the University of Hawaii at Manoa. Dr. Haynes is an internationally recognized expert in behavioral assessment, clinical case formulation, psychological test development and evaluation, and psychopathology. In addition to publishing more than 150 articles and book chapters, Dr. Haynes has authored several books on these topics. Dr. Haynes served as editor of the journal *Psychological Assessment*, and he is also on the editorial board of other major clinical psychology journals.

Dr. Haynes provided the following responses to our questions about his background, interests, and viewpoints.

**What originally got you interested in the field of clinical psychology?**

My commitment to psychology as a career occurred in Kalamazoo, Michigan, on a clear, crisp spring day during my sophomore year in high school. I was always drawn to questions about my environment when I was in high school. I contemplated air flow around falling leaves, why water circled during its drain exits, and why girls behaved the way they did. In the spring semester of my sophomore year, I encountered Ms. Mountjoy, a new student teacher who taught a one-semester course in psychology. We had intriguing and hilarious discussions of sex, how people learned and remembered things, and how they formed attitudes and cried. By perseveratively asking sex-tinged questions, we were able to make Ms. Mountjoy blush almost daily. Psychology was a fascinating application of science, and it was the most interesting and fun course I had in high school. It was a Tuesday morning in April of that sophomore year, following a particularly scintillating interaction with Ms. Mountjoy, when I decided that clinical psychology was something I could make a career of.

**Describe what activities you are involved in as a clinical psychologist.**

My current scholarly activities mostly involve research in psychopathology and clinical assessment. I am involved in psychopathology research on the causes of sleep disorders in persons who have experienced trauma (such as sexual assault or war trauma), on the effects of chronic pain on sleep, mood, and social interactions, on the psychosocial correlates of cardiovascular disorders, the causes and correlates of domestic violence and violence by psychiatric inpatients.

My assessment research involves the development of assessment instruments to measure important

personal and social problems. The valid measurement of these problems is a necessary antecedent to good research and treatment—you need good measures to know how well a treatment is working or to understand the causes of a behavior problem.

The most enjoyable aspect of my research is that it occurs in collaboration with many competent and fun colleagues and graduate and undergraduate students. Many of the projects are directed by graduate students and are often used as their theses and dissertations. Typically, each graduate student functions as a principal investigator and has a team of undergraduates working for him/her.

I also teach behavioral assessment and adult psychopathology courses to graduate students. We learn psychometric principles, behavioral interviewing, observation, and self-monitoring and study research on the causes of behavior disorders. In these courses, we study scientific principles of psychological assessment and apply these principles to the evaluation of families who are having significant troubles with their children. The goal of the assessment is to specify the problems and strengths of the family and, most important, identify the causes of the problems so that they can be treated.

I also enjoy editing and writing. As editor of *Psychological Assessment* I reviewed thousands of manuscripts submitted for publication and continue to review many manuscripts every year. It is an educational and humbling experience—I am continually confronted with the limits of my knowledge and by the impressive expertise of many scholars and reviewers. I have also published recent books on behavioral assessment with William O'Brien (2000) and Elaine Heiby (2004).

I don't do private therapy, but I do a lot of consulting, seminars, and workshops. I have also consulted with the family court system as a volunteer guardian for abused/neglected children, on case formulation at a state psychiatric institution, and at clinics serving adults and children with behavior problems. As I write this, I'm living in Spain giving lectures and workshops on assessment and clinical case formulation and writing more books on case formulation and the causes of psychopathology.

**What are your particular areas of expertise or interest?**

As I noted above, the areas in which I feel competent continue to shrink as I encounter the impressive expertise of other scholars and as the sophistication of the field increases. I would say that I am mildly to moderately familiar with methods of developing and evaluating assessment instruments, principles of clinical judgment

derived from assessment information (such as functional analysis), measurement principles, and research designs, including single-subject time-series designs. The content areas that I am most familiar with include health psychology (sleep disorders, cardiovascular disorders, chronic pain), experimental psychopathology, and marital distress. I am trying to learn more about calculus and physics because many of their principles are relevant to understanding behavior problems.

### What are the future trends you see for clinical psychology?

There are many good trends in clinical psychology and most are based on the advancement of the scientific aspects of clinical psychology. The advancement of the field will be associated with continued research and a scholarly approach to clinical psychology, particularly clinical assessment, as well as changes in the proliferation of methods of service delivery that are guided by the outcome of research. Trends include:

1. An increasing emphasis on empirically validated treatments and the use of empirically validated assessment instruments.
2. An increasing emphasis on clinical case formulation to select the best treatments, as empirically supported treatment options expand and we are more familiar with the individual differences among clients with the same behavior problems.
3. An emphasis on ongoing evaluation of treatment process and outcome (time-series measurements), using valid measures, so that changes in programs can be implemented quickly.
4. In assessment, increasing use of alternative assessment strategies, such as handheld computers, computerized interviews, analogue clinical observations, brief screening instruments, and specifically focused questionnaires.
5. Concepts and methods of psychology that combine information about our physiology, thinking, emotions, and actions.

The focus of the discipline is also likely to change:

1. An emphasis on the Ph.D. as a clinical supervisor and administrator.
2. A reduction in the number of expensive Psy.D. programs because of decreased payoff for the Psy.D. in private practice.
3. An increased focus on the science of clinical psychology.

4. An increased focus on program evaluation by Ph.D.s (evaluating how well treatment programs are working at different agencies).

### What future trends do you see in behavioral assessment?

1. Continued integration with mainstream psychology. Note that most articles in the *Journal of Consulting and Clinical Psychology* use some form of behavioral assessment method now, compared to approximately 0% in the 1960s.
2. Increasing use of computer technology—for example, ambulatory monitoring, handheld computers for self-monitoring, instrumentation in other ways (such as monitoring medication use or exercise), and computerized storage and analysis of data.
3. Increasing use of analogue clinic assessment—observation of parent–child interactions, marital interactions, social skills of abusive spouses in clinic settings.
4. More cost-efficient assessment: use of above procedures with less time involvement.
5. Increased understanding of sources of error in measurement and ways to control for measurement errors; a continued emphasis on a scholarly, empirically grounded approach to psychological assessment.
6. Increasing sophistication in the functional analysis of clients (clinical case formulation) and matching treatments to the functional analysis.



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*interviews*, the clinician attempts to gain a general impression of the presenting problem and of the variables that seem to be maintaining the problem behavior (Goldfried & Davison, 1994). Other information sought includes relevant historical data and an assessment of the patient's strengths and of past attempts to cope with the problem. Also of interest are the patient's expectations regarding therapy. Finally, when feasible, some initial establishment and communication of therapeutic goals by the clinician can be helpful. However, the basic goal of the interview is to identify specific problem behaviors, situational factors that maintain the problem behavior, and the consequences that result from the problem behavior. It should also be noted that the use of structured diagnostic interviews (see Chapter 6) is increasing among behavioral clinicians, who view the symptoms of mental disorders as problematic behaviors targeted for intervention.

## OBSERVATION METHODS

### Naturalistic Observation

To assess and understand behavior, one must first know what one is dealing with. It comes as no surprise, then, that behavioral assessment employs *observation* as a primary technique (Yoman, 2008). A clinician can try to understand a person with a phobia's fear of heights, a student's avoidance of evaluation settings, or anyone's tendency to overeat. These people could be interviewed or assessed with self-report inventories. But many clinicians would argue that unless those people are directly observed in their natural environments, true understanding will be incomplete. To determine the frequency, strength, and pervasiveness of the problem behavior or the factors that are maintaining it, behavioral clinicians advocate direct observation.

Of course, all this is easier said than done. Practically speaking, it is difficult and expensive to maintain trained observers and have them available. This is especially true in the case of adults who are being treated on an outpatient basis. It is relatively easier to accomplish with children or those with

cognitive limitations. It is likewise easier to make observations in a sheltered or institutional setting. In some cases, it is possible to use observers who are characteristically part of the person's environment (e.g., spouse, parent, teacher, friend, or nurse). In certain instances, as we shall see later, it is even possible to have the client do some self-observation. Of course, there is the ever-present question of ethics. Clinical psychologists must take pains to make sure that people are not observed without their knowledge or that friends and associates of the client are not unwittingly drawn into the observational net in a way that compromises their dignity and right to privacy.

For all these reasons, naturalistic observation has not been used in clinical practice as much as it might be. Indeed, observation is still more prominent in research than in clinical practice. However, one need not be a diehard proponent of the behavioral approach to concede the importance of observational data. It is not unlikely that clinicians of many different persuasions have arrived at incomplete pictures of their clients. After all, they may never see them except during the 50-minute therapy hour or through the prism of objective or projective test data. But because of the cumbersome nature of many observational procedures, for years most clinicians opted for the simpler and seemingly more efficient methods of traditional assessment.

Naturalistic observation is hardly a new idea. McReynolds (1975) traced the roots of naturalistic observation to the ancient civilizations of Greece and China. More than 60 years ago, Barker and Wright (1951) described their systematic and detailed recordings of the behavior of a 7-year-old over 1 day (a major effort that took an entire book). Beyond this, all of us recognize instantly that our own informal assessments of friends and associates are heavily influenced by observations of their naturally occurring behavior. But observation, like testing, is useful only when steps are taken to ensure its reliability and validity. As we pursue these topics, the reader may notice that a number of the factors that affect the reliability and validity of observations are basically the same as those discussed in connection with the interview (see Chapter 6).

## Examples of Naturalistic Observation

Over the years, many forms of naturalistic observation have been used for specific settings. These settings have included classrooms, playgrounds, general and psychiatric hospitals, home environments, institutions for those with mental retardation, and therapy sessions in outpatient clinics. Again, it is important to note that many of the systems employed in these settings have been most widely used for research purposes. But most of them are adaptable for clinical use.

**Home Observation.** Because experiences in the family or home have such pervasive effects on adjustment, it is not surprising that a number of assessment procedures have been developed for behaviors occurring in this setting. One of the most well-regarded systems for *home observation* is the *Mealtime Family Interaction Coding System* (MICS; Dickstein, Hayden, Schiller, Seifer, & San Antonio, 1994), which is based on the McMaster Model of Family Functioning (Epstein, Bishop, & Levin, 1978). This observational system involves the use of a videotaped interaction of the entire family eating at mealtime, without the presence of a clinician or researcher. Trained coders watch the videotape and rate the family on several domains, including:

*Task Accomplishment* (meeting and balancing of family members' needs in the context of the meal)

*Affect Management* (expression and management of feelings expressed by family members)

*Interpersonal Involvement* (the degree to which family members show concern for one another's needs)

*Behavior Control* (use of discipline and consistency)

*Communication* (appropriateness and directness of verbal and non-verbal communication)

*Roles* (how family members divide tasks and responsibilities) (Hayden et al., 1998)

In one study, Moens, Braet, and Soetens (2007) collected observational data from home interactions

in 28 families with a normal-weight child and 28 families with a child who was overweight (all children aged 7–13 years). Moens and colleagues (2007) asked parents to report the degree of support and control they provided to their children. They also collected observational data using the MICS on these same dimensions. Results revealed that although parents of overweight children reported that they provided similar levels of support to their children, as compared to parents of normal-weight children, observational data indicated that they provided significantly less support. Moreover, observational data indicated that as compared to other children, parents of overweight children exhibited significantly higher levels of maladaptive control, such as an overly permissive approach. Thus, in this study, the predictive value of naturalistic observation (over more traditional ratings by parents) was demonstrated.

**School Observation.** Clinical child psychologists must often deal with behavior problems that take place in the school setting; some children are disruptive in class, overly aggressive on the playground, generally fearful, cling to the teacher, will not concentrate, and so on. Although the verbal reports of parents and teachers are useful, the most direct assessment procedure is to observe the problem behavior in its natural habitat. Several coding systems have been developed over the years for use in *school observation*.

An example of a behavioral observation system used in school settings is Achenbach's revised *Direct Observation Form* (DOF; McConaughy & Achenbach, 2009) of the Child Behavior checklist. The DOF is used to assess problem behaviors that may be observed in school classrooms or other settings (McConaughy & Achenbach, 2009). It consists of 88 problem items as well as an open-ended item that allows assessors to indicate problem behaviors not covered by these items. Assessors are instructed to rate each item according to its frequency, duration, and intensity within a 10-minute observation period. It is recommended that three to six 10-minute observation periods be completed over at least two days, preferably in both the morning

**TABLE 9-2 Sample Items from the Direct Observation Form (DOF) of the Child Behavior Checklist**

1. Argues
2. Defiant or talks back to staff
3. Cruel, bullies, or mean to others
4. Disturbs other children
5. Physically attacks people
6. Disrupts group activities
7. Nervous, high-strung, or tense
8. Apathetic, unmotivated, or won't try
9. Shy or timid behavior
10. Stares blankly
11. Unhappy, sad, or depressed
12. Withdrawn, doesn't get involved with others

NOTE: All items are rated on a scale of 0 to 3 for the specified observation period. 0 = no occurrence; 1 = very slight or ambiguous occurrence; 2 = definite occurrence with mild to moderate intensity/frequency and less than 3 minutes total duration; 3 = definite occurrence with severe intensity, high frequency, or greater than 3 minutes total duration.

SOURCE: Copyright © 1986. T. M. Achenbach; Center for Children, Youth, and Families; University of Vermont, 1 South Prospect Street, Burlington, VT 05401. Reprinted with permission.

and afternoon. In this way, a more reliable and stable estimate of the child's level of behavior problems in the classroom can be obtained. Table 9-2 provides sample items from the DOF (McConaughy & Achenbach, 2009). Research has demonstrated that direct observations can be very useful in developing diagnostic formulations. In a sample of 310 children aged 6 through 12 years, McConaughy and colleagues (2010) revealed that the DOF helped identify youth with ADHD even after accounting for the predictive value of parent and teacher rating scales of inattentiveness and hyperactivity.

**Hospital Observation.** Observation techniques have long been used in such settings as psychiatric hospitals and institutions for those with mental retardation. The sheltered characteristics of these settings have made careful observation of behavior much more feasible than in more open, uncontrolled environments.

An example of a *hospital observation* measure is the *Time Sample Behavior Checklist (TSBC)* developed by Gordon Paul and his associates (Marrionto & Paul, 1974). It is a time-sample behavioral checklist that can be used with chronic psychiatric patients. Time-sample means that observations are made at regular intervals for a given patient. Observers can make a single 2-second observation of the patient once every waking hour. Thus, a daily behavioral profile can be constructed on each patient. Interobserver reliability for this checklist has typically been quite high, and scales such as the TSBC are helpful in providing a comprehensive behavioral picture of the patient. For example, using the TSBC, Menditto et al. (1996) documented how a combination of a relatively new antipsychotic medication (clozapine) and a structured social learning program (Paul & Lentz, 1977) helped significantly decrease the frequency of inappropriate behaviors and aggressive acts over a 6-month period in a sample of chronically mentally ill patients on an inpatient unit. More recently, Salinas, Paul, and Springer (2008) used the TSBC scores to index over 400 patients' overall level of functioning on inpatient units and found that the TSBC scores were most strongly and significantly related to discharge-readiness decisions by staff compared to ratings of paranoia and of patient hostile belligerence.

### Controlled Observation

Naturalistic observation has a great deal of intuitive appeal. It provides a picture of how individuals actually behave that is unfiltered by self-reports, inferences, or other potentially contaminating variables. However, this is easier said than done. Sometimes the specific kind of behavior in which clinicians are interested does not occur naturally very often. Much time and resources can be wasted waiting for the right behavior or situation to happen. The assessment of responsibility-taking, for example, may require day after day of expensive observation before the right situation arises. Then, just as the clinician is about to start recording, some unexpected "other" figure in the environment may step in to spoil the

situation by subtly changing its whole character. Furthermore, in free-flowing, spontaneous situations, the client may move away so that conversations cannot be overheard or the entire scene may move down the hall too quickly to be followed. In short, naturalistic settings often put clinicians at the mercy of events that can sometimes overwhelm opportunities for careful, objective assessment. As a way of handling these problems, clinicians sometimes use *controlled observation*.

Controlled observation is sometimes referred to as *analogue behavioral observation* (Haynes, 2001). Such observation can occur in a clinic setting or in the natural environment. The important feature is that the environment is “designed” such that it is likely that the assessor will observe the targeted behavior or interactions—for example, asking couples to discuss relationship problems in the laboratory to observe couple interaction patterns (Heyman, 2001).

For many years, researchers have used techniques to elicit controlled samples of behavior. These are really *situational tests* that put individuals in situations more or less similar to those of real life. Direct observations are then made of how the individuals react. In a sense, this is a kind of work-sample approach in which the behavioral test situation and the criterion behavior to be predicted are quite similar. This should reduce errors in prediction, as contrasted, for example, to psychological tests whose stimuli are far removed from the predictive situations.

**Parent–Adolescent Conflict.** To more accurately assess the nature and degree of parent–adolescent conflict, Prinz and Kent (1978) developed the *Interaction Behavior Code* (IBC) system. Using the IBC, several raters review and rate audiotaped discussions of families attempting to resolve a problem about which they disagree. Items are rated separately for each family member according to the behavior’s presence or absence during the discussion (or for some items, the degree to which they are present). Summary scores are calculated by averaging scores (across raters) for negative behaviors and positive behaviors. Recently, a group of investigators was interested in reducing family conflict within families

**TABLE 9-3 Sample Codes and Definitions from the Interaction Behavior Code (IBC)**

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**Negative Behavior**

1. *Yelling*—raising the volume of one’s voice in an angry manner.
2. *Name-calling*—applying a name to the other person that connotes something negative. Must be a noun.
3. *Mind-reading*—stating or attributing beliefs to the other person.

**Positive Behavior**

1. *Making suggestions*—offering solutions and possible ideas (without demanding) of things that can be done differently in the future.
  2. *Asking what the other would like*—attempting to find out what the other person wants, expects, or prefers.
  3. *Compromise*—modifying original intentions or preferences, willingness to do so.
- 

NOTE: Each code is rated according to whether it occurred during the time frame of interest.

SOURCE: Reprinted with permission of author, Dr. Ronald Prinz.

that included a child diagnosed with diabetes (Wysocki et al., 1999). These researchers offered behavioral family systems therapy to 119 families and used the IBC to measure conflict before and after the treatment. Results suggested promising effects for this form of therapy for reducing family conflict, and IBC offered a less-biased outcome measure than either child or parent reports of conflict (Wysocki et al., 1999). Table 9-3 presents a sample of the codes and definitions from the IBC.

### Controlled Performance Techniques

Contrived situations allow one to observe behavior under conditions that offer potential for control and standardization. A, perhaps, exotic example is the case in which A. A. Lazarus (1961) assessed claustrophobic behavior by placing a patient in a closed room that was made progressively smaller by moving a screen. Similarly, Bandura (1969) has used films to expose people to a graduated series of anxiety-provoking stimuli.

