

Introduction to Clinical Psychology

*Edited by
Lynda A. Heiden
and
Michel Hersen*

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Springer Science+Business Media, LLC

Library of Congress Cataloging-in-Publication Data

Introduction to clinical psychology / edited by Lynda A. Heiden and Michel Hersen.

p. cm.

Includes bibliographical references and index.

1. Clinical psychology. I. Heiden, Lynda A. II. Hersen, Michel.

[DNLM: 1. Psychology, Clinical. WM 105 I618 1995]

RC467.I677 1995

616.89--dc20

DNLM/DLC

for Library of Congress

95-17695

CIP

ISBN 978-1-4899-1575-7

ISBN 978-1-4899-1573-3 (eBook)

DOI 10.1007/978-1-4899-1573-3

© Springer Science+Business Media New York 1995
Originally published by Plenum Press, New York in 1995
Softcover reprint of the hardcover 1st edition 1995

10 9 8 7 6 5 4 3 2 1

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To the memory of my mother and friend,
Shirley H. Heiden, and to my family

—LAH

To Vicki

—MH

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Preface

Introduction to Clinical Psychology is intended to serve as a text for the upper-division undergraduate and beginning graduate student of clinical psychology. Using a unique format for a text at this level, this edited volume brings together authors who are active professionals and experts in their field and provides a current perspective on theory, training, assessment, consultation, research, and outpatient and inpatient practice. The book is designed for students who have some understanding of abnormal psychology, assessment, and psychotherapeutic theory and methods. It should be most useful either for students considering a career in clinical psychology or for those who would like to know more about professional applications of clinical training.

Although there are several excellent introductory texts available that detail relevant clinical theory and the broad activities of assessment and treatment, in teaching clinical psychology courses we find that many students have little understanding of the specialties within the field and have been exposed to only a rudimentary understanding of the “real” life of a clinical psychologist. The purpose of this book, therefore, is to bridge the gap between theory and practice and to provide the student with a flavor of the field. We trust that by complementing the more typical review of clinical theory and practice with expert perspectives on a number of specialized activities and settings, the student will appreciate more fully the diverse professional opportunities available to those trained in clinical psychology.

For pedagogical purposes, each chapter has been designed to include key words and study questions. For classroom use, the study questions provide students with specific learning objectives, and the boldface key words provide emphasis on new or essential terminology introduced in each chapter. Ample case examples are provided where appropriate to illustrate the types of challenges encountered in each specialization or setting, and to demonstrate how theory translates into practice.

The 17 chapters of this book are divided into five parts. In Part I, Introduction, the three chapters include a historical overview of clinical psychology, theoretical models, and education and training. Part II, Evaluation and Assessment, contains four chapters that deal with intellectual evaluation, behavioral assessment, personality assessment, and interviewing. The application of be-

havioral and psychodynamic treatment is considered in the two chapters contained in Part III, Intervention. Part IV, Professional Activities and Settings, provides four chapters describing consultation and research activities, as well as clinical practice in private and psychiatric hospital settings. The remainder of the book—Part V, Clinical Specialties—is devoted to four current areas of specialization, including behavioral medicine, neuropsychology, pediatrics, and forensics.

We are grateful to those who have made substantial contributions to this volume. First, we thank our eminent contributors for sharing with us their special expertise. Second, we wish to thank Lynda Heiden's students—Michelle Barry, Elain Cortina, Denis Healy, Monica Hinson, Michelle Roper, Christina Ryan, Stephanie Smith, Michael Thomson, Cheryl Williams-Jackson, and Lisa Zelt—for their insightful comments on many of the chapters from the perspectives of the consumer. Third, we thank Burt G. Bolton for his technical expertise and help. Finally, but most important, we express our gratitude to Eliot Werner, Executive Editor at Plenum, for his understanding of the nuances of the project.

LYNDA A. HEIDEN
MICHEL HERSEN

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Introduction to Clinical Psychology

PART I

Introduction

The role of clinical psychology in meeting mental health needs has grown increasingly more complex since its formal recognition in the early 20th century. Before advancing to professional applications of clinical psychology, it is important first to gain some understanding of its historical development and to review influential models in the assessment and treatment of abnormal behavior. Moreover, it is essential for students to be informed about the most current educational and training requirements for clinical psychologists as they pursue their educational and professional goals. Part I, therefore, is devoted to an overview of clinical psychology's history, basic theoretical models, and educational preparation.

In Chapter 1, Michael Alessandri, Lynda A. Heiden, and Melisa Dunbar-Welter highlight key points in the modern history of clinical psychology that set the stage for later developments in the field. As they trace the contributions of key American and European figures from the mid-19th century to the present, the evolution of the field unfolds into a discussion of the professional challenges we face today, including education and training issues, changes in treatment modalities, and emerging specialities.

In Chapter 2, J. Mark Davis and Henry E. Adams review four primary models from which clinical psychologists draw their theoretical orientation: psychoanalytic, phenomenological, cognitive/behavioral, and biological/medical. These authors discuss the assumptions about personality development and adjustment embedded in each model, and illustrate how the unique concepts of each theory are integrated into assessment and treatment strategies. The importance of research in validating each theory is underscored.