A series of assessment procedures using *controlled performance techniques* to study chronic snake phobias



© Corbis

Clinical psychologists can use various assessment devices to observe and rate the degree of conflict between parents and adolescents.

illustrates several approaches to this kind of measurement (Bandura, Adams, & Beyer, 1977):

*Behavioral avoidance.* The test of avoidance behavior consisted of a series of 29 performance tasks requiring increasingly more threatening interactions with a red-tailed boa constrictor. Subjects were instructed to approach a glass cage containing the snake, to look down at it, to touch and hold the snake with gloved and then bare hands, to let it loose in the room and then return it to the cage, to hold it within 12 cm of their faces, and finally to tolerate the snake crawling in their laps while they held their hands passively at their sides.... Those who could not enter the room containing the snake received a score of 0; subjects who did enter were asked to perform the

various tasks in the graded series. To control for any possible influence of expressive cues from the tester, she stood behind the subject and read aloud the tasks to be performed.... The avoidance score was the number of snake-interaction tasks the subject performed successfully.

*Fear arousal accompanying approach responses.* In addition to the measurement of performance capabilities, the degree of fear aroused by each approach response was assessed. During the behavioral test, subjects rated orally, on a 100-point scale, the intensity of fear they experienced when each snake approach task was described to them and again while they were performing the corresponding behavior. (pp. 127–128)

More recently, Armstrong, Sarawgi, and Olatunji (2011) used a controlled performance technique called a behavioral avoidance task to assess the level of behavioral avoidance and distress in a group of individuals with contamination fears, a symptom characteristic of obsessive compulsive disorder. Specifically, the researchers had participants enter a public restroom and progressively perform the following tasks: (1) touch inside the restroom sink; (2) touch inside the restroom trashcan; (3) touch the toilet seat; (4) touch the rim below the toilet seat; and finally (5) touch the inside of the toilet itself. After each step (1–5) the participants rated their level of distress and if they refused a step rated their perceived level of distress when they imagined themselves doing the step. In this way, the researchers were able to quantify behavioral avoidance (number of steps completed) and distress (total distress ratings). Therefore, in this controlled situation, the clinical researchers were able to get perhaps a more realistic idea of how severe the avoidance behavior and distress was for each individual because each person was actually faced with situations that invoked contamination fears.

Despite their appeal, it is important that the demand characteristics of these controlled situations be carefully examined. Behavior in these stressful situations may not always be typical of a patient's real-life behavior. For example, some patients may be influenced by the presence of the clinician or researcher, and, combined with a trusting attitude that such a clinician or researcher will not permit harm to come to the patient, may, for example, take more risks or report less distress than would be typical without such a companion.

In some cases, psychophysiological assessment procedures have been employed for both clinical and research purposes. *Psychophysiological measures* are used to assess unobtrusively central nervous system, autonomic nervous system, or skeletomotor activity (Cacioppo, Tassinari, & Berntson, 2007). These measures have been used in the assessment of a host of clinical conditions, including anxiety, stress, and schizophrenia. Clinical psychologists typically use psychophysiological measures to complement other,

more traditional forms of assessment. The advantage of psychophysiological measures is that they may assess processes (e.g., emotional responsivity) that are not directly assessed by self-report or behavioral measures, and they tend to be more sensitive measures of these processes than alternative measures. Examples of psychophysiological measures include event-related potentials (ERPs), electromyographic (EMG) activity, electroencephalographic (EEG) activity, and electrodermal activity (EDA). Although these measures do offer some advantages to the clinician, they are still subject to the same psychometric considerations of reliability and validity as other more traditional clinical assessment techniques (Strube & Newman, 2007).

### Self-Monitoring

In the previous discussion of naturalistic observation, the observational procedures were designed for use by trained staff: clinicians, research assistants, teachers, nurses, ward attendants, and others. But such procedures are often expensive in both time and money. Furthermore, it is necessary in most cases to rely on time-sampling or otherwise limit the extent of the observations. When dealing with individual clients, it is often impractical or too expensive to observe them as they move freely about in their daily activities. Therefore, clinicians have been relying increasingly on *self-monitoring*, in which individuals observe and record their own behaviors, thoughts, and emotions.

In effect, clients are asked to maintain behavioral logs or diaries over some predetermined time period. Such a log can provide a running record of the frequency, intensity, and duration of certain target behaviors, along with the stimulus conditions that accompanied them and the consequences that followed. Such data are especially useful in telling both clinician and client how often the behavior in question occurs. In addition, it can provide an index of change as a result of therapy (e.g., by comparing baseline frequency with frequency after 6 weeks of therapy). Also, it can help focus the client's attention on undesirable behavior and thus aid in reducing it. Finally, clients can come to realize the connections between environmental stimuli,

the consequences of their behavior, and the behavior itself.

Of course, there are potential problems with self-monitoring. Some clients may be inaccurate or may purposely distort their observations or recordings for various reasons. Others may simply resist the whole procedure. Despite these obvious difficulties, self-monitoring has become a useful and efficient technique. It can provide a great deal of information at very low cost. However, self-monitoring is usually effective as a change agent only in conjunction with a larger program of therapeutic intervention.

A variety of monitoring aids has been developed. Some clients are provided with small counters or stopwatches, depending on what is to be monitored. Small file-sized or wallet-sized cards have been developed upon which clients can quickly and unobtrusively record their data. At a more informal level, some clients are simply encouraged to make entries in a diary. These days, electronic dairies can be used for self-monitoring. Electronic dairies can take the form of personal digital assistants (PDAs), palmtop computers, or even mobile phones. Electronic dairies provide higher-quality data than paper-and-pencil dairies because time stamps indicate exactly when the experience was logged, and it is possible to portray the sequence of moods, behaviors, and cognitions across time (Piasecki, Hufford, Solhan, & Trull, 2007).

Self-monitoring dairies are especially useful when assessing or treating problems such as mood dysregulation, obesity, substance use problems, anxiety, and even psychotic experiences (Trull & Ebner-Priemer, 2009). These aids can help reinforce the notion that one's problems can be reduced to specific behaviors. Thus, a client who started with global complaints of an ephemeral nature can begin to see that "not feeling good about myself" really involves an inability to stand up for one's rights in specific circumstances, speaking without thinking, or whatever. An example of a self-monitoring log—in this case, a dysfunctional thought record—is shown in Figure 9-2.

The *dysfunctional thought record* (DTR) is completed by the client and provides the client and therapist with a record of the client's automatic thoughts

that are related to dysphoria or depression (J. S. Beck, 1995). This DTR can help the therapist and client target certain thoughts and reactions for change in a cognitive-behavioral treatment for depression. The client is instructed to complete the DTR when she or he notices a change in mood. The situation, automatic thought(s), and associated emotions are specified. The final two columns of the DTR can be filled out in the therapy session and serve as a therapeutic intervention. In this way, clients are taught to recognize, evaluate, and modify these automatic dysfunctional thoughts.

### Variables Affecting Reliability of Observations

Whether their data come from interviewing, testing, or observation, clinicians must be assured that the data are reliable. In the case of observation, clinicians must have confidence that different observers will produce basically the same ratings and scores. For example, when an observer of interactions in the home returns with ratings of a spouse's behavior as "low in empathy," what assurance does the clinician have that someone else rating the same behavior in the same circumstances would have made the same report? Many factors can affect the reliability of observations. The following is a good sample of these factors.

**Complexity of Target Behavior.** Obviously, the more complex the behavior to be observed, the greater the opportunity for unreliability. Behavioral assessment typically focuses on less complex, lower-level behaviors (Haynes, 1998). Observations about what a person eats for breakfast (lower-level behavior) are likely to be more reliable than those centering on interpersonal behavior (higher-level, more complex behavior). This applies to self-monitoring as well. Unless specific agreed-upon behaviors are designated, the observer has an enormous range of behavior upon which to concentrate. Thus, to identify an instance of interpersonal aggression, one observer might react to sarcasm while another would fail to include it and focus instead on clear, physical acts.

Directions: When you notice your mood getting worse, ask yourself, "What's going through my mind right now?" and as soon as possible jot down the thought or mental image in the Automatic Thought column.

Date/Time	Situation	Automatic thought(s)	Emotion(s)	Adaptive response	Outcome
	<p>1. What actual event or stream of thoughts, or daydreams or recollection led to the unpleasant emotion?</p> <p>2. What (if any) distressing physical sensations did you have?</p>	<p>1. What thought(s) and/or image(s) went through your mind?</p> <p>2. How much did you believe each one at the time?</p>	<p>1. What emotion(s) (sad/anxious/angry/etc.) did you feel at the time?</p> <p>2. How intense (0-100%) was the emotion?</p>	<p>1. (optional) What cognitive distortion did you make?</p> <p>2. Use questions at bottom to compose a response to the automatic thought(s).</p> <p>3. How much do you believe each response?</p>	<p>1. How much do you now believe each automatic thought?</p> <p>2. What emotion(s) do you feel now? How intense (0-100%) is the emotion?</p> <p>3. What will you do (or did you do)?</p>
Friday 2/23 10 A.M.	Talking on the phone with Donna.	She must not like me any more. 90%	Sad 80%		
Tuesday 2/27 12 P.M.	Studying for my exam.	I'll never learn this. 100%	Sad 95%		
Thursday 2/29 5 P.M.	Thinking about my economics class tomorrow.  Noticing my heart beating fast and my trouble concentrating.	I might get called on and I won't give a good answer. 80%  What's wrong with me?	Anxious 80%  Anxious 80%		

Questions to help compose an alternative response: (1) What is the evidence that the automatic thought is true? Not true? (2) Is there an alternative explanation? (3) What's the worst that could happen? Could I live through it? What's the best that could happen? What's the most realistic outcome? (4) What's the effect of my believing the automatic thought? What could be the effect of my changing my thinking? (5) What should I do about it? (6) If \_\_\_\_\_ [friend's name] was in the situation and had this thought, what would I tell him/her?

**FIGURE 9-2** An example of a Dysfunctional Thought Record.

SOURCE: From Beck, J. S., *Cognitive Therapy: Basics and Beyond*. Copyright (c) 1995 Guilford Publications, Inc. Reprinted with permission.

**Training Observers.** There is no substitute for the careful and systematic training of observers. For example, observers who are sent into psychiatric hospitals to study patient behaviors and then make diagnostic ratings must be carefully prepared in advance. It is necessary to brief them extensively on just what the definition of, say, depression is, what specific behaviors represent depression, and so on. Their goal should not be to “please” their supervisor by coming up (consciously or unconsciously) with data “helpful” to the project. Nor should they protect one another by talking over their ratings and then “agreeing to agree.”

Occasionally, there are instances of *observer drift*, in which observers who work closely together subtly, without awareness, begin to drift away from other observers in their ratings. Although reliability among the drifting observers may be acceptable, it is only so because, over time, they have begun to shift their definitions of target behaviors. Occasionally, too, observers are not as careful in their observations when they feel they are on their own as when they expect to be monitored or checked. To guard against observer drift, regularly scheduled reliability checks (by an independent rater) should be conducted and feedback provided to raters.

### Variables Affecting Validity of Observations

At this point, it seems unnecessary to reiterate the importance of validity. We have encountered the concept before in our discussions of both interviewing and testing; it is no less critical in the case of observation. But here, issues of validity can be deceptive. It seems obvious in interviewing that what patients tell the interviewer may not correspond to their actual behavior in non-interview settings. When a child is observed to bully his peers unmercifully and these observations are corroborated by reports from teachers, there would seem to be little question of the validity of the observers’ data. Aggression is aggression! However, things are not always so simple, as the following discussion will illustrate.

**Content Validity.** A behavioral observation schema should include the behaviors that are deemed important for the research or clinical purposes at hand. Usually, the investigator or clinician who develops the system also determines whether or not the system shows content validity. But this process is almost circular in the sense that a system is valid if the clinician decides it is valid. In developing the *Behavioral Coding System (BCS)*, Jones et al. (1975) circumvented this problem by organizing several categories of noxious behaviors in children and then submitting them for ratings. By using mothers’ ratings, they were able to confirm their own a priori clinical judgments as to whether or not certain deviant behaviors were in fact noxious or aversive.

**Concurrent Validity.** Another way to approach the validity of observations is to ask whether one’s obtained observational ratings correspond to what others (e.g., teachers, spouses, or friends) are observing in the same time frame. For example, do observational ratings of children’s aggression on the playground made by trained observers agree with the ratings made by the children’s peers? In short, do the children perceive each other’s aggression in the same way that observers do?

**Construct Validity.** Observational systems are usually derived from some implicit or explicit theoretical framework. For example, the BCS of Jones et al. (1975) was derived from a social learning framework that sees aggression as the result of learning in the family. When the rewards for aggression are substantial, aggression will occur. When such rewards are no longer contingent on the behavior, aggression should subside. Therefore, the construct validity of the BCS could be demonstrated by showing children’s aggressive behavior declines from a baseline point after clinical treatment, with clinical treatment defined as rearranging the social contingencies in the family in a way that should reduce the incidence of observed aggression.

**Mechanics of Rating.** It is important that a *unit of analysis* be specified (Tryon, 1998). A unit of analysis is the length of time observations will be made,

along with the type and number of responses to be considered. For example, it might be decided that every physical movement or gesture will be recorded for 1 minute every 4 minutes. The total observational time might consist of a 20-minute recess period for kindergarten children. This means that every 4 minutes the child would be observed for 1 minute and all physical movements recorded. These movements would then be coded or rated for the variable under study (e.g., aggression, problem solving, or dependence).

In addition to the units of analysis chosen, the specific form that the ratings will take must also be decided. One could decide to record behaviors along a dimension of *intensity*: How strong was the aggressive behavior? One might also include a *duration* record: How long did the behavior last? Or one might use a simple *frequency* count: How many times in a designated period did the behavior under study occur?

Beyond this, a scoring procedure must be developed. Such procedures can range from making checkmarks on a sheet of paper attached to a clipboard to the use of counters, stopwatches, timers, and even laptop computers. All raters, of course, will employ the same procedure.

**Observer Error.** No one is perfect. Observers must be monitored from time to time to ensure the accuracy of their reports. Sometimes they simply miss things or else believe they have observed things that never really happened. A child's yell may be accidentally attributed to the wrong child. Or perhaps the yell is coded as verbal aggression when actually it represented a kind of camaraderie. In other cases, it may not be error so much as bias. For some reason, an observer may not like a person in a family being observed. The observer may then be prone to provide a less than flattering rating for that person whenever the opportunity arises. It sometimes happens that a person being observed does something early in the observational sequence—solving a problem quickly, perhaps, or making an intelligent remark—that the observer reacts to. The result is a kind of halo effect so that later the observer is more likely to assign favorable

ratings to that person. Whatever the nature of the potential bias or error, it is important to hold careful training sessions for observers in advance, along with periodic review sessions, to help keep these sources of trouble in check.

**Reactivity.** Another factor affecting the validity of observations is *reactivity*. Patients or study participants sometimes react to the fact that they are being observed by changing the way they behave. The talkative person suddenly becomes quiet. The complaining spouse suddenly becomes the epitome of self-sacrifice. Sometimes an individual may even feel the need to apologize for the dog by saying, "He never does that when he is alone with us." In any case, reactivity can severely hamper the validity of observations because it makes the observed behavior unrepresentative of what normally occurs. The real danger of reactivity is that the observer may not recognize its presence. If observed behavior is not a true sample, this affects the extent to which one can generalize from this instance of behavior. Then, too, observers may unwittingly interfere with or influence the very behavior they are sent to observe. In the case of sexual dysfunction, for example, Conte (1986) has noted that behavioral ratings are so intrusive that clinicians usually have to rely on self-report methods. However, even self-monitoring may be subject to reactivity as well (Korotitsch & Nelson-Gray, 1999).

**Ecological Validity.** One of the biggest problems in psychology (and one that has never been fully resolved) is what Brunswik (1947) referred to many years ago as *ecological validity*. The basic question is whether or not clinicians do obtain really representative samples of behavior. Is the client's behavior today typical, or is it the product of some uncharacteristic stimulus? Such a question goes beyond simple reactivity. It asks whether or not observers have a large enough sample to assure that their observations will be truly representative. It is doubtful that any one piece of behavior will be typical of a given client. This being so, is the sample of 4 or 10 or 20 instances the proper number? All areas of psychology have long grappled with this problem. Is one experiment

on altruism a good enough sample of all possible situations to allow psychologists to make generalizations about it? Are observations of hospitalized patients about to undergo surgery general enough to suggest how these patients might react to other stressful situations?

### Suggestions for Improving Reliability and Validity of Observations

The following suggestions are offered as ways to improve the reliability and validity of observational procedures. Like similar suggestions made for interviews (see Chapter 6), they often cannot be fully implemented in clinical situations. Nevertheless, an awareness of these points may help focus the clinician's attention in directions that will improve the validity of observations.

1. Decide on target behaviors that are both relevant and comprehensive. Specify direct and observable behaviors that can be defined objectively.
2. In specifying these behaviors, work as much as possible from an explicit theoretical framework that will help define the behaviors of interest.
3. Employ trained observers whose reliability has been established and who are familiar with the objective, standardized observational format to be used.
4. Make sure that the observational format is strictly specified, including the units of analysis, the form in which observers' ratings will be made, the exact observational procedures, the scoring system, and the observational schedule to be followed.
5. Be aware of such potential sources of error in the observations as bias and fluctuations in concentration.
6. Consider the possibility of reactivity on the part of those being observed and the general influence of awareness that they are being observed.
7. Give careful consideration to issues of how representative the observations really are and how much one can generalize from them to behavior in other settings.

### Contemporary Trends in Data Acquisition

There are many ways in which technological advances have begun to change the face of behavioral assessment methods that involve observation. First, the availability of laptop and handheld computers/tablets/smartphones facilitates the coding of observational data by assessors. Second, handheld computers etc. can be assigned to clients so that clients can provide real-time self-monitoring data. One advantage of using handheld computers is that they can be programmed to prompt clients to respond to queries at specified times of the day or night. Third, data from handheld computers can be loaded onto other computers that have greater processing and memory capacity so that observations can be aggregated, scored, and analyzed. Finally, a variety of other technologies are being used to gather data on patients while they are in their natural environment. These include biosensors (Haynes & Yoshioka, 2007), audiorecordings (Mehl, Pennebaker, Crow, Dabbs, & Price, 2001), and both GPS devices and activity monitors (Intille, 2007). It is clear that behavioral assessors will continue to capitalize on future technological advances.

The use of these devices for data collection in individuals' natural environment is often called *ecological momentary assessment* (EMA; Stone & Shiffman, 1994; Shiffman, Stone, & Hufford, 2008), an important new research tool that has come into its own over the past 10 years. In some EMA research, for example, subjects carry *electronic diaries* (EDs) with them throughout the day in their natural environments. We briefly discussed electronic diaries above. The EDs are programmed to prompt or "beep" participants at random or quasi-random moments throughout each day. These prompts signal participants to complete a self-report assessment battery programmed into the ED. Typically, assessment items ask about momentary states and behaviors (e.g., "What is your mood right now?"). Thus, EDs are used as experience sampling tools. EMA has many conceptual advantages over traditional research designs when investigators are interested in characterizing dynamic, clinically important



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Handheld computers can be used to monitor and record thoughts, emotions, and behaviors as they occur.

psychological processes. Relative to laboratory research, EMA has the advantage of being *ecological*; processes such as mood can be studied in subjects' "natural habitats" where they are influenced by the many environmental and interpersonal factors that typify their lives but cannot be re-created in the laboratory. Of course, EMA research can not only sample the process of interest (e.g., mood) but also characteristics of the environment (e.g., location, time of day, presence of interpersonal conflict) that change over time and that may be important for explaining variation in the process of interest. Thus, EMA studies can yield exceptionally rich descriptive data.

Computerization represents another advantage of EMA protocols over traditional field techniques. Investigators have often collected field data using paper diaries, asking subjects to complete one or more diary entries per day between visits to the study center. A chief limitation of this approach is that investigators cannot be sure that the ratings were completed at the times specified by the research design. Subjects may neglect making scheduled ratings and then "backfill" their diaries before reporting to the study center to avoid admitting they failed to make the scheduled ratings. To the extent this backfilling occurs, it represents a serious threat to the validity of the research. At best, backfilling turns momentary reports into covert retrospective reports, allowing them to be influenced by the biases characteristic of retrospection (e.g., forgetting, self-presentation bias). Unfortunately, because the practice of backfilling is inherently deceptive, the investigator cannot know to what extent these errors are present in the data or how they vary from subject to subject. Because EDs are computerized, EMA studies avoid the backfilling problem. Subjects complete ratings in response to prompts emitted by the device, and entries are time-stamped by the computer. Non-compliance, if it occurs, is recorded as such by the absence of a completed assessment at the programmed prompt time. Backfilled entries, if subjects tried to make them, would be time-stamped and thus easily identified as questionable data.

A study of daily pain experiences (Stone, Shiffman, Schwartz, Broderick, & Hufford, 2002) provides dramatic evidence attesting to the advantages of computerized assessments relative to traditional paper diaries. The researchers passively time-stamped paper diary recordings by inserting a photocell in the cover of the diary binder to record when it was opened. Results showed that only 11% of the scheduled paper diary recordings were completed at the appropriate times. However, subjects *reported* complying with scheduled recording 95% of the time (i.e., they "hoarded" assessments and backdated them to create an impression of compliance). In contrast, a comparison group of

participants using an ED implemented by palmtop computer completed 94% of scheduled assessments at the time of the scheduled prompt. Thus, real-time computerized monitoring is clearly advantageous.

## ROLE-PLAYING METHODS

*Role-playing* is another technique that has been used in behavioral assessment. Role-playing or *behavioral rehearsal* (Goldfried & Davison, 1994) can be used as a means of training new response patterns. Although role-playing is an old clinical technique, behavioral assessors have carried out few systematic studies on the methodological problems inherent in the technique as a means of assessment—among them, demand characteristics, standardization of procedures, rater halo effects, and sampling problems involved in role selections.

Role-playing has been widely used in the assessment of social skills and assertiveness. In a study of social skills in shy men, for example, Twentyman and McFall (1975) developed six social behavior situations that required the individual to play a role. Participants were instructed to respond aloud as they would were they actually in the situation described to them. For example:

You are on a break at your job. You see a girl who is about your age at the canteen. She works in another part of the store, and consequently you don't know her very well. You would like to talk to her. What would you say? (p. 386)

Once the individual began speaking, a trained female assistant responded to his efforts. The conversation continued until the participant terminated the conversation or 3 minutes had gone by.

McFall and Lillesand (1971) also used role-playing in assessing assertiveness. Individuals were asked to respond aloud to nine recorded stimuli. For example:

*Narrator:* A person you do not know very well is going home for the weekend. He,

or she, has some books which are due at the library and asks if you would take them back so they won't be overdue. From where you live it is a twenty-five minute walk to the library, the books are heavy, and you hadn't planned on going near the library that weekend. What do you say? (Subject responds aloud.) (p. 315)

Obviously, role-playing techniques are not new. They have been used as therapeutic devices for many years (e.g., Kelly, 1955; Moreno, 1946; Rotter & Wichens, 1948). The behaviorally oriented clinician is interested in role-playing techniques because they provide a simple, efficient means of sampling the client's behavioral skills and deficits. However, we cannot assume that the behavioral skills developed in the therapy room are practiced consistently in the real world.

## INVENTORIES AND CHECKLISTS

Behavioral clinicians have used a variety of self-report techniques to identify behaviors, emotional responses, and perceptions of the environment. For example, the Fear Survey Schedule (Geer, 1965; Lang & Lazovik, 1963) and the Fear Questionnaire (Marks & Matthews, 1979) have been widely used to assess behaviors associated with anxiety disorders. The Fear Survey Schedule consists of 51 potentially fear-arousing situations and requires the patient to rate the degree of fear each situation arouses, and the Fear Questionnaire includes 15 items that cover situations that are avoided due to fear. Behavioral inventories also exist to assess a range of behaviors, including physical activity (Physical Activity Scale for the Elderly; Washburn, Smith, Jette, & Janney, 1993), binge eating (Binge Eating Scale; Gormally, Black, Daston, & Rardin, 1982), and alcohol use (Alcohol Use Disorders Inventory Test; World Health Organization), for example. Other frequently used self-report inventories in behavioral assessment include the Rathus Assertiveness Schedule (Rathus, 1973), the Beck Depression Inventory-II (Beck, Steer, & Brown,

1996), the Youth Self Report (Achenbach, 1991), and the Marital Conflict Form (Weiss & Margolin, 1977).

Notably absent from this brief and partial listing of inventories are instruments that have a psychiatric diagnostic orientation. Historically, this has been a conscious omission on the part of behavioral assessors, who generally found little merit in psychiatric classification (e.g., see Follette & Hayes, 1992). Tests used by behavior therapists were more oriented toward the assessment of specific behavioral deficits, behavioral inappropriateness, and behavioral assets (Sundberg, 1977). The focus of behavioral inventories is, in short, behavior. Clients are asked about specific actions, feelings, or thoughts that minimize the necessity for them to make inferences about what their own behavior really means.

## COGNITIVE-BEHAVIORAL ASSESSMENT

As we shall see in later chapters, behavioral approaches have become increasingly cognitively oriented (Goldfried & Davison, 1994; Meichenbaum, 1977). Cognitions along with behaviors are becoming the subject of intense study as they relate to the development of a pathological situation, its maintenance, and changes in it. Central to this type of *cognitive-behavioral assessment* is the notion that the client's cognitions and thoughts (from self-images to self-statements) play an important role in behavior (Brewin, 1988). Indeed, Meichenbaum (1977) advocates a *cognitive-functional approach*. In essence, this means that a functional analysis of the client's thinking processes must be made to plan an intervention strategy. A careful inventory of cognitive strategies must be undertaken to determine which cognitions (or lack of them) are aiding or interfering with adequate performance and under what circumstances.

As Parks and Hollon (1988) note, a number of methods and procedures are available for assessing cognitive functioning. For example, clients can be instructed to "think aloud," or verbalize immediate

thoughts; they can report their thoughts and feelings in reaction to recorded conversations of various types (e.g., stressful, social-evaluative situations); they can complete rating scales whose items target adaptive and maladaptive cognitions that may have occurred in the past; and they can list thoughts that occur in reaction to specific stimuli (e.g., topics or problems) that are presented.

A good example comes from work in which a task analysis of assertive behavior was made (Schwartz & Gottman, 1976). Cognitive self-statements as they relate to assertion situations were assessed by means of the Assertiveness Self-Statement Test (ASST). This is a 34-item questionnaire, with 17 positive self-statements that would make it easier to refuse a request and 17 negative self-statements that would make it harder. For example:

*Positive:* I was thinking that I am perfectly free to say no; I was thinking that this request is an unreasonable one.

*Negative:* I was worried about what the other person would think of me if I refused; I was thinking that the other person might be hurt or insulted if I refused. (Schwartz & Gottman, 1976, p. 913)

Through such assessment, it becomes clearer exactly what role is being played by self-statements in the maintenance of problems such as lack of assertiveness.

Similar procedures can be applied to such problems as overeating, depression, and shyness. For example, to assess agoraphobics' fear of fear, Chambless, Caputo, Bright, and Gallagher (1984) have developed a scale comprising thoughts about negative consequences as one experiences anxiety. Another example of cognitive assessment comes from the work of Seligman et al. (1988). Using the *Attributional Style Questionnaire*, they found that healthier explanations for events occurred in depressive patients following a course of cognitive therapy.

More recently, Turner, Beidel, Heiser, Johnson, and Lydiard (2003) developed a self-report measure to assess cognitions associated with social phobia, the *Social Thoughts and Beliefs Scale* (STABS). Social

**BOX 9-2 Clinical Psychologist Perspective: Karen D. Rudolph, Ph.D.**

Karen D. Rudolph is a Professor at the University of Illinois, Urbana-Champaign. She received her Ph.D. in Clinical Psychology at the University of California, Los Angeles, and completed a clinical internship at the Neuropsychiatric Institute and Hospital at UCLA. She has been a recipient of a William T. Grant Foundation Faculty Scholars Award and a James McKeen Cattell Sabbatical Award and is a two-time recipient of an Arnold O. Beckman Award from the University of Illinois. Dr. Rudolph has served as a PI and Co-PI on several large-scale longitudinal studies funded by the National Institutes of Health. She is an associate editor for the *Journal of Clinical Child and Adolescent Psychology* and serves on the editorial boards of *Development and Psychopathology* and *Journal of Abnormal Child Psychology*. She is currently co-editing the third edition of the *Handbook of Developmental Psychopathology* with Dr. Michael Lewis. Her research focuses on person-by-environment interactions that predict the emergence and continuity of depressive disorders in youth, with a focus on developmental transitions (e.g., puberty, school transitions) that create a context of risk for the onset or exacerbation of psychopathology.

Dr. Rudolph shared her perspectives on the field of clinical psychology and developmental psychopathology.

**What originally got you interested in the field of clinical psychology?**

My interest in the field of clinical psychology emerged in a fairly traditional way. Yes, I was the child who was always interested in why people acted in a certain manner, why siblings often develop quite different interests and characteristics, why peer groups could be supportive or cruel, and why some children struggled more than others in the process of development. As an undergraduate at the University of Pennsylvania, my first (intellectually stimulating and yet delightfully entertaining) introductory psychology course, taught by Dr. Henry Gleitman, confirmed my general interest in psychology. Whereas a course in developmental psychopathology, taught by Dr. Rena Repetti, provided a *name* for my specific emerging interest in how developmental processes contribute to differing social and mental health pathways across children. An internship and independent study project focused on

theory of mind in children with autism, supervised by Dr. Leila Gleitman, provided many *faces* for this interest. My graduate training at UCLA with Drs. Constance Hammen, John Weisz, and Stephen Hinshaw provided a more nuanced perspective regarding the intersection between personal vulnerabilities (ranging from coping to interpersonal competencies to cognitive processing) and contextual risks (ranging from the family to the peer group to life stressors) that contribute to the emergence of psychopathology across development. Ultimately, I think indecision helped guide my pursuits in the field of developmental psychopathology—rather than choosing one particular area of specialization, I could integrate my fascination with the many aspects of human functioning that shape development.

**Describe what activities you are involved in as a clinical psychologist.**

My primary activities involve conducting research and teaching in the field of developmental psychopathology and providing service at both a local and national level. My research integrates a variety of methodological approaches, including large-scale survey research within school settings, in-depth semi-structured interviews, laboratory and naturalistic observations of behavior, biological assessment of stress reactivity, and structured performance-based assessments (e.g., neuropsychological and cognitive tasks). My teaching involves lecture and seminar courses for undergraduate and graduate students as well as individual supervision of research conducted by undergraduate research assistants and doctoral students. As a faculty member, I serve on a variety of administrative committees within the department and university, and I serve on master's and dissertation committees for graduate students. I am also involved in several activities in the field more broadly, including: (a) reviewing manuscripts for multiple journals in the fields of clinical psychology, developmental psychology, and child psychiatry, as well as serving as an associate editor for the *Journal of Clinical Child and Adolescent Psychology*; (b) reviewing grants for federal government agencies and private foundations; and (c) reviewing conference abstracts and helping to organize professional conferences. Both in the context of my research and as a service to the community, I present professional workshops to schools and families regarding various topics

of interest, generate newsletters to inform local schools and families about our research findings, and conduct interviews with various media outlets about my research and related topics.

**What are your particular areas of expertise or interest?**

My research and teaching center broadly on the field of developmental psychopathology. In particular, my work is guided by a person-by-environment framework that considers how attributes of youth (e.g., sex, temperament, social-cognitive processes, biological and behavioral responses to stress) and their environments (e.g., family, peer group, school context) jointly contribute to well-being or ill-being across development. Theoretically, my work is characterized by two organizing themes. First, my research emphasizes a developmental perspective on psychopathology. This perspective is reflected in a focus on: (a) developmentally relevant vulnerabilities; (b) transactional processes—i.e., reciprocal influences between youth and their environments—that perpetuate psychopathology over time; (c) the role of developmental transitions; and (d) the early developmental origins of vulnerability. Second, my research emphasizes an interpersonal perspective on psychopathology. In particular, relationships are viewed as a fundamental context for development. I propose that psychopathology both emerges from, and contributes to, a disruption in developmentally salient interpersonal processes that interferes with youths' basic need to be related to others. A particular focus is placed in my research on understanding the emergence of sex-differentiated trajectories of psychopathology across development.

**What are the future trends you see for clinical psychology?**

Integration, integration, integration. One of the most salient trends in the field of clinical psychology is the blurring of boundaries across disciplines. Of course, one of the most rapidly growing areas in this respect is the intersection of neuroscience and clinical science, particularly efforts to use cutting-edge technology in the fields of molecular genetics and brain imaging to identify and clarify biological processes involved in psychopathology. As a field, it will be critical to translate these findings into practical applications through their incorporation into a new generation of diagnostic, prevention, and intervention procedures that drive

targeted efforts to reduce the development and exacerbation of symptoms. Success in this endeavor will require a consideration of how developing biological systems are influenced by, and influence, psychological, affective, and social processes underlying risk for psychopathology.

**How will clinical psychology change as a field as our methods for assessing behaviors (and psychopathology, and biomarkers) continue to evolve?**

As the field develops more sophisticated and precise methods for assessing genetic, cognitive, affective, biological, and behavioral markers of psychopathology, it is likely that we will place less emphasis on our traditional system of diagnostic classification, as reflected in the *Diagnostic and Statistical Manual*, and will move toward a system that emphasizes specific processes involved in the emergence of symptoms. This movement is reflected in the National Institutes of Mental Health's Research Domain Criteria project, which is attempting to identify critical constructs of interest at multiple levels of analysis that may bridge across traditionally defined disorders. The field also is likely to be marked by increasing acknowledgement of the need to consider quantitative differences in the expression of psychopathology in addition to, or perhaps eventually instead of, qualitative boundaries between disorders.



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phobia is prevalent in the general population, afflicting approximately 8% of Americans each year (Kessler et al., 1994). The STABS has items that assess respondents' thoughts in social situations that are characteristic of those with social phobia. These include cognitions related to social comparisons (e.g., beliefs that others are more socially competent and capable) as well as cognitions related to social ineptness (e.g., beliefs that one is awkward in social situations and will appear socially anxious to others). STABS scores have been shown to discriminate patients with social phobia from those with other anxiety disorder diagnoses (Turner et al., 2003).

Methods that assess multiple cognitive constructs at the same time are also available (Linscott & DiGiuseppe, 1998). For example, Davison, Robins, and Johnson (1983) have used a method in which participants listen to an audiotape that presents several problem situations. Every 10 or 15 seconds, the tape pauses so that the participants can report whatever is in their minds at that point. Results from numerous studies suggest that the method uncovers how people think about both difficult and innocuous situations (Davison & Neale, 1998), and it reveals cognitions related to a variety of conditions, including depression, anxiety, family conflict, and aggression (Linscott & DiGiuseppe, 1998).

## **STRENGTHS AND WEAKNESSES OF BEHAVIORAL ASSESSMENT**

The use of more systematic and precise methods of evaluation in the field of behavioral assessment is laudable. Behavioral assessors operationalize the clinical problem by specifying the behaviors targeted for intervention. Further, multiple assessments of these behaviors before, during, and following treatment are conducted. Finally, assessment results are used to inform or modify treatment. This is in contrast to "traditional" assessment in which, too often, assessment occurs only once, either before or in the beginning stages of treatment. In addition, it is often

not clear how these assessment results influence treatment.

The precision and comprehensiveness of behavioral assessment methods, however, appear to be both a strength and a weakness. Many of these techniques have proved to be impractical in clinical settings. Some of the natural observation methods, as well as the psychophysiological methods of assessment, are quite time-intensive and expensive. Therefore, behavioral clinicians have begun to incorporate less time-intensive methods and measures into their assessments. For example, it is now quite common to administer some type of self-report inventory as part of the behavioral assessment battery. Granted, these inventories contain items of a more cognitive or behavioral nature than those found in traditional self-report inventories. However, all these measures assume that a patient's self-report conveys an accurate representation of his or her behavior or cognitive processes. Early behaviorists placed little faith in these types of self-report inventories.

Another interesting development in this field is the seeming acceptance of the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* diagnostic classification system. Behavioral assessors, in general, now concede that such a diagnostic formulation may be useful as one component of the overall assessment. Diagnoses must be supplemented with data from more traditional behavioral methods. It was not so long ago, however, that behavioral clinicians not only ignored mental disorder diagnostic information but attacked the legitimacy and utility of this source of information. Of course, there are still some radical behaviorists who maintain this rather anachronistic perspective on mental disorder diagnoses. They are in the minority, however.

Why the change of heart for most behaviorists? A multitude of explanations are plausible, but several possibilities stand out. First, the criteria for the various mental disorders have become increasingly objective and behavioral. Second, behavioral clinicians have discovered some degree of utility in using diagnostic labels. These diagnoses describe constellations of

maladaptive behaviors that can be targeted for intervention and may also help the clinician anticipate which other symptoms (other than the target behaviors) may change as a result of treatment. These predictions are based on the established covariation patterns among the disorder's symptoms. For example, increasing the amount of social interaction engaged in by a depressed patient may also result in fewer reports of depressed mood. Although more research is needed regarding the covariation among problematic behaviors (Kazdin, 1985), the criteria sets (symptom lists) for mental disorders at least give us initial hypotheses about what behaviors may or may not change as a result of treatment.

Finally, it is noteworthy that cognitive phenomena and processes are now considered more legitimate subjects for behavioral assessment and behavioral intervention. In behavioral assessment, not only are behaviors, antecedent/stimulus conditions, and consequences sampled but so are "organismic" variables (Goldfried & Davison, 1994). These organismic variables may include a variety of physiological factors, but many cognitive variables are assessed as well. In particular, client expectations are regarded as important. The client's expectations concerning the nature

and meaning of the presenting problem, the minimal standards of success that the client sets, and the client's expectations from behavior therapy are just a few of the variables that are assessed in contemporary behavioral assessment. Behavior therapists appear to have found that an overly rigid adherence to learning models that do not incorporate organismic variables is too constraining.

However, this does not leave the door wide open for *any* kind of physiological or cognitive measure. Rather, these measures and methods must satisfy the same rigorous standards set forth for the more traditional behavioral methods. Validity must be demonstrated, not assumed. For example, a cognitive measure purported to be related to panic disorder (e.g., beliefs of "uncontrollability") must be correlated with other behavioral measures of panic disorder symptoms, and changes in these beliefs should result in some improvement in other panic disorder symptoms and lead to a better outcome in the future. Through these and other procedures, the concurrent and predictive validity of a measure can be established as well as its treatment utility (Hayes, Nelson, & Jarrett, 1987; Kazdin, 1985).

## CHAPTER SUMMARY

Behavioral assessment differs from traditional assessment in several fundamental ways. Behavioral assessment emphasizes direct assessments (naturalistic observations) of problematic behavior, antecedent (situational) conditions, and consequences (reinforcement). By conducting such a functional analysis, clinicians can obtain a more precise understanding of the context and causes of behavior. It is also important to note that behavioral assessment is an ongoing process, occurring at all points throughout treatment.

We have surveyed some of the more common behavioral assessment methods. Behavioral interviews are used to obtain a general picture of the presenting problem and of the variables that seem to be maintaining the problematic behavior. Observation

methods provide the clinician with an actual sample (rather than a self-report) of the problematic behavior. Observations can be made in naturalistic conditions (as behavior typically and spontaneously occurs) or under more controlled conditions (in simulated or contrived situations or conditions). Behavioral assessors may also have clients self-monitor ("self-observe") their own behaviors, thoughts, and emotions. A variety of factors can affect both the reliability and validity of observations, including the complexity of the behavior to be observed, how observers are trained and monitored, the unit of analysis chosen, the behavioral coding system that is used, reactivity to being observed, and the representativeness of the observations.

Finally, we have discussed the use of role-playing or behavioral rehearsal, of behavior-based inventories or checklists, and of more cognitively focused assessments. The future of behavioral assessment is likely to include more cognitive and

psychophysiological assessment methods and to take advantage of technological advances (e.g., computer-assisted data acquisition methods) to make behavioral assessment more precise, valid, and efficient.

## KEY TERMS

**antecedent conditions** Stimulus conditions, or conditions that lead up to the behavior of interest.

**behavioral assessment** An assessment approach that focuses on the interactions between situations and behaviors for the purpose of effecting behavioral change.

**behavioral interviews** Interviews conducted for the purpose of identifying a problem behavior, the situational factors that maintain the behavior, and the consequences that result from the behavior.

**behavioral rehearsal** Role-playing. The term *behavioral rehearsal* is usually used in cases where the patient is trying to develop a new response pattern.

**cognitive-behavioral assessment** An assessment approach recognizing that the person's thoughts or cognitions play an important role in behavior.

**cognitive-functional approach** An assessment approach that calls for the functional analysis of the client's thinking processes. In this approach, the clinician completes a careful analysis of the person's cognitions, how they are aiding or interfering with performance, and under what situations this is occurring.

**consequent events** Outcomes, or events that follow from the behavior of interest.

**controlled observation** An observational method in which the clinician exerts a certain amount of purposeful control over the events being observed; also known as *analogue behavioral observation*. Controlled observation may be preferred in situations where a behavior does not occur very often on its own or where normal events are likely to draw the patient outside the observer's range.

**controlled performance technique** An assessment procedure in which the clinician places individuals in carefully controlled performance situations and collects data on their performance/behaviors, their emotional reactions (subjectively rated), and/or various psychophysiological indices.

**dysfunctional thought record** Completed by the client, it provides the client and therapist with a record of the client's automatic thoughts that are related to dysphoria or depression.

**ecological momentary assessment** A new method of behavioral assessment in which participants record their thoughts, feelings, or behaviors as they occur in the natural environment. This is typically accomplished through the use of electronic diaries.

**ecological validity** In the context of behavioral assessment, the extent to which the behaviors analyzed or observed are representative of a person's typical behavior.

**electronic diaries** A technique used in behavior assessment in which individuals carry handheld computers that are programmed to prompt the individuals to complete assessments at that moment in time, in participants' natural environment.

**functional analysis** A central feature of behavioral assessment. In a functional analysis, careful analyses are made of the stimuli preceding a behavior and the consequences following from it to gain a precise understanding of the causes of the behavior.

**home observation** Observation that is carried out in the patient's home by trained observers using an appropriate observational rating system.

**hospital observation** Observation that is carried out in psychiatric hospitals or institutions using an observational device designed for that purpose.

**observation** A primary technique of behavioral assessment. Observation is often used to gain a better understanding of the frequency, strength, and pervasiveness of the problem behavior as well as the factors that are maintaining it.

**observer drift** A phenomenon in which observers who work closely together subtly, and without awareness, begin to drift away in their ratings from those of other observers.

**organismic variables** Physical, physiological, or cognitive characteristics of the client that are important for both the conceptualization of the client's problem and the formulation of effective treatments.

**psychophysiological measures** Used to assess central nervous system, autonomic nervous system, or skeletomotor activity. The advantage of psychophysiological measures is that they may assess processes (e.g., emotional responsivity) that are not directly assessed by self-report or behavioral measures, and they tend to be more sensitive measures of these processes than alternative measures. Examples include event-related potentials (ERPs), electromyographic (EMG) activity, electroencephalographic (EEG) activity, and electrodermal activity (EDA).

**reactivity** In the context of observation, the phenomenon in which individuals respond to the fact that they are being observed by changing their behavior.

**role-playing** A technique in which patients are directed to respond the way they would typically

respond if they were in a given situation. The situation may be described to them, or an assistant may actually act the part of another person.

**sample** Behavioral assessment uses a “sample” orientation to testing—that is, the goal is to gather examples that are representative of the situations and behaviors of interest.

**school observation** Behavioral observation that is conducted in the school setting. As with home observation, trained observers rate the patient using an appropriate observational system.

**self-monitoring** An observational technique in which individuals observe and record their own behaviors, thoughts, or emotions (including information on timing, frequency, intensity, and duration).

**sign** Traditional assessment uses a “sign” approach to testing—that is, the goal is to identify marks of underlying characteristics.

**situational test** A controlled observation technique in which the clinician places individuals in situations more or less similar to those of real life and then observes their reactions directly.

**SORC model** A model for conceptualizing clinical problems from a behavioral perspective. In this model, *S* = the stimulus or antecedent conditions that bring on the problematic behavior, *O* = the organismic variables related to the behavior, *R* = the response or the behavior itself, and *C* = the consequences of the behavior.

**unit of analysis** In the context of observation, the length of time observations will be made and the type and number of responses that will be rated.

## WEB SITES OF INTEREST

To visit any of the following Web sites, go to [www.wadsworth.com](http://www.wadsworth.com) and click Links.

9-1 Association for Behavioral and Cognitive Therapies (ABCT)  
<http://www.abct.org/Home/>

9-2 Association for Behavior Analysis International (ABAI)  
<http://www.abainternational.org>

9-3 Division of the Behavior Analysis (Division 25 of the APA)

[http://www.auburn.edu/~newlamc/apa\\_div25/](http://www.auburn.edu/~newlamc/apa_div25/)

9-4 Society for the Experimental Analysis of Behavior

<http://seab.envmed.rochester.edu/society/>

9-5 Behavior analysis resources

<http://www.coedu.usf.edu/behavior/bares.htm>

# 10

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## Clinical Judgment

### FOCUS QUESTIONS

1. What are the advantages and disadvantages of the clinical approach to prediction?
2. What are the advantages and disadvantages of the statistical approach to prediction?
3. How can clinical judgment be improved?
4. What are the major obstacles in implementing statistical prediction procedures?
5. What are the major considerations when preparing a psychological report?

### CHAPTER OUTLINE

#### Process and Accuracy

Interpretation

Theory and Interpretation

Quantitative Versus Subjective Approaches

The Case for a Statistical Approach

BOX 10-1: *Focus on Clinical Applications: An Example of a "Barnum Effect": Purported Characteristics of Adult Children of Alcoholics (ACOAs)*

The Case for a Clinical Approach

Comparing Clinical and Actuarial Approaches

BOX 10-2: *Clinical Psychologist Perspective: Howard N. Garb, Ph.D.*

Conclusions

BOX 10-3: *Focus on Professional Issues: How Do Psychiatrists Make Clinical Decisions?*

#### Improving Judgment and Interpretation

Information Processing

The Reading-in Syndrome

Validation and Records

Vague Reports, Concepts, and Criteria

The Effects of Predictions

Prediction to Unknown Situations

Fallacious Prediction Principles

The Influence of Stereotyped Beliefs

"Why I Do Not Attend Case Conferences"

#### Communication: The Clinical Report

The Referral Source

Aids to Communication

*A Case Illustration of a Clinical Report*

### CHAPTER SUMMARY

#### KEY TERMS

As scientific and objective as clinical psychology is, it is still virtually impossible to evaluate its diagnostic and assessment techniques apart from the clinician involved. The very title of this chapter, “Clinical Judgment,” is enough to suggest that clinicians sometimes use inferential processes that are often far from objective. The process, accuracy, and communication of clinical judgment are still very often extremely personalized phenomena.

In this chapter, we examine some of the means by which the clinician puts together assessment data and arrives at particular conclusions. In addition, we discuss the accuracy of clinical judgments and impressions. Finally, we examine briefly the method by which the results of assessment are typically communicated—the clinical report.

## PROCESS AND ACCURACY

Our discussion of clinical judgment begins with its basic element—interpretation.

### Interpretation

Interpretation is an inferential process that takes up where assessment leaves off. The interviews have been completed; the psychological tests have been administered. Now, what does it all mean, and what decisions are to be made?

At the very least, *clinical interpretation* or judgment is a complex process. It involves stimuli—an MMPI-2 profile, an IQ score, a gesture, a sound. It also involves the clinician’s response. “Is this patient psychotic?” “Is the patient’s behavior expressive of a low expectancy for success?” Or even “What is the patient like?” It also involves the characteristics of clinicians such as their cognitive structures and theoretical orientations. Finally, situational variables enter into the process. These can include everything from the type and range of patients to the constraints that the demands of the setting place on predictions. For example, a clinician in a

university mental health center may make a range of recommendations—from hospitalization to psychotherapy to just taking time away from school—whereas a clinician in a prison setting may be limited to many fewer options.

**The Theoretical Framework.** As mentioned throughout this book, clinical psychologists strive to discover the etiology, or origins, of psychological problems and to understand patients so that they can be helped. Clinical problems can be conceptualized in a variety of ways (e.g., behavioral, cognitive, psychodynamic). The kinds of interpretations made by a Freudian are vastly different from those made by a behavioral clinician. Two clinicians may each observe that a child persistently attempts to sleep in his mother’s bed. For the Freudian, this becomes a sign of an unresolved Oedipus complex. For the behaviorist, the interpretation may be in terms of reinforcement. Indeed, one way in which clinicians can evaluate interpretations is by examining their consistency with the theory from which they are derived. The number of interpretations that can be made from a set of observations, interview responses, or test data is both awesome and bewildering. By adopting a particular theoretical perspective, clinicians can evaluate interpretations and inferences according to their theoretical consistency and can also generate additional hypotheses.

### Theory and Interpretation

Currently, clinicians may be assigned to three very broad interpretive classes. First, there are the behavioral clinicians. As we have seen, the strict behaviorist avoids making inferences about underlying states and instead concentrates on the behavior of the patient. The behavioral clinician typically seeks patient data based on personal observation or on direct reports from the patient or other observers. These data are regarded as samples.

A second group of clinicians prides themselves on being empirical and objective. In particular, these clinicians are likely to use objective tests to predict to relatively specific criteria. For example,



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Clinical psychologists must collect, integrate, and interpret data from multiple sources.

will scores from tests A, B, and C predict success in college, therapy outcome, or aggressive outbursts? This *psychometric approach* to interpretation, as we shall see a bit later, is especially useful when the criteria being predicted are crisp and well articulated. In general, this approach uses data as correlates of something else—for example, a score at the 95th percentile on test X may be related to recidivism in prisoners. The psychometrically oriented clinician is most concerned with standardized tests and their norms, regression equations, or actuarial tables.

A third group of clinicians is more comfortable with a *psychodynamic approach*. This was once a popular orientation in clinical psychology. The psychodynamic approach strives to identify inner states or determinants. Data from projective tests,

unstructured clinical interviews, and other sources are viewed as signs of an underlying state. A broad, often highly impressionistic picture of the patient is drawn, although in many instances subtle normative assertions are made.

### Quantitative Versus Subjective Approaches

Quietly embedded in the preceding discussion are two distinct approaches to clinical judgment and interpretation. First is the *quantitative or statistical approach*, which emphasizes objectivity and is presumably free from fuzzy thinking. Second is the *subjective or clinical approach*, which adherents claim is the only method to offer truly useful interpretations and predictions.

**The Quantitative, Statistical Approach.** An empirically based psychologist relies on data to make clinical judgments. These data may come from the scientific literature in clinical psychology or from the clinician's own observations and data collection with the patient. For instance, if a clinician believes that a child's oppositional behavior is due to a desire to get attention from a withdrawing, emotionally "flat" parent, the clinician could learn in the scientific literature that parents' depressive symptoms indeed longitudinally predict increases in children's oppositional behavior. Moreover, the clinician may collect information on the level of parents' depressive symptoms using a standardized checklist, and on the child's level of oppositional behavior using observations, a checklist, or structured interview. Using a simple statistical approach, it would be possible to test the clinician's hypothesis and present the results to parents as a way of helping them explain one contributing factor to their child's escalations in oppositional behavior.

A particular caution to bear in mind, however, is that while statistics and scientific findings may help to understand the relationships between variables *in general*, they do not offer an answer that is equally applicable to every situation, or every person. For instance, even though the research literature suggests that parents' level of childhood peer popularity generally is associated with their child's level of peer popularity, this does not mean that every child will be similar to their parents. In other words, the empirical approach offers information that *raises the probability* of a certain interpretation or outcome, but it does not guarantee that this interpretation is correct. It is very important that empirically based clinicians use data and scientific evidence to help inform their decisions and to ensure that they are using well-established knowledge to guide their thinking about a case. However, one must always consider factors that may limit the applicability of data-based findings to a single, specific individual. We do not have data on every community, every type of diagnosis and comorbidity, or every possible cultural factor that may influence clinical interpretations.

**The Subjective, Clinical Approach.** The clinical approach is much more subjective, experiential, and intuitive. Here, subjective weights based on experience suffice. The emphasis is on the application of judgment to the individual case. The classical notion is that "clinical intuition" is not readily amenable to analysis and quantification. It is a private process in which clinicians themselves are sometimes unable to identify the cues in a patient's test responses or verbalizations that led them to a given conclusion or judgment.

Once, for example, in the course of a Rorschach administration, a patient said, "This looks like a Christmas tree." What did this mean? Perhaps nothing. Or perhaps it indicated a career in forestry. Or perhaps it suggested an underlying sadness or depression in a person with few friends or family with whom to enjoy the approaching holiday season. In this case, the last interpretation was later supported by the patient during a discussion of his family background. The clinical student who had made the correct interpretation in a training exercise explained her reasoning as follows: "It was near the Christmas season; there were several references in the TAT to remote family figures; I remembered how I always seem to become a little sad during Christmas; it suddenly popped into my head, and I just knew with complete certainty that it was true—it simply felt right!"

This example illustrates several things about clinical interpretation. First, such interpretation involves a sensitive capacity to integrate material. The astute clinical psychologist pays attention to the wide range of events that characterize the patient's behavior, history, other test responses, and so on. A clinician must function a bit like the detective who takes in everything at the scene of the crime and then makes a series of inductive or deductive generalizations that link these observations together. In addition, there is often a willingness in the clinician to see a bit of him- or herself in the patient—a kind of assumed similarity that enables the clinician to utilize his or her own experience in interpreting the behavior and feelings of another.

Unfortunately, the presentation of this example has been one-sided. Little has been made of the clinical student who believed that the Christmas tree suggested an interest in forestry. Therefore, consider two additional observations. First, there are individual differences in clinical sensitivity. Second, for every instance of brilliant and sensitive clinical inference, there probably lurks in the unrecalled recesses of memory an equally impressive misinterpretation.

Clinical interpretation, then, involves the sensitive integration of many sources of data into a coherent picture of the patient. It also fulfills a hypothesis-generating function that is best served by guidance from a well-articulated theory of personality. But it behooves responsible clinicians to make every effort to articulate the cues involved in their judgments and to explicate the manner in which they make the leap from cues to conclusions. It is not enough to be good clinicians. There is also a responsibility to pass on these skills to others.

### The Case for a Statistical Approach

A quantitative, statistical approach to clinical judgment is particularly effective when the outcome or event to be predicted is known and specific. Indeed, in such cases, additional clinical data of an impressionistic nature usually add little. This is especially true when dealing with fairly large numbers of persons and when the percentage of correct predictions is more important than the correct prediction of the performance of any one individual. Were the task solely one of predicting the grades of an incoming class of college freshmen, the clinician would be well advised to use the objective data of high school grades and ability test scores. Because good grades in college can generally be predicted from ability and its previous effective use, more ubiquitous and subtle personality factors may add little.

Many of the failings in purely subjective, clinical approaches result from the tendency to depend on vague criteria. Too often, a clinician will make the following judgment: The patient, based upon MMPI-2 Scale 7 scores, will benefit from psychotherapy. This vague statement contains no explicit

referents. What constitutes benefit? Will the conclusion that the patient has or has not benefited from therapy be based on the patient's own assertions or on the therapist's judgment? The loose conceptualization of the foregoing prediction precludes an empirical test. But suppose that the clinician explicitly defined the outcome as, say, remaining in rational-emotive therapy for 12 months, coupled with a therapy success rating of 7 or higher (on a 10-point scale) by an outside observer? Then it might be possible to develop a formula based on objective interview or test criteria that would successfully predict to a defined universe of therapists.

Clinical terms are often used loosely and without explicit meaning. An objective, statistical approach forces greater specification of meaning that should eventually lead to more specific predictions which could be represented in formulas. This would attenuate much of the unreliability of judgment inherent in more intuitive approaches.

Another reason for adopting the statistical approach is that so many clinical descriptions seem applicable to everyone. As noted in a previous chapter, personality descriptions should show incremental utility; they must reveal something beyond what everyone knew before the assessment began. More precisely, clinicians must develop descriptions of their patients that are meaningful and will lead to explicit predictions. Too often, however, clinicians make interpretations that seem valid but in actuality characterize everybody. This is known as the *Barnum effect*—a notion that goes back to a report distributed by D. G. Paterson that was later cited by Meehl (1956). Barnum statements appear to be self-descriptive, but in reality, they describe almost everyone and are not very discriminative. For example, who would deny the personal relevance of the following statements?

At times, I am unsure of my sexual maturity.

I am not always as confident as most people think I am.

Often, I keep my real feelings to myself unless I am around people I like.

**BOX 10-1 Focus on Clinical Applications**  
**An Example of a “Barnum Effect”: Purported Characteristics of Adult Children of Alcoholics (ACOAs)**

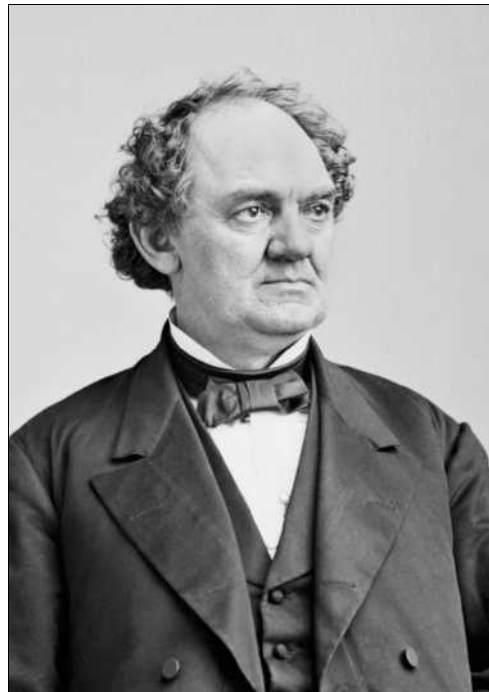
Logue, Sher, and Frensch (1992) examined whether the apparent widespread acceptance of personality descriptions of ACOAs was due, at least in part, to a Barnum effect (following Barnum’s edict: “A circus should have a little something for everybody”). Barnum-like statements apply to almost everyone and therefore appear to be self-descriptive. In reality, however, they are descriptive of people in general and lack both a discriminative ability and clinical utility.

Authors of several popular books on ACOAs have proposed that parental alcoholism produces negative effects on the family, leading to a host of problems in children of alcoholics once they become adults. These include feelings of guilt, shame, insecurity, low self-esteem, and powerlessness as well as problems coping with emotions and intimate relationships. Logue et al. hypothesized that these descriptors have gained popularity because they not only describe ACOAs but also tend to be descriptive of people in general.

Two groups of undergraduates (ACOA and non-ACOA) were asked to rate personality profiles as to how self-descriptive they were. These profiles consisted of six personality statements (e.g., “In times of crisis, you need to take care of others.”). There were two personality profile types: (a) ACOA personality profile, consisting of personality statements drawn from the ACOA literature, and (b) Barnum personality profile, consisting of personality statements drawn from several existing personality inventories and used in previous Barnum research. These profiles were matched on overall level of social desirability (assessed through an independent sample). Briefly, results of the Logue et al. study indicated that ACOA profiles were rated as highly self-descriptive by both ACOA participants and non-ACOA participants. The authors concluded that these popular personality descriptors appear to have a Barnum-like quality and, therefore, lack validity as specific descriptors of ACOA individuals.

What are the clinical implications of these and related findings? Clinicians (and consumers) should be

vary of test interpretations and clinical interpretations that are so general as to fit most anyone. If a single interpretation (e.g., “When under sufficient stress, you get irritable”) fits many people, then it is probably not going to be helpful in providing a specific characterization of any one client. Furthermore, it will probably not be helpful in informing the appropriate treatment choice or predicting response to treatment.



Archive Pics/Alamy

P.T. Barnum

Box 10-1 discusses the Barnum effect in more detail.

By moving toward quantification, the statistical approach could eliminate much of the unreliability in clinical judgment. Objectively derived formulas, explicit norms, weighted predictors and regression equations, and carefully stated descriptions and

predictions could combine to replace the fallibilities of clinical judgment with a standardized procedure that will minimize errors.

Why, then, do not more clinical psychologists adopt the statistical approach? There are probably many reasons some people find statistical approaches distasteful. Dawes (1979) describes three such reasons.

Take a situation in which a student is denied admittance to graduate school because of the application of such empirical predictors as GPA and Graduate Record Examination (GRE) test scores. First, Dawes notes, some will argue with such predictors on technical grounds. They claim that the indices are short-term and rather unprofound. The plea “I just know I could succeed if they would only give me a chance” is less an argument than an expression of hope. The antistatistical argument often claims that there are expert judges “out there somewhere” who could do as well or even better than formulas. But somehow, these experts never seem to be produced!

Second, this approach may be rejected for psychological reasons. Many persons easily remember those instances in which their intuition was right but conveniently forget those occasions when it was wrong. To take another example, a clinician may unconsciously work harder with a client for whom the clinician has predicted success in therapy. A positive outcome will then prove to the clinician that his or her clinical hunch was right!

Third, there are ethical sources of resistance. Some people have the idea that reducing an applicant to a set of numbers is unfair or dehumanizing. Dawes (1979) discusses this argument:

No matter how psychologically un compelling or distasteful we may find their results to be, no matter how ethically uncomfortable we may feel at “reducing people to mere numbers,” the fact remains that our clients are people who deserve to be treated in the best manner possible. If that means—as it appears at present—that selection, diagnosis, and prognosis should be based on nothing more than the addition of a few numbers representing values or important attributes, so be it. To do otherwise is cheating the people we serve. (p. 581)

### **The Case for a Clinical Approach**

The difficulty with a statistical approach that relies on prediction models or regression equations is that clinical psychologists would need a multitude of

them to function as clinicians. The field currently does not have well-established, cross-validated formulas to predict therapy outcomes, make interpretations during the course of a therapy session, or recommend a special class rather than institutionalization. Should the clinician suggest bibliotherapy, a hobby, a marriage counselor, a trial separation, or what? The busy, harried clinician does not have available a regression equation for even important decisions, let alone the pedestrian judgments that must continually be made. It was Meehl (1957) who long ago said, “Mostly we will use our heads, because there just aren’t any formulas” (p. 273). Unfortunately, the situation has not changed much since Meehl made this observation.

Of course, when specific outcomes are to be predicted and the clinician has enough time to develop good formulas, the clinician can easily be outperformed by those formulas. We will review this evidence shortly. However, even here, the clinician’s judgment can add something in some instances, especially when the sample is relatively homogeneous. Suppose, for instance, that the formula for selecting students for graduate training depends solely on Graduate Record Examination scores and undergraduate grades. The formula would probably do quite well in selecting from an initial, heterogeneous sample of applicants those who will do well. However, from that point on, clinical judgments regarding motivation or personality features may be quite helpful in further discriminating among those selected. That is, the final sample is so selective that previous grades and test scores may not be very discriminating. Clinical inferences may become useful after the initial screening because they provide extra data that relate to success in training. Holding large amounts of data in our heads and integrating them are not what we humans excel at (Dawes, 1979). Clinicians should use computers and formulas for that and save their own mental powers for what they do excel at—selecting what to look at and deciding what to do with the results.

Another important contribution involves the clinician’s function as a data gatherer. For example, it may turn out to be important to know about

certain patient characteristics for purposes of prediction. However, it may not be possible to uncover those characteristics without extensive interviewing or some in-depth interpretation based on test results. As a further example, several facets of a patient's life history data may suggest to a sensitive clinician that the patient could be prone to making violent sexual assaults on women. Although clinical psychology does not have a reliable regression equation to predict such assaults, the data uncovered by an astute clinician could be important. Thus, at present, certain data may be discoverable only through extensive clinical investigation. Predictive formulas work best when test data are available. Sometimes, however, tests of the right sort simply do not exist. When dealing with rare events (e.g., suicide), the frequency of occurrence is so low that clinicians cannot develop adequate equations for them. But rare or not, such events are important, and they must be dealt with by clinical judgment.

Finally, many people would argue that the power to predict specific outcomes is not the only goal of science; rather, understanding and describing phenomena are the overriding goals. Although there may be some validity to this argument, all too frequently it can become a rationalization for using vague terminology and applying equally vague criteria, as noted earlier. The counterargument would assert that when description and understanding are couched in explicit terms, with clear-cut referents and criteria, then prediction will be a natural by-product.

### Comparing Clinical and Actuarial Approaches

Over the years, many studies have compared the relative accuracy of clinical and actuarial methods (Garb, 2005; Grove, Zald, Lebow, Snitz, & Nelson, 2000). Let us now examine some of that work.

**Comparison Studies.** Sarbin (1943) contrasted the prediction of academic success for college freshmen made by a clerk employing a regression equation

with the predictions made by several counselors. The regression equation predictors were aptitude test scores and high school rank. The counselors had available the two preceding sources of data (but without their mathematical weighting), vocational interest scores, interview data, and biographical data. Sarbin (1943) found that the counselors were no better than the regression equation in their predictions, even though they had the benefit of much more information.

Meehl (1954) surveyed a number of the studies available on clinical versus statistical prediction and concluded that in "all but one ... the predictions made actuarially [statistically] were either approximately equal or superior to those made by a clinician" (p. 119). In a later survey of additional research, Meehl (1965) reaffirmed his earlier conclusions. However, Meehl (1954) also observed that, in several studies, statistical predictions were made on the same data from which the regression equations were developed. In short, the formulas were not cross-validated. As noted earlier, such formulas frequently show a marked reduction in efficiency when they are applied to samples different from those used in their derivation.

Sawyer (1966) regarded data collected by interview or observation as clinical data. He viewed inventory, biographical, or clerically obtained data as statistical or mechanical. Having considered the methodological problems and the equivocal results of the studies he examined, Sawyer concluded that in combining data the mechanical mode is superior to the clinical mode. However, he also concluded that the clinical method is useful in the data collection process. The clinical method can provide an assessment of characteristics that would not normally be assessed by more mechanical techniques of data collection. But once the data (from whatever source) are collected, they can best be combined by statistical approaches.

An example of an individual study comparing clinical and statistical prediction may help further illustrate the nature of this controversy. One of the most frequently cited studies of clinical versus statistical prediction was reported by Goldberg (1965).

In this study, 13 Ph.D.-level staff members and 16 predoctoral trainees were asked to make judgments regarding the diagnostic status of more than 800 patients based on the patients' MMPI scores. These judgments were made without any contact with the patient or any additional information on the patient. Each judge simply examined the MMPI profile (scores) for each patient and then predicted whether the patient was "psychotic" or "neurotic." These judgments constituted clinical predictions because it was left up to each judge as to how she or he used the MMPI information to formulate a diagnosis.

In contrast, statistical predictions involved the application of a variety of algorithms, in which MMPI scale scores were combined (added or subtracted) in some manner and previously established cutoff scores for psychosis versus neurosis were used. In addition, some statistical predictions involved the application of specified decision rules based on MMPI high-point codes or other psychometric signs. A total of 65 different quantitatively based rules were considered.

What were these clinical and statistical predictions compared to in order to assess their accuracy?

In this study, the criterion diagnosis was the psychotic versus neurotic diagnosis provided by each patient's hospital or clinic. Thus, the accuracy of each clinician's and each statistical algorithm's prediction was determined by assessing the agreement between predictions and the actual criterion diagnoses across all cases.

Table 10-1 presents selected results from this study. Not all of the statistical indices used are presented in this table, but it should serve to give the reader a general impression of the results. First, judges (clinical prediction) were correct, on average, in 62% of the cases. It is noteworthy that the trainees' accuracy rate was comparable to that of doctoral-level clinicians with more years of clinical experience. Second, a number (14 in all) of statistical indices (statistical prediction) were comparable to or outperformed the judges with regard to overall accuracy of prediction. Several diagnostic decision rules based on simple linear combinations of MMPI scale scores (e.g.,  $Pt - Sc$ ) outperformed the clinicians.

A variety of additional, updated reviews of the studies pitting clinical versus statistical prediction have uniformly demonstrated the superiority of statistical procedures (e.g., Ægisdóttir et al., 2006;

**TABLE 10-1 Accuracy of Clinical Versus Statistical Predictions in Goldberg's (1965) Study**

Source of Prediction	Average Accuracy Percentage (n = 861)
<i>Clinicians</i>	
13 Ph.D.-level staff	62 (range = 59 to 65)
16 Trainees	61 (range = 55 to 67)
29 Total judges	62 (range = 55 to 67)
<i>Statistical Indices</i>	
$(L + Pa + Sc) - (Hy + Pt)$	70
Two-point code rules	67
$Sc - (Hs + D + Hy)$	67
$(Pt - Sc)$	65
High-point code rules	66
$(Hy - Pa)$	61
$Pa - (Hs + D + Hy)$	62
$(Hs - Sc)$	61
$(Pd + Pa) - (Hs + Hy)$	63

NOTE: Adapted from Goldberg (1965).

Dawes, 1979, 1994; Dawes, Faust, & Meehl, 1989; Garb, 1998; Goldberg, 1991; Grove et al., 2000; Kleinmuntz, 1990; Meehl, 1986; Wiggins, 1973). For example, in a comprehensive review of studies pitting clinical versus statistical prediction, Grove et al. (2000) reported, once again, that statistical prediction was superior in roughly 50% of the studies, whereas clinical prediction was superior in only a small number of studies (approximately 6%). This trend held true regardless of the judgment task (e.g., predicting psychotherapy outcome), type of judges (physicians vs. psychologists), judges' amount of experience, or types of data being combined. Thus, because it is typically less expensive than clinical prediction (primarily because of the personnel costs involved), statistical prediction is preferred. As stated by Meehl (1986):

There is no controversy in social science that shows such a large body of qualitatively diverse studies coming out so uniformly in the same direction as this one. When you are pushing 90 investigations [this number is dramatically higher as of 2005], predicting everything from the outcome of football games to the diagnosis of liver disease, and when you can hardly come up with a half dozen studies showing even a weak tendency in favor of the clinician, it is time to draw a practical conclusion. (pp. 373–374)

More recently, Garb (2005) reviewed findings on the accuracy of clinical judgments in five different areas: (a) the description of personality and psychopathology; (b) diagnosis; (c) case formulation; (d) behavioral prediction; and (e) decision making. Although clinicians seem aware of the official diagnostic manual's description of symptoms of psychopathology and appear to be able to reliably describe patients in these terms (especially if using structured diagnostic instruments), they appear much worse at reliably describing personality features of patients. This limitation may be due to the relative lack of structured instruments for personality that are used in clinical practice, or simply that clinicians tend to



Courtesy of Paul Meehl

**FIGURE 10-1** Paul Meehl is widely recognized as a major proponent of the actuarial or statistical approach to prediction.

make these judgments based on their own internal, but not well operationalized, implicit theories of personality that are based on everyday experience but not on scientific findings.

In general, clinical case formulations appear highly subjective and unreliable; data for the case formulations are often obtained unsystematically from patients as well as informants. However, such reports are known to be biased by memory heuristics and biases that are influenced by the timing of events and affect associated with events, for example.

The prediction of future behavior is a frequent issue faced by clinical psychologists (e.g., what is the likelihood this client will commit an act of violence?), but we do not appear to be particularly good at it. Studies suggest that violence is often overpredicted for certain genders (men) and certain racial groups (African Americans).

Concerning treatment decisions, there is currently a great focus on evidence-based assessments that have demonstrated validity in informing treatment decisions (e.g., see Hunsley & Mash, 2008).

In particular, there is an emphasis on the clinical utility of these instruments—the extent to which these measures provide data that improves the decisions made by clinicians as well as the outcomes experienced by patients. Therefore, clinicians are encouraged to use evidence-based assessments with demonstrated utility to inform their own judgments, as opposed to offering clinical judgments based only on subjective factors (e.g., clinical intuition, hunches, etc).

**Objections to These Findings.** Dawes (1994) has outlined several of the major objections to the large body of evidence supporting the superiority of statistical prediction, along with responses to each objection. First, critics argue that several of the individual studies reviewed contained research design flaws that may have affected the findings. Dawes (1994) refers to this as an “argument from a vacuum” because a possibility is raised, but there is no empirical demonstration supporting the possibility. Although every study has its limitations, it is difficult to imagine that the opposite conclusion (clinical prediction is superior) is warranted when practically all of the studies support statistical prediction.

The second objection concerns the expertise of the judges/clinicians in these studies. Perhaps they were not “true” experts, and a study employing expert clinicians would demonstrate the superiority of clinical judgment. Although a wide variety of judges/clinicians were used in these studies, a number employed recognized “experts”—clinicians with many years of experience performing the predictive task in question. There were a few instances in which an individual clinician performed as well as the statistical formula, but this was more the exception than the rule. Thus, there is no compelling empirical evidence that expert clinicians are superior. We will return to the issue of whether clinical experience improves judgment accuracy later.

A third objection is that the predictive tasks were not representative of prediction situations facing clinicians (i.e., not ecologically valid). A clinician’s diagnosis may not be based only on the MMPI-2, for example, but also on an interview with the patient. Dawes (1994)

argues, however, that the predictive tasks are components of what may go on in clinical practice—clinicians purportedly use the MMPI-2 information to make predictions. Further, several of the studies demonstrate that additional information (e.g., interview material) obtained and used in the judge’s clinical prediction may actually result in less accurate predictions than would be the case if the clinician had simply “stuck with” the statistical formula that was available.

Dawes (1994) goes on to suggest that much of the negative reaction to the findings is a function of our human need to believe in a high degree of predictability in the world. This appears to be both a cognitive and an emotional need. People have a built-in tendency to both seek and see order in the world, and a lack of predictability in the world is likely to result in some degree of discomfort or emotional distress. However, the need for predictability does not prove its existence.

**Bias in Clinical Judgment.** Clinical judgment suffers when bias of any kind intrudes into the decision-making process. Bias exists when accuracy of clinical judgment or prediction varies as a function of some client or patient characteristic, not simply when judgments differ according to client characteristics (Garb, 1997, 1998). For example, finding that a higher percentage of women than men are judged to suffer from major depression would not indicate a bias against women. However, finding that a higher percentage of women than men are given this diagnosis when the same symptoms are presented would indicate bias.

Garb (1997) reviewed the empirical evidence for race bias, social class bias, and gender bias in clinical judgment. Interestingly, he found that many conventionally held beliefs about these types of bias were not supported. For example, there was little support for the beliefs that (a) lower-socioeconomic-class patients are judged to be more seriously disturbed than those from higher socioeconomic classes or (b) women patients are judged to be more disturbed or dysfunctional than men patients. However, there was strong evidence to support the existence of several other types of bias: (a) Black and Hispanic patients who

have psychotic mood disorders are more likely to be misdiagnosed with schizophrenia than are similar White patients. (b) Even when presenting the same constellation of symptoms, men are more likely to be diagnosed as antisocial and women are more likely to be diagnosed as histrionic. (c) Middle-class patients are more likely to be referred for psychotherapy than lower-class patients. (d) Black patients are more likely to be prescribed antipsychotic medications than members of other racial groups, even when the Black patients are not more psychotic.

Garb (1997) made the following recommendations to help clinicians overcome these and other biases: (a) Be aware of and sensitive to the biases that have been documented in the literature. (b) Attend to the diagnostic criteria in diagnostic manuals. (c) Whenever possible, use statistical prediction rules instead of clinical judgment or prediction.

**Experience and Training.** Faust (1986) has noted:

To whom do these studies of low judgment performance apply? The answer is not that they apply to hacks or novices alone. There is limited evidence—in fact, almost none—that experts or those with exhaustive experience perform significantly better than “regulars” or “relative beginners.” (p. 420)

To date, almost all major studies examining this issue do not support the position that increased clinical experience results in increased accuracy in prediction (Dawes, 1994; Garb, 1989, 1998; Grove et al., 2000). This seems to fly in the face of conventional wisdom. Why do we not see evidence for the effect of clinical experience in clinical psychology and other mental health fields? There are several possibilities (Dawes, 1994). First, the accuracy of predictions is limited by the available measures and methods that are used as aids in the prediction process. If scores from psychological tests, for example, are not strongly correlated with the criterion of interest (i.e., they are not highly valid), then it is unlikely one could ever observe an effect for clinical experience. The accuracy of predictions will remain modest at best and will not depend on how “clinically experienced” the clinician is. Second, we often

cannot define precisely what we are trying to predict (e.g., “abusive personality”), and no gold standards for our criteria exist to enable us to assess objectively the accuracy of our predictions. As a result, true feedback is impossible, and diagnosticians are not able to profit from experience. Third, we tend to remember our accurate predictions and to forget our inaccurate ones. Therefore, more experience in the prediction process does not necessarily lead to increased accuracy because the feedback that is incorporated is incomplete.

A recent, large-scale meta-analysis of clinical judgment studies, however, suggested that clinical experience may *slightly* improve clinical judgment. Spengler et al. (2009) analyzed results from 75 studies of clinical judgment published between 1970 and 1996. To be included, all studies focused on clinical judgment, clinical judgment bias, or clinical versus statistical prediction. Further, studies focused on mental health issues, and judges were graduate-level trainees or mental health professionals. Clinical experience was defined by a range of variables across these studies, including: number of clients seen, length of treatment, number of psychological tests administered, number of graduate courses taken, years in training, level of training, and amount of clinical supervision received, for example. As for the nature of the clinical judgment in these studies, most focused on the clients’ problems, symptoms, or diagnosis. Other clinical judgments included severity of the problem, treatment needed, or prognosis.

Across all studies, there is a slight, but significant, association between level of experience and accuracy of clinical judgment (weighted mean effect size = .12). This small effect means that practically, greater clinical experience or training improved judgment accuracy by 13%. This is a relatively small improvement in accuracy, overall. Also interesting is that a number of factors influenced whether or not clinical experience significantly improved accuracy.

- More experienced mental health professionals were more accurate in diagnosis and in formulating treatment recommendations consistent with empirical guidelines than were those less experienced.

**BOX 10-2 Clinical Psychologist Perspective: Howard N. Garb, Ph.D.**

Dr. Howard N. Garb is Chief of the Psychology Research Service at Lackland Air Force Base in San Antonio Texas. Recently awarded the Civilian Meritorious Service Medal for his work on mental health screening in the military, he is the associate editor of *Military Psychology*.

We asked Dr. Garb a few questions about his background and his views on clinical psychology.

**What originally got you interested in the field of clinical psychology?**

I decided to become a clinical psychologist by the time I was 16. Many of the relatives on my mother's side of the family were mental health professionals. In fact, I am a third-generation mental health professional. In contrast, my father's brother died in a mental health hospital as a young man. He died because of the inappropriate use of shock treatment—an occurrence that was not unknown in the 1940s. I decided to become a clinical psychologist because I enjoyed reading and thinking about psychology and because I could think of no more interesting work.

**Describe what activities you are involved in as a clinical psychologist.**

From 1984 until 2003, I worked as a clinical psychologist at the Pittsburgh V.A. Health Care System. I saw clients for interviews, for psychological testing, and for individual and group therapy. Two of my books were published during this time: *Studying the Clinician: Judgment Research and Psychological Assessment* and *What's Wrong With the Rorschach? Science Confronts the Controversial Inkblot Test* (written with Jim Wood, Teresa Nezworski, and Scott Lilienfeld). Currently, I am responsible for the mental health screening of all U.S. Air Force recruits who are beginning basic training (more than 35,000 a year), and I conduct a range of research projects.

**What are your particular areas of expertise or interest?**

My general area of expertise is psychological assessment. I am especially interested in the validity of psychological tests, the validity of judgments made by mental health professionals, the cognitive processes of clinicians, and the use of computers for making judgments and decisions. For example, when a clinician says something to a client, is the clinician likely to be right or wrong?

**What are the future trends you see for clinical psychology?**

Computers will become increasingly important in psychological assessment, just as they will become

increasingly important for society in general. Eventually, computers will be used to describe personality traits, make diagnoses, predict behaviors, and make treatment decisions. However, before computers transform psychological assessment, it is important that we understand how, and how well, clinicians make judgments. It is important to understand something before one tries to change it.

**What are the major lessons clinical psychologists should learn from studies of clinical judgment?**

There are many lessons to learn from studies on clinical judgment. Clinicians should attend to empirical research, be aware of and overcome cultural biases, be wary of some judgment tasks because they may be too difficult (such as describing defense mechanisms or making causal judgments), be systematic and comprehensive when conducting interviews, attend to diagnostic criteria when making diagnoses, make use of psychological tests and behavioral assessment methods, consider alternative hypotheses when making judgments, decrease reliance on memory, and follow legal and ethical principles.

Results on clinical judgment are neither all positive nor all negative. Clinicians may be unhappy when the results of a study are negative. However, only by examining ourselves can progress be made.



Howard N. Garb

Carlos Ramirez, USAF Photography,  
Lackland Multi-Media Ctr.,  
Lackland AFB, TX.

- Studies with judgment outcomes that were *less* valid had greater effect sizes. In contrast, the studies that included judgment criteria with the highest validity on average showed no relationship between clinical experience and accuracy of judgment!
- Finally, studies published in higher-quality journals tended to higher associations between experience and judgment.

So, what do we make of these findings? As noted by Spengler et al. (2009), even though an overall significant effect was found, “Training and experience may only improve things modestly for the professional.” (p. 383) As noted above, the effect size was quite small by any standards (e.g., typically an effect size of .20–.30 is considered “small”). So, overall, these results should be humbling to those that place great value on clinical experience when making judgments. Second, the finding that larger effects were reported in studies with less valid criterion measures of judgment is also disconcerting. Could it be that the overall effect is primarily due to these lower-quality studies? Finally, it is important to note that these studies did not compare clinical and statistical prediction. Instead, they only addressed whether clinical experience improved clinical prediction. The general conclusion that statistical prediction outperforms clinical prediction overall remains intact.

As for the virtue of receiving specific types of professional training, there is not much evidence to suggest that one profession is superior to another in making accurate diagnostic judgments. For example, even in differentiating psychological symptoms that are masking medical disorders from those without underlying medical disorders, medical and non-medical practitioners did not differ in their accuracy (Garb, 2000; Grove et al., 2000; Sanchez & Kahn, 1991).

All of this research is somewhat sobering for the field of clinical psychology. However, it is our professional responsibility to be aware of the limits of our predictive ability and not to promote the “myth of experience.” One thing is sure. Clinicians will continue to make decisions because they have no choice. The important point is to ensure that

clinical psychologists are as well prepared as they can be, as well as to train clinical psychologists to use the best available measures and techniques for a given prediction situation.

## Conclusions

Given the current state of affairs, the following conclusions regarding the relative strengths of clinical and actuarial methods seem warranted.

The clinical approach is especially valuable when:

1. *Information is needed about areas or events for which no adequate tests are available.* In this case, the research fails to offer any evidence that the data-gathering function of the clinician can be replaced by a machine.
2. *Rare, unusual events of a highly individualized nature are to be predicted or judged.* Regression equations or other formulas cannot be developed to handle such events, and clinical judgment is the only recourse.
3. *The clinical judgments involve instances for which no statistical equations have been developed.* The vast majority of instances, in effect, fall into this category (Garb, 2000). The day-to-day decisions of the clinician are such that the availability of a useful equation would itself be a rare and unusual event.
4. *The role of unforeseen circumstances could negate the efficiency of a formula.* For example, a formula might very easily outstrip the performance of a clinician in predicting suitability for hospital discharge. In the role of data gatherer, however, the clinician might unearth important data from a patient that would negate an otherwise perfectly logical statistical prediction.

The statistical approach is especially valuable when:

1. *The outcome to be predicted is objective and specific.* For example, the statistical approach will be especially effective in predicting grades, successful discharge, vocational success, and similar objective outcomes.

**BOX 10-3 Focus on Professional Issues: How Do Psychiatrists Make Clinical Decisions?**

Like clinical psychologists, psychiatrists engage in clinical decision making. Furthermore, these decisions are often based on data gathered from subjective self-reports of the patient. A recent study (Bhugra, Easter, Mallaris, & Gupta, 2011) sought to investigate the clinical decision-making process of psychiatrists by conducting in-depth interviews of 31 psychiatrists about their own ways of obtaining, managing, and integrating patient data to make clinical decisions. The researchers organized their findings around several themes and stages in the clinical decision-making process.

*Information gathering:* Psychiatrists relied heavily on unstructured psychiatric interviews to gather data, and they did not routinely use psychological or medical tests.

*Clinical intuition and experience:* Psychiatrists highlighted the importance of using clinical intuition and hunches in evaluating symptoms and diagnoses of patients but did cite the use of evidence-based guidelines when making decisions regarding medication and treatment. Interestingly, novice psychiatrists were more likely to rely on evidence-based guidelines than were more experienced psychiatrists, who used more clinical intuition.

*Uncontrollable factors:* Psychiatrists cited the influence of many “uncontrollable” factors on their decisions, including limited treatment options at the facility, the availability of and costs of medications, patient compliance, and the time available to make the decision.

*Multidisciplinary teams:* Psychiatrists indicated that the opinions of the multidisciplinary team (e.g., nurses, psychologists, social workers) frequently influenced the ultimate clinical decision, especially in cases of uncertainty or high risk.

The investigators concluded that these results were broadly consistent with the dual-process theory of decision making, which suggests two approaches to clinical decision making depending on the familiarity of the situation. When the clinical situation is familiar, psychiatrists reported relying more on their own clinical intuition. In contrast, when the clinical situation was more unfamiliar or uncertain, psychiatrists tended to rely more on an analytical approach to decision making that involved evaluating the evidence base for the decision and gathering additional input.

2. *The outcomes for large, heterogeneous samples are involved, and interest in the individual case is minimal.* Having a statistical formula to predict how many of 50,000 soldiers will receive dishonorable discharges from the Army will be highly useful to the Army, though less so for the clinician who is dealing with Private Smith.
3. *There is reason to be particularly concerned about human judgmental error or bias.* Fatigue, boredom, bias, and a host of other human failings can be responsible for clinical error. Often, such effects are random and unpredictable. Formulas, equations, and computers never become tired, bored, or biased.

Much of the controversy over clinical versus statistical methods has been heated. Each camp seems to scorn the other. If a formula appears to do better than intuition, clinicians become threatened and react defensively. Similarly, some researchers view all clinicians as nothing but

second-rate adding machines when it comes to making predictions. Such reactions do little to resolve anything but instead freeze both factions into positions that prevent either from accepting the strengths of the other.

The most useful position would seem to be one that integrates the two approaches. The sensible clinician will use every regression equation, objective test score, or statistical method that shows promise of working for a specific task. Such a clinician will fully understand that clinical data gathering, hypothesis formation, and even intuition will never be totally supplanted by a formula. By the same token, the clinician can take comfort from the fact that even regression equations must spring from somewhere. Just as someone must program a computer, so too must someone decide which kinds of data should be quantified and submitted for statistical analysis. Someone must initially select the tests and the test items. Although formulas can be applied mechanically, their initial development depends on the clinical psychologist.

## **IMPROVING JUDGMENT AND INTERPRETATION**

In this chapter, and in preceding chapters on interviewing and assessment, we have discussed a variety of factors that can reduce the efficiency and validity of clinical predictions and interpretation. One cannot presume to lay down a series of prescriptions that will lead inevitably to perfect performance. Let us, however, call attention to several factors that are important to keep in mind as one moves from data to interpretation to prediction. Although the performance of clinicians has not been good, there are ways of making improvements (Faust, 1986; Garb, 1998).

### **Information Processing**

As clinicians process assessment information, they are often bombarded with tremendous amounts of data. In many instances, this information can be difficult to integrate because of its volume and complexity. Clinicians must guard against the tendency to oversimplify. It is easy for them to overreact to a few “eye-catching” bits of information and to ignore other data that do not fit into the picture they are trying to paint. Whether the pressure comes from an overload of information or from a need to be consistent in inferences about the patient, clinicians must be able to tolerate the ambiguity and complexity that arise from patients who are inherently complex.

### **The Reading-in Syndrome**

We commented in an earlier chapter that clinicians sometimes tend to overinterpret. They often inject meaning into remarks and actions that are best regarded as less than deeply meaningful. Because clinicians are set to make such observations, they can easily react to minimal cues as evidence of psychopathology. What is really amazing is that the world gets along with so many “sick” people out there. It is so easy to emphasize the negative rather than the positive that clinicians can readily make dire predictions or interpretations that fail to take the person’s assets into account. Garb (1998) points

out that clinicians who do evaluate clients’ strengths and assets in addition to assessing pathology and dysfunction are less likely to pronounce clients as maladjusted or impaired.

### **Validation and Records**

Too often, clinicians make interpretations or predictions without following them up. If clinicians fail to record their interpretations and predictions, it becomes too easy to remember only the correct ones. Taking pains to compare the clinician’s view with that of professional colleagues, relatives, or others who know the patient can also help to refine interpretive skills.

### **Vague Reports, Concepts, and Criteria**

One of the most pervasive obstacles to valid clinical judgment is the tendency to use vague concepts and poorly defined criteria. This process, of course, culminates in psychological reports that are equally vague. Under these conditions, it can be very difficult to determine whether clinicians’ predictions and judgments were correct (which may be why some of them use such shadowy terminology!). To combat this problem, Garb (1998) recommends that clinicians use structured interviews, structured rating scales, objective personality tests, and behavioral assessment methods to inform their clinical judgment and predictions.

### **The Effects of Predictions**

Sometimes predictions turn out to be in error not because they were based on faulty inferences, but because the predictions themselves influenced the behavioral situation. For example, a prediction that a patient would have difficulty adjusting at home after release from the hospital may have been correct. However, the patient’s relatives may have accepted the prediction as a challenge and therefore provided an environment that was more conducive to the patient’s adjustment than it would have been in the absence of the prediction. Thus, the very act of having made a judgment may serve

to alter the clinician's own behavior or that of others.

### Prediction to Unknown Situations

Clinical inferences and predictions are likely to be in error when clinicians are not clear about the situations to which they are predicting. Inferring aggression from the TAT is one thing; relating it to specific situations is another. Furthermore, no matter how careful and correct clinicians are, an extraneous event can negate an otherwise perfectly valid prediction. Take the following example from the Office of Strategic Services (OSS, a predecessor to the Central Intelligence Agency) assessment program:

One high-ranking OSS officer, while operating abroad, received a letter from a friend of his in America informing him that his wife had run off with the local garage man, leaving no message or address. As a result the officer's morale, which had formerly been high, dropped to zero. The assessment staff could predict that a small percentage of men would have to cope with a profoundly depressing or disquieting event of this sort, but, again, it was not possible to guess which of the assessees would be thus afflicted. (OSS Assessment Staff, 1948, p. 454)

Common sense should suggest that to accurately predict a person's behavior, the clinician must consider the environment in which that behavior will take place. This is also a tenet of behavioral assessment. However, clinicians are frequently asked to make predictions based on only imprecise and vague information regarding the situation in which their patient will be living or working.

In a hospital setting, a clinician may be requested to provide a prerelease workup on a given psychiatric patient. But the information available to the clinician will too often cover only general background, with supplementary descriptions of individual differences. Investigators agree that such data are subject to a ceiling effect that will

allow correlations of no better than .30 to .40 between the data and subsequent behavior (e.g., Mischel, 1968). To say the least, correlations of that magnitude leave a great deal to be desired. Therefore, personality data alone are likely to be insufficient in many prediction situations.

### Fallacious Prediction Principles

In some instances, intuitive predictions can lead clinicians into error because they ignore the logic of statistical prediction. Intuitive predictions often ignore base rates, fail to consider regression effects, and assume that highly correlated predictors will yield higher validity (Garb, 1998; Kahneman & Tversky, 1973). For example, suppose that a clinician is assessing a patient by collecting samples of behavior in a variety of situations. Even though observations reveal an extremely aggressive person, the clinician should not be surprised to learn that eventually the person behaves in a non-aggressive fashion. Regression concepts should lead one to expect that exceptionally tall parents will have a shorter child, that brilliant students sometimes do poorly, and so on.

In addition, clinicians' own confidence can sometimes be misleading. For example, Kahneman and Tversky (1973) showed that individuals are more confident when they are predicting from correlated tests. More specifically, although clinicians are often more confident of their inferences when they stem from a combination of the Rorschach, the TAT, and the MMPI rather than from a single test, Golden (1964) could find no evidence to support this confidence. The reliability and validity of clinical interpretations did not increase as a function of increasing amounts of test data. One should always seek to corroborate one's inferences, but it would be a mistake to believe that the validity of inferences is inevitably correlated with the size of the test battery.

### The Influence of Stereotyped Beliefs

Sometimes clinicians seem to interpret data in terms of *stereotyped beliefs* (Chapman & Chapman, 1967). For example, Golding and Rorer (1972) found that

certain clinicians believed that anal responses on the Rorschach indicated homosexuality, and they were extremely resistant to changing their preconceptions even in the face of intensive training to the contrary. Such research is a reminder that clinicians must constantly be on guard against any tendency to believe that certain diagnostic signs are inevitably valid indicators of certain characteristics.

Another example comes from a survey of the effects of clients' socioeconomic status on clinicians' judgments (Sutton & Kessler, 1986). A sample of 242 respondents read case histories identical in all respects except that the client was placed in different socioeconomic classes. When the client was described as an unemployed welfare recipient with a seventh-grade education, clinicians predicted a poorer prognosis and were less likely to recommend insight therapy.

### **“Why I Do Not Attend Case Conferences”**

In an engaging paper, Meehl (1977) lists a variety of reasons he gave up attending case conferences. He catalogs a number of fallacies that often surface at such meetings. Most of them are entirely relevant to the interpretive process generally. The following synopsis of a few of Meehl's examples provides something of their general flavor:

- *Sick-sick fallacy*: the tendency to perceive people very unlike ourselves as being sick. There is a tendency to interpret behavior very unlike our own as maladjusted, and it is easier to see pathology in such clients.
- *Me-too fallacy*: denying the diagnostic significance of an event in the patient's life because it has also happened to us. Some of us are narcissistic or defensive enough to believe we are paragons of mental health. Therefore, the more our patients are like us, the less likely we are to detect problems.
- *Uncle George's pancakes fallacy*: “There is nothing wrong with that; my Uncle George did not like to throw away leftover pancakes either.”

This is perhaps an extension of the previous fallacy. Things that we do (and by extension, things that those close to us do) could not be maladjusted; therefore, those like us cannot be maladjusted either.

- *Multiple Napoleons fallacy*: There was only one Napoleon, despite how strongly a psychotic patient may feel that he or she is also Napoleon. An objection to interpreting such a patient's belief as pathological is buttressed by the remark, “Well, it may not be real to us, but it's real to him (or her)!” Further, “Everything is real to the person doing the perceiving. In fact, our percepts are our reality.” If this argument were invoked consistently, nothing could possibly be pathological. Even the patient with paranoid schizophrenia who believes aliens are living in his nasal passages would be normal because, after all, this is reality for him.
- *Understanding it makes it normal fallacy*: the idea that understanding a patient's beliefs or behaviors strips them of their significance. This trap is very easy for clinicians to fall into. Even the most deviant and curious behavior can somehow begin to seem acceptable once we convince ourselves that we know the reasons for its occurrence. This may not be unlike the reasoning of those who excuse the criminal's behavior because they understand the motives and poor childhood experiences involved.

## **COMMUNICATION: THE CLINICAL REPORT**

To this point, we have discussed the process of clinical judgment in assessment. The clinician has completed the interview, administered the tests, and read the case history. The tests have been scored, and hypotheses and impressions have been developed. The time has come to write the report. This is the communication phase of the assessment process.

Long ago, Appelbaum (1970) has characterized the role of the assessor as sociologist, politician,

diplomat, group dynamicist, salesperson, artist, and yes, even psychologist. As a sociologist, the assessor must assay the local mores to aid in the acceptance of the report and to direct the report to those most likely to implement it. In some instances, this may mean interacting directly with hospital personnel to convince them of the validity of the report and to encourage them to act on it. These interactions may involve ward attendants, nurses, psychiatrists, and others. Such persuasion may at times seem more suitable for a politician or a diplomat than for a clinician.

One should not accept the role of clinical huckster. However, there are certainly times when reports will have to serve the function of convincing reluctant others. Not everyone is willing to regard the clinician as a purveyor of wisdom and unadulterated truth. Ideally, of course, the evidence for clinicians' conclusions and the tightness of their arguments will be reasons enough for accepting their descriptions and recommendations.

There is no single "best format" for a report. The nature of the referral, the audience to which the report is directed, the kinds of assessment procedures used, and the theoretical persuasion of the clinician are just a few of the considerations that may affect the presentation of a clinical report. What one says to a psychiatrist is likely to be couched in language different from that directed to a school official. The feedback provided to the parents of a child with mental retardation must be presented differently from the feedback given to a professional colleague. In Table 10-2, we present a sample outline of a psychological test report (Beutler, 1995).

### The Referral Source

The major responsibility of the report is to address the *referral question*. The test report should carefully and explicitly answer the questions that prompted the assessment in the first place. If the referral questions cannot be answered or if they are somehow inappropriate, this should be stated in the report and the reasons given for this judgment. In some (perhaps most) instances, contradictions will be inherent in the assessment data. Although the clinician must make every effort to resolve such

contradictions and present a unified view of the patient, there are instances in which such resolution is not possible. In those instances, the contradictions should be described. Distortion in the service of consistency is not a desirable alternative.

There are often secondary readers of clinical reports. For example, although the primary report may be sent to the referring person (a psychiatrist, a school, another clinician, or an agency), a secondary reader may be an agency administrator, a program evaluator, or a research psychologist. In specific circumstances, it may be necessary or even desirable to prepare a special report for such people. In any event, a clinical report does not always serve an exclusively clinical or direct helping function. It can also be useful in assisting an agency to evaluate the effect of its programs. It can likewise be useful from the standpoint of psychological research. Information in clinical reports can often be helpful in validating tests or the interpretations and predictions made from tests. Such data can sometimes provide a baseline against which to compare subsequent change in the patient as a function of various forms of intervention.

### Aids to Communication

The function of a report is communication. The following are some suggestions for enhancing that function.

**Language.** One should not resort to jargon or to a boring and detailed test-by-test account of patient responses. Again, it is important to recall the nature of the referral source. In general, it is probably best to write in a style and language that can be understood by the intelligent layperson. Of course, what is jargon or excessively technical is partly in the eye of the beholder. A considerable amount of technical language can be tolerated in a report sent to a professional colleague whom one knows. On the other hand, technical jargon has no place in a report that is going to a parent. The terms *interrest scatter* and *Erlebnistypus* (a somewhat obscure Rorschach index) may be all right for another clinician, but they should not appear in a report sent to a junior high school counselor.

**TABLE 10-2 Sample Outline of Psychological Report**


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<p>I. Identifying information</p> <p>A. Name of patient</p> <p>B. Sex</p> <p>C. Age</p> <p>D. Ethnicity</p> <p>E. Date of evaluation</p> <p>F. Referring clinician</p> <p>II. Referral question</p> <p>III. Assessment procedures</p> <p>IV. Background</p> <p>A. Information relevant to clarifying the referral question</p> <p>B. A statement of the probable reliability/validity of conclusions</p> <p>V. Summary of impressions and findings</p> <p>A. Cognitive level</p> <ul style="list-style-type: none"> <li>▪ Current intellectual and cognitive functioning (e.g., ideation, intelligence, memory, perception)</li> <li>▪ Degree (amount of) impairment compared to premorbid level</li> <li>▪ Probable cause of impairment</li> </ul> <p>(By end of this subsection, referrer should know whether the patient has a thought disorder, mental retardation, organicity.)</p> <p>B. Affective and mood levels</p> <ul style="list-style-type: none"> <li>▪ Mood, affect at present—compare this with premorbid levels</li> <li>▪ Degree of disturbance (mild, moderate, severe)</li> <li>▪ Chronic vs. acute nature of disturbance</li> <li>▪ Lability—how well can the person modulate, control affect with his/her cognitive resources?</li> </ul> <p>(By end of this subsection, referrer should know whether there is a mood disturbance, what the patient's affects are, and how well controlled his/her emotions are.)</p> <p>C. Interpersonal–intrapersonal level</p> <ul style="list-style-type: none"> <li>▪ Primary interpersonal and intrapersonal conflicts, and their significance</li> <li>▪ Interpersonal and intrapersonal coping strategies (including major defenses)</li> <li>▪ Formulation of personality</li> </ul> <p>VI. Diagnostic impressions</p> <p>A. Series of impressions about cognitive and affective functioning, <i>or</i></p> <p>B. The most probable diagnoses</p> <p>VII. Recommendations</p> <p>A. Assessment of risk, need for confinement, medication</p> <p>B. Duration, modality, frequency of treatment</p>	<hr/> <p>SOURCE: Beutler, L. E., "Integrating and communicating findings," in L. E. Beutler &amp; M. R. Berren (Eds.), <i>Integrative Assessment of Adult Personality</i> (pp. 25–64). Copyright © 1995 Guilford Publications, Inc. Reprinted with permission.</p>
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**Individualized Reports.** We observed earlier in this chapter the importance of avoiding the Barnum effect, and it is appropriate to repeat the point here. The distinctive (be it current characteristics, development, or learning history) is preferred over the general. To say “Jack is insecure” hardly distinguishes him from 90% of all psychotherapy patients. To say that Jack’s insecurity stems from a

history of living with several different relatives as a child and that it will become particularly acute whenever he must make a decision that will take him away (even temporarily) from wife and home is considerably more meaningful. In this case, a general characteristic has been distinctly qualified by both antecedent and subsequent conditions.

**The Level of Detail.** The question often arises as to how detailed a report should be. Again, the answer depends largely on the audience. In general, however, it seems desirable to include a mix of abstract generalities, specific behavioral illustrations, and some testing detail. For example, in reporting depressive tendencies, a few illustrations of the test responses that led to the inference would be in order. A few of the relevant behavioral observations that were made during testing could also be quite helpful. A certain amount of detail can give readers the feeling that they can evaluate the clinician's conclusions and interpretations. The exclusive use of abstract generalities places the reader at the mercy of the clinician's inferential processes.

**Some Comments on the Antonio Ramirez Report.** The primary function of a report is communication. It should not be an ego trip for the writer. In general, the report on Antonio Ramirez could be read and understood by a layperson; it included little of a technical nature. However, some of the language used (e.g., "intense inner experiences," "reality testing") may only be familiar to other mental health professionals.

Another positive feature is the level of detail. The report begins with some background material, along with references to the patient's accounts of his behavior and feelings. It also includes some behavioral observations by the clinician. It then moves to a discussion of test responses and some

### A Case Illustration of a Clinical Report

To illustrate several of the points that this chapter has made regarding clinical judgment and communication, let us consider a specific clinical case report (Corbishley & Yost, 1995, pp. 322–340).

#### *Identifying Information*

*Name:* Antonio Ramirez

*Date of birth:* 7/4/62

*Sex:* Male

*Dates of examination:* 8/22/94, 8/23/94

#### *Referral Question*

Antonio Ramirez, a 32-year-old Latino male, is a sergeant with the Detroit, Michigan, Police Department, currently working as a narcotics officer. In the past few weeks, he has exhibited signs of stress but has refused to take sick leave, claiming that there is nothing wrong. He was referred by his commanding officer for psychological assessment to determine the extent to which recent events in Mr. Ramirez's life may have affected his ability to continue with his present duties.

#### *Assessment Procedures*

Mr. Ramirez's personnel file and the referring physician's report were reviewed, and Mr. Ramirez reluctantly agreed to allow his wife, Donna, to be interviewed. On August 22, 1994, Mrs. Ramirez was interviewed for 1 hour while her husband took the Minnesota Multiphasic Personality Inventory–2 (MMPI-2). He complained of headache and blurred vision, which he claimed prevented further assessment that

day. He returned the next day for a 1-hour interview, after which he completed the Rorschach and the Wechsler Adult Intelligence Scale–Revised (WAIS-R).

#### *Background*

Mr. Ramirez is currently living with his wife of 8 years, a 6-year-old daughter, and a 4-year-old son. He has been employed by the Detroit Police Department since 1984 and has a satisfactory record. In general his health is good, and he expresses satisfaction with his job and marriage. His social life is limited, which he attributes to the fact that as a police officer he is viewed with unease by potential friends, and also to the unpredictable hours he must work.

He has good relationships with his siblings but sees them rarely, as they all live in distant parts of the country. He has no hobbies and spends his limited spare time at home, occasionally playing with his children, but primarily maintaining his house and yard. His relationship with his wife is by his report close, but he says they rarely discuss feelings and he would not burden her with his worries. His wife describes him as a good husband, faithful, even-tempered, and a loving father, but she says he takes life too seriously, and would like him to learn to have more fun.

Mr. Ramirez was raised by his mother in considerable poverty, his father having died in an industrial accident when Antonio was 8 years old. He remembers his father as "stern, but you knew he loved you." He

(Continued)

### A Case Illustration of a Clinical Report (*Continued*)

describes his mother as “always worn out, always sad.” At the time of his father’s death, there were three younger children, ages 5 years, 3 years, and 6 months. Mr. Ramirez early took on the role of family supporter, working after school and on weekends to add to the family income, and helping to discipline his younger siblings. He remembers his development years as “not much fun, a lot of struggling to survive.”

At school he was an isolate because of his work schedule and also because he was determined to complete his education, and thus had no time for “fooling with the guys.” He learned to fight in self-defense when necessary, to pursue his own course, and to persist at whatever he tried. His sexual development was unremarkable. Since his mother seemed already to be burdened and since he had no close friends, he learned to keep problems and feelings to himself. After 2 years of college he entered the police academy, attracted by the discipline and structure of the organization and the opportunity to defend the public. On the police force he acquired a reputation for being fair, even-tempered, tough, and completely dependable, but not an easy person to get close to—indeed, almost frightening in his self-sufficiency.

In the last 3 months, he has experienced a number of disturbing events. His partner was wounded during a raid; Mr. Ramirez himself was shot at, though not injured, while making a routine traffic check; his wife was attacked, though not raped or physically harmed, on the way home from work one evening; and he was the first on the scene to discover two children under the age of 5 beaten to death in a “crack” house.

This accumulation of violence appears to have affected Mr. Ramirez in several ways. He has had several uncharacteristic outbursts of temper at minor frustrations; on one occasion, to the distress of his fellow officers, he fired his police weapon with insufficient provocation. Somatic symptoms include a 15-pound weight loss over the past 2 months, and (according to his wife) restless sleep and nightmares several times a week. In addition, he has become irrationally overprotective of his family, refusing to let the children visit friends’ houses, and angrily demanding that his wife stop work. At work he appears jumpy and distractible, to an extent that has become a concern to his fellow officers. When doing work requiring close attention, he has, on several occasions, developed a headache. Several of his written reports, usually meticulously completed, have contained careless errors and omissions. He has refused to discuss any of these

incidents or their impact with his partner, his immediate supervisor, or the police-appointed physician.

When asked about these unusual behaviors, Mr. Ramirez denied that he had changed and claimed that people were exaggerating. On probing, he admitted that sometimes, when he is involved in unrelated daily activities, he gets flashbacks (especially to the scene with the dead children), but claimed that they neither upset him nor made him lose concentration. He attributed his weight loss and restless sleep to the hot summer weather, and insisted throughout the assessment process that he is “fine,” that the events of the past months are just part of his job and of life, and that he is capable of continuing to work as before.

#### *Reliability and Validity of Conclusions*

At various points in the evaluation, Mr. Ramirez became agitated and appeared irritated; he jokingly accused the examiner of trying to make him remember “things best forgotten.” In unstructured situations (the Rorschach), he produced fewer responses as the test proceeded. It is likely that his high level of arousal affected the validity of his responses to unstructured materials. He had fewer complaints regarding structured materials (the MMPI-2), but indices of validity indicate an effort to present himself in a favorable light and to deny pathology. During intellectually challenging tasks (the WAIS-R), he appeared to try hard and was minimally distracted.

All external evidence indicates that Mr. Ramirez’s behavior over the past few weeks represents a considerable departure from premorbid levels of functioning, despite his denials. The results of procedures should therefore be interpreted in the light of objective information from external sources.

#### *Summary of Impressions and Findings*

On both days of assessment, Mr. Ramirez arrived punctually, in full uniform and meticulously groomed. Whether standing or sitting, he held himself rigidly and made little movement, as if at attention. He made eye contact infrequently and briefly, and spoke in a clear, quite loud, monotone voice, often pausing before speaking, and rarely expanding upon his answers without prompting. Even when he spoke of his inner experiences, he gave the impression of a person making a formal report to a superior. Only while he was responding to unstructured material was there a sense that his responses were spontaneous.

Intellectually, this man is functioning within the “bright normal” range of intelligence, but at a considerably lower level than previous assessment has indicated. In normal circumstances, he thinks carefully and logically (though unimaginatively), and is capable of sustained intellectual efforts. At the present time, he is easily distracted by intense inner experiences. Strong affect and mental images of unpleasant recent events appear to intrude on his problem-solving efforts and reduce his cognitive efficiency. Thus, his concentration and memory are somewhat impaired; recognizing this, he makes halting and ineffective efforts to overcome and compensate. These efforts produce increased physical tension, which may account for his somatic symptoms. It is likely that his reality testing is somewhat impaired under conditions of high stress, especially the stress of perceived threats to his sense of competence or to the welfare of others; under these conditions, his cognitive controls may be insufficient to prevent his becoming overwhelmed by internal or external stimuli. There is no evidence of a thought disorder, and it is likely that he can return to premorbid levels of functioning if he receives appropriate treatment.

Mr. Ramirez’s mood is normally bland, almost stoic, with mild expression of emotions appropriate to the situation. He rarely exhibits anger, and, indeed, generally manages his affective experiences so as to avoid arousing strong feelings in himself. He is, however, capable of great emotional intensity, the expression of which he views as weakness, both in himself and in others. His greatest fear is the loss of self-control, since he believes such control to be the prime means of attaining satisfaction in life. Typically, he maintains control over his emotions by avoidance, withdrawal, and denial—even at home, where he feels less need to protect himself. He attempts to prevent both his wife and his children from expressing intense or prolonged affect, both positive and negative. He is experienced by others as emotionally insulated, but not cold or threatening.

Currently, he is reacting with unusual intensity to mild stimuli, and there are indications that he is experiencing acute dysphoria, with barely suppressed rage and frustration. It is apparent that his normal controls over affect are becoming less effective, though he continues to deny either the existence of strong emotion or his own inability to contain it. Since, as a police officer, he must work in daily contact with situations that are bound to elicit unpleasant emotions, and since he will never be able to completely protect his family from all harm, it is likely that his emotions will intensify and that his control will weaken further. A breakdown of control may manifest itself in more severe somatic complaints or in hostile and

aggressive action, or in both. It is clear that Mr. Ramirez’s current method of dealing with recently encountered stresses is increasingly ineffective.

Mr. Ramirez is generally conforming and conventional, with a need for structure and a strong sense of morality, loyalty, and responsibility to others. He performs best, and experiences a strong sense of competence and self-confidence, in situations where both role and task are clear. He has a need to be—and to be seen as—strong, effective, and in control. To this end, he is planful, vigilant, persistent, and determined, setting goals for himself and pursuing them in an organized manner. When difficulties arise, he tackles them immediately, directly, and actively, and is impatient with ambiguous resolutions to problems. On the other hand, he demonstrates a lack of flexibility and a tendency to be dogmatic and domineering, especially with those he views as inferior or in need of his protection. Because of his confidence and competence, others tend to trust, rely on, and respect him, but they find him emotionally distant and hard to know. Because of these attitudes and behaviors, Mr. Ramirez is, in general, a highly competent police officer.

In his personal life, both his single-minded pursuit of goals and his refusal to acknowledge intense affect make for a rather joyless and dogged existence. His need to avoid appearing vulnerable and his tendency to enjoy solitary pursuits keep him from an active social life, and he experiences considerable discomfort in what appear to him to be purposeless social occasions. Only in his most intimate relationships is he able to relax to some degree—for example, when playing with his children. He has a strong sense of the importance of family, and generally adheres to a traditional view of the male’s role as provider and protector. Thus, the recent attack on his wife was experienced by Mr. Ramirez as a severe and multifaceted threat, calling for immediate action. Because he had no control over the situation and has no way to control future, similar situations, Mr. Ramirez feels helpless and vulnerable to a degree that is extremely difficult for him to tolerate.

#### *Diagnostic Impressions*

This man’s premorbid functioning is likely to have been characterized by mild social phobia, a tendency to restrict affective experiences and expression, and a somewhat rigid personality structure. However, it is likely that he was generally effective in daily living, with stable work and personal relationships. Recent changes in his affect, behavior, and cognitive functioning appear directly related to several severe

(Continued)

### A Case Illustration of a Clinical Report (*Continued*)

psychosocial stressors. He re-experiences these events; avoids stimuli associated with the events; and suffers from loss of interest in significant activities, poor concentration, exaggerated startle response, and intense irritability. These symptoms having persisted for at least 1 month. A diagnosis of Post-Traumatic Stress Disorder is warranted.

Axis I	309.89, Post-Traumatic Stress Disorder
Axis II	No diagnosis on Axis II
Axis III	None
Axis IV	Psychosocial stressors: Injury of partner; wife attacked; discovery of dead children in "crack" house Severity: 4–5 (acute events)
Axis V	Global Assessment of Functioning (GAF): Current, 53; highest past year, 75

#### *Recommendations*

Mr. Ramirez's responses to his environment are increasingly atypical and therefore unpredictable. His current

assignment requires self-discipline and cool judgment, which he may no longer be able to produce reliably at premorbid levels. Furthermore, he has apparently almost no insight into his condition, is experiencing anger, and is capable of acting aggressively. It is recommended, therefore, that he be relieved of those duties that involve direct confrontation with violence or danger to himself or to others, with return to active duty contingent upon psychological change.

It is further recommended that Mr. Ramirez seek behavioral psychotherapy—in a group, if possible—that takes a self-management approach. His defensiveness, self-sufficiency, assumption of a conventional male role, and resistance to psychological material indicate that he is unlikely to be a good candidate for insight-oriented psychotherapy, which he would be likely to see as evidence of personal failure. However, it is essential that he learn to modify his need to control every aspect of life, especially if he wishes to continue his present career path. The behavioral/self-management approach seems most likely to present the process of self-examination and change in an acceptable light.

inferences from them. Following that, several integrative statements are made.

At the same time, occasional examples of Barnum statements are apparent in the report—for example, "It is likely that his reality testing is somewhat impaired under conditions of high stress." There were also occasional predictions or statements that were somewhat vague. For example, how would one validate the prediction "It is likely that he can return to premorbid levels of functioning if he receives appropriate treatment?" In many cases, it is unclear what test data were used to support the stated interpretations and predictions. Were these

based on MMPI-2, WAIS-R, or Rorschach results? What specific test scores from any or all of these measures were used as the basis for these statements?

Despite these few critical comments, we want to emphasize that this report has many more strengths than it has limitations. Reports will vary with regard to structure, style, and language. What is most important, however, is that the test report contribute to an increased understanding of the patient so that the appropriate course of action/treatment can be undertaken. After all, that is the primary goal of psychological assessment.

## CHAPTER SUMMARY

Clinicians are an integral part of diagnosis and assessment. Clinicians make important decisions as to what data are gathered, how they are gathered, and how they are interpreted. Data can be viewed as a sample of behavior, as a sign of some

underlying condition, or as a correlate of other behavioral or emotional constructs. Likewise, interpretations can take many forms, ranging from the more straightforward and less inferential to the highly complex and highly inferential variety.

Clinical psychology has for some time debated the merits of clinical (subjective) versus statistical (objective, quantitative) prediction. Research clearly supports the statistical approach to clinical prediction. Although intuitively appealing, clinical prediction is subject to a variety of biases (e.g., race, social class, and gender), may lead to unwarranted overconfidence, and is characterized by unreliability and validity problems. However, objective decision rules and statistical algorithms are not available for most of the prediction tasks that face clinicians. Therefore, clinical judgment and clinical prediction are often required.

We offer a number of recommendations to improve the reliability and validity of clinical judgments: (a) Consider all available information, and do not ignore inconsistent data. (b) Consider clients' or patients' strengths and assets as well as pathology and

dysfunction. (c) Document all predictions, try to evaluate their accuracy, and use this information as feedback. (d) Use only structured interviews, structured rating scales, objective personality tests, and behavioral assessment methods to gather data. (e) Consider the client's situation and environment before making predictions. (f) Consider base rates and regression effects. (g) Do not let one's level of confidence influence prediction. (h) Be aware of and guard against stereotyped beliefs and illusory correlations.

The clinical report serves as the major form of communication to convey the findings from a clinician's assessment and evaluation. The report should address the referral questions and use language that is tailored to the person or persons who will be reading the report. Finally, the report should contain information that is detailed and specific to the client and should avoid vague, Barnum-like statements.

## KEY TERMS

**Barnum effect** A term applied in cases where statements that appear to be valid self-descriptions in actuality characterize almost everybody.

**clinical interpretation** A complex, inferential process in which the clinician considers the information at hand (e.g., interview data, test results) to conceptualize the problem and determine a course of action.

**correlates** Related variables. Clinicians employing a correlational orientation to patient data focus on the presumed behavioral, attitudinal, or emotional correlates of specific results.

**quantitative or statistical approach** An approach to clinical judgment and interpretation that uses formulas and statistical models (already derived) to make predictions about clinical outcomes. Once the formulas have been established, this approach involves no clinical decision making at all.

**referral question** The question about the patient that prompted the assessment.

**samples** Specimens of behavior. One orientation to patient data views these data as samples of a larger pool of information about the patient.

**signs** Markers of underlying characteristics. One orientation to patient data regards these data as signs of some underlying state or trait.

**stereotyped beliefs** Fixed beliefs (e.g., about certain diagnostic signs, about certain demographically defined groups) that may influence clinical judgment.

**subjective or clinical approach** An approach to clinical judgment and interpretation that is largely intuitive and experiential. Subjective or clinical interpretation requires that the clinician be sensitive to information from a wide range of sources and make a series of inductive or deductive generalizations to link the observations and predict the outcome.

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## PART III

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# Clinical Interventions

- 11 Psychological Interventions
  - 12 Psychotherapy: The Psychodynamic Perspective
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# 11



## Psychological Interventions

### FOCUS QUESTIONS

1. What is psychological treatment or intervention? Does psychotherapy work?
2. What is the difference between evidence-based treatment (EBT) and evidence-based practice (EBP)?
3. What patient or therapist variables have been shown to be related to psychotherapy outcome?
4. What are the typical phases or steps involved in clinical intervention? Describe each phase.
5. What are the major issues to consider when designing a psychotherapy research study?
6. What conclusions can be drawn from the major comparative studies of different forms of psychotherapy?

### CHAPTER OUTLINE

#### Intervention Defined

#### Does Psychotherapy Help?

BOX 11-1: *Clinical Psychologist Perspective: Martin E. P. Seligman, Ph.D.*

#### Evidence-Based Treatment and Evidence-Based Practice

#### Features Common to Many Therapies

BOX 11-2: *Clinical Psychologist Perspective: Dianne L. Chambless, Ph.D.*

#### Nature of Specific Therapeutic Variables

The Patient or Client

BOX 11-3: *Focus on Professional Issues: Cultural Competence*

The Therapist

#### Course of Clinical Intervention

Initial Contact

Assessment

The Goals of Treatment

Implementing Treatment

Termination, Evaluation, and Follow-up

BOX 11-4: *Focus on Clinical Applications: Information Patients Have a Right to Know*

#### Stages of Change

#### Psychotherapy Research

BOX 11-5: *Focus on Professional Issues: Eysenck's Bombshell*

Issues in Psychotherapy Research

Comparative Studies

Process Research

Recent Trends

## Some General Conclusions

### CHAPTER SUMMARY

In this chapter, we provide a general description of psychotherapy, describe its major features, discuss issues about its efficacy and effectiveness, and present an introduction to psychotherapy research. The focus is on a broad overview of some of the major features shared by different methods of clinical intervention. These interventions go by many different names: psychodynamic therapy, cognitive therapy, group therapy, family therapy, behavior therapy, existential therapy, and on and on. In some ways, each has a set of unique defining characteristics or is directed toward specific kinds of problems. In subsequent chapters, we will focus on these defining characteristics. Here, however, our attention is directed toward shared features rather than differences.

### INTERVENTION DEFINED

In a most general way, *psychological intervention* is a method of inducing changes in a person's behavior, thoughts, or feelings. Although the same might also be said for a TV commercial or the efforts of teachers and close friends, psychotherapy involves intervention in the context of a professional relationship—a relationship sought by the client or the client's guardians. In some cases, therapy is undertaken to solve a specific problem or to improve the individual's capacity to deal with existing behaviors, feelings, or thoughts that impair functioning at work, school, or in relationships. In other cases, the focus may be more on the prevention of problems than on remedying an existing condition. In still other instances, the focus is less on solving or preventing problems than it is on increasing the person's ability to take pleasure in life or to achieve some latent potential.

Over the years, many definitions of the intervention process have been offered. As often as not, the terms *intervention* and *psychotherapy* have been used interchangeably. A rather typical general

### KEY TERMS

### WEB SITES OF INTEREST

definition of psychotherapy was provided years ago by Wolberg (1967):

Psychotherapy is a form of treatment for problems of an emotional nature in which a trained person deliberately establishes a professional relationship with a patient with the object of removing, modifying or retarding existing symptoms, of mediating disturbed patterns of behavior, and of promoting positive personality growth and development. (p. 3)

Wolberg's definition includes such words as *symptoms* and *treatment*, and his subsequent elaboration of the definition gives it a distinctly medical flavor. Yet, overall, the definition is not much different from one offered by a more psychologically oriented clinician (Rotter, 1971a, p. 79): "Psychotherapy ... is planned activity of the psychologist, the purpose of which is to accomplish changes in the individual that make his life adjustment potentially happier, more constructive, or both." J. D. Frank (1982) elaborates this general theme as follows:

Psychotherapy is a planned, emotionally charged, confiding interaction between a trained, socially sanctioned healer and a sufferer. During this interaction the healer seeks to relieve the sufferer's distress and disability through symbolic communications, primarily words but also sometimes bodily activities. The healer may or may not involve the patient's relatives and others in the healing rituals. Psychotherapy also often includes helping the patient to accept and endure suffering as an inevitable aspect of life that can be used as an opportunity for personal growth. (p. 10)

Granted, these definitions are rather broad. Practitioners of such specific approaches as psychodynamic therapy, rational-emotive therapy, client-centered counseling, cognitive therapy, Gestalt

therapy, and other forms of psychological treatment will rightly note that such definitions hardly convey the essence of their unique “brand” of therapy.

## DOES PSYCHOTHERAPY HELP?

Before we describe in more detail the goals and features of psychotherapy, a general question needs to be addressed. Does psychotherapy work? There are two issues to address when answering this question, the *efficacy* of a treatment and the *effectiveness* of a treatment. A treatment is considered efficacious to the extent that the average person receiving the treatment in clinical trials is demonstrated to be significantly less dysfunctional than the average person not receiving any treatment (e.g., those on a waiting list for treatment). *Efficacy studies* place a premium on internal validity by controlling the types of clients in the study, by standardizing the treatments, and by randomly assigning patients to treatment or no-treatment groups. Efficacy studies often take place in a research lab or university clinic where a group of prescreened clients can participate. Often the group of clients is homogeneous, and they may be paid to participate. Therapists in efficacy studies often are trained graduate students or mental health professionals who receive very close supervision. In contrast, *effectiveness studies* emphasize external validity and the representativeness of the treatment that is administered. These studies can look more like “real-world” treatment, as compared to efficacy studies. A range of clients and range of therapists (sometimes with varied training and supervision) are included. A treatment is considered effective to the extent that clients report clinically significant benefit from it. Effectiveness studies may or may not include control groups or random assignment. The focus is on whether a typical client receiving the treatment as is typically administered reports clinically significant relief or benefit.

Both advocates (e.g., Lambert & Bergin, 1994; Lambert & Ogles, 2004) and critics (e.g., Dawes, 1994) agree that empirical evidence supports the efficacy of psychotherapy. Of course, this does not mean that everyone benefits from psychotherapy. Rather,

on average, individuals who seek out and receive psychotherapy achieve some degree of relief. For example, a frequently cited meta-analytic review of more than 475 psychotherapy outcome studies reported that the *average* person receiving psychological treatment is functioning better than 80% of those not receiving treatment (Smith, Glass, & Miller, 1980). We will discuss this study and other reviews of psychotherapy outcomes in a later section focusing on psychotherapy research methods.

There are fewer studies of the effectiveness of psychotherapy, however. One major survey on the benefits of psychotherapy deserves mention. The November 1995 issue of *Consumer Reports* (“Mental Health,” 1995) summarized the results of a survey of 4,000 readers who had sought treatment for a psychological problem from a mental health professional, family doctor, or self-help group during the years 1991–1994. Most of the respondents were well educated, their median age was 46 years, and about half were women. Of this sample, 43% described their emotional state at the time that treatment was sought as “very poor” (“I barely managed to deal with things”) or “fairly poor” (“Life was usually pretty tough”). The 4,000 respondents presented for treatment of a wide range of problems, including depression, anxiety, panic, phobias, marital or sexual problems, alcohol or drug problems, and problems with children. The major findings were as follows:

- Psychotherapy resulted in some improvement for the majority of respondents. Those who felt the worst before treatment began reported the most improvement.
- As for which types of mental health professionals were most helpful, psychiatrists, psychologists, and social workers all received high marks. All appeared to be equally effective even after controlling for severity and type of psychological problem.
- Respondents who received psychotherapy alone improved as much as those who received psychotherapy plus medication as part of their treatment.
- In this survey, longer treatment (more sessions) was related to more improvement.

**BOX 11-1 Clinical Psychologist Perspective: Martin E. P. Seligman, Ph.D.**

Martin E. P. Seligman is the Zellerbach Family Professor of Psychology at the University of Pennsylvania. He is a leading authority on learned helplessness, explanatory style, and optimism and pessimism. He has published 25 books and more than 250 scholarly articles on motivation and personality. Over the last 30 years of his research career, he has received support from the National Institute of Mental Health, the National Institute of Aging, the National Science Foundation, the Guggenheim Foundation, and the MacArthur Foundation; in 1991, he won the coveted Merit Award from the National Institute of Mental Health. His colleagues have recognized his achievements by presenting him with prizes such as the Zubin Award of the Society for Research in Psychopathology, the William James Fellow Award of the American Psychological Society, and two Distinguished Scientific Contribution Awards from the American Psychological Association. Dr. Seligman recently served as president of the American Psychological Association.

The central theme of Dr. Seligman's work has been recognizing our explanatory style—what we say to ourselves when we experience setbacks—and how it influences our lives. He has identified effective techniques to transform negative thoughts and unlearn helplessness and to rise above pessimism and the depression that may accompany these negative thoughts. With years of research behind him, he has demonstrated how we can boost our moods, and immune systems, with healthful thoughts. In *What You Can Change and What You Can't* (Seligman, 1994),

he pinpoints what techniques and therapies will work best to effect change and also identifies what conditions we should stop trying to change. *The Optimistic Child* (Seligman, Reivich, Jaycox, & Gillham, 1995), presents research he and his colleagues have done to show how depression in children can be prevented. They propose a program that parents and educators can use to identify the danger signs of pessimism in children and teach them the skills of thinking optimistically. His most recent book, *Flourish* (2011), details the Positive Psychology movement, of which he is a founder.



Dr. Martin E.P. Seligman, Psychology Dept., Univ. Penn

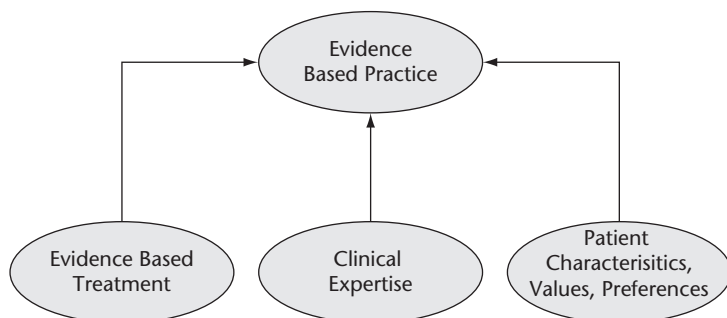
Martin E. P. Seligman

These findings are both interesting and provocative. This survey, however, is limited in a number of respects, and we must be cautious in our generalizations. For example, few respondents reported severe psychopathology (e.g., schizophrenia), and reports were both retrospective and based solely on the clients' self-reports. In addition, the percentage of potential respondents who returned the survey was relatively low, raising the possibility of an unrepresentative sample. Further, readers of this publication may not be particularly representative of the general U.S. population. Despite these limitations, the *Consumer Reports* survey provides some support

for the contention that psychotherapy works. It represents the largest study to date that has assessed "the effectiveness of psychotherapy as it is actually performed in the field with the population that actually seeks it, and it is the most extensive, carefully done study to do this" (Seligman, 1995, p. 971).

### **EVIDENCE-BASED TREATMENT AND EVIDENCE-BASED PRACTICE**

Many other studies have been conducted to determine whether psychotherapy works and also,



**FIGURE 11-1** Empirically based practice (EBP) is informed by information about evidence-based treatments (EBTs), a clinician’s own expertise, and a patient’s own characteristics, values, and preferences.

whether some approaches to psychotherapy are more likely to produce benefit than other approaches. Perhaps of greatest interest in clinical psychology today is the question of whether evidence-based treatments (i.e., psychotherapies that have been shown to work better than no treatment) are more efficacious, and are more effective, than other therapies (Kazdin, 2008).

It is important to make a distinction, though, between evidence-based treatment and evidence-based practice (Kazdin, 2008). *Evidence-based treatment* (EBT; originally called empirically supported or empirically validated treatment) refers to those interventions or techniques that have produced significant change in clients and patients in controlled trials. In other words, these interventions have been shown to be efficacious by comparing those that receive the treatment to those from a control group. A treatment is deemed an EBT based on efficacy studies supporting its positive effects on patients. Evidence-based practice (EBP) is a broader category in that it includes treatments informed by a number of sources, including scientific evidence about the intervention, clinical expertise, and patient needs and preferences (APA, 2006; Kazdin, 2008). So, EBP is not the same as EBT; the latter designation comes solely from the results of controlled clinical trials (see Figure 11-1).

Evidence-based practice has always been a topic of interest to health care providers; physicians, nurses, and members of many other allied fields have been interested in whether the treatments they provided had demonstrated effects. Clinical psychologists became especially interested in this question in the 1980s and 1990s, however, when health care reforms placed greater pressure upon psychologists to demonstrate that their services “worked.” Particularly important for psychologists was whether the treatments that clinicians provided were better or worse than the treatments that could be provided in the fields of psychiatry, social work, or many other mental health disciplines (e.g., counseling, marriage and family therapy, etc.).

However, some clinical psychologists resisted the idea of evidence-based practice, arguing that therapy was an “art” and the factors that changed as a result of therapy would be difficult to define and measure scientifically. Many thought that the examination of certain therapeutic approaches as compared to others would not be possible.

In 1995, the Society of Clinical Psychology, a division of the American Psychological Association, disseminated criteria to evaluate whether specific approaches to treatment had established scientific support to suggest that they could reduce psychological symptoms (see Table 11-1). Initially