In Chapter 3, Joseph R. Scotti and Barry A. Edelstein provide a comprehensive discussion of education and training in psychology at both the undergraduate and graduate levels, including a review of the historical underpinnings for each of the present training models. The ongoing controversy over the weight assigned to scientific versus professional aspects of training is discussed at length. Finally, the authors offer valuable advice for graduate school and professional success, beginning with the application process and continuing through to APA internship selection and postdoctoral training.

CHAPTER 1

History and Overview

MICHAEL ALESSANDRI, LYNDA A. HEIDEN,
and MELISA DUNBAR-WELTER

INTRODUCTION

Clinical psychology has grown tremendously since 1896, the year **Lightner Witmer** founded the world's first psychological clinic at the University of Pennsylvania (Reisman, 1976). While once associated merely with clinic-based evaluation and treatment of childhood learning problems, the field of clinical psychology has expanded into a wide range of client populations, clinical activities, and work settings.

Professional activities are no longer limited to children, but now involve adults, couples, families, and groups as well. The range of problems has expanded well beyond learning deficits, and encompasses everything from mild adjustment disturbances to severe psychopathology. The settings in which clinical psychologists conduct their work have extended beyond the academic psychology clinics of years past to include college and university psychology departments; medical and law schools; hospitals; community mental health centers; educational facilities; prisons, police departments, and other law enforcement agencies; rehabilitation centers; nursing homes and other geriatric facilities; health maintenance organizations; private practice; and numerous others. Finally, in addition to assessment and treatment of psychological disorders, contemporary clinical psychologists are engaged in research, teaching, and professional consultation.

The primary activities, settings, and specialty areas associated with modern

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

clinical psychology are featured in the various chapters of this book. Before discussion of current practices and conceptualizations, however, a historical account of significant events and developments is presented. As Brendan Maher (1991) stated in his eloquent personal history of clinical psychology, “Science does not develop free from the influence of nonintellectual factors; the professions, being conducted in the larger society, are even more subject to social movements and pressures” (p. 3). The history of any field of study, after all, is deeply rooted in its philosophical debates and intellectual challenges, as well as the social climate and political pressures of the day. Clinical psychology is no exception.

PSYCHOLOGY: THE EARLY YEARS

The study and treatment of mental illness can be traced back to at least 2100 B.C., when its cause was believed to be demonic possession, and its cure incantation ceremonies and prayer to various gods (Ehrenwald, 1956). Because discussion of mental illness from prehistoric through the Enlightenment periods can be found in most general or abnormal psychology texts, the focus of this chapter will be on the periods most directly influencing *clinical* psychology, that is, the 18th century and beyond. The reader is referred to Table 1-1 for a chronology of significant historical events.

Belief in demonically-induced mental illness had diminished greatly by the start of the 18th century. Unfortunately, treatment modes had not advanced beyond confinement and cruel practice. Patients were locked up, confined to restrictive cribs, shackled, placed in spinning chairs, purged, and left hungry—all in the name of a “cure” for their mental illness (Altrocchi, 1980). Progressive treatment did not begin in the United States until the mid- to late 18th century, when **Benjamin Rush** (1745–1813), **Dorothea Dix** (1802–1887), and others objected to the inhumane methods employed in most institutions for the “insane.”

Benjamin Rush was a physician who believed in the physiological etiology and treatment of mental disease, and he was also a strong proponent of moral and humane intervention. He postulated that mental illness originated in blood vessels, particularly those of the brain. According to his theory, blood vessels were influenced by emotional factors, and emotions could reduce their effectiveness. He instituted treatments consistent with his etiological reasoning, including bloodletting, purging, diets, and drugs as potential cures (Mora, 1985). Obviously, these practices would not be viewed as “humane” in present society; however, Rush’s efforts represented a move away from harsh custody toward more active and humane intervention. Dix extended Rush’s efforts at reform by making mental illness more of a political issue than a medical one (Brems, Thevenin, & Routh, 1991). Her contacts with Congress increased lawmakers’ and public awareness of the problems faced by the mentally ill. She advocated successfully for hospitalization of the mentally ill confined to prisons, and her activism resulted ultimately in more modern hospitals and treatment for many in need.

Profound and influential reforms were taking place in Europe during this time as well. **William Tuke** (1732–1819) founded the **York Retreat** in England,

an institution devoted to humaneness and respect for the mentally ill patients under care. Exercise, discussion, kindness, and hobbies replaced the prior emphases on punishment and control, making the York Retreat a model institution for others to follow (Brems et al., 1991). In France, **Philippe Pinel** (1745–1826) worked to free patients from the senseless brutality, and instead provided

Table 1-1. Significant Dates and Events in the History of Clinical Psychology

Date	Event
1793	Pinel introduces “humane care” in France
1848	Dorothea Dix facilitates construction of hospital for the insane in the United States
1879	Wilhelm Wundt creates first psychology laboratory in Germany
1882	Galton establishes anthropometric laboratory in England
1890	Cattell coins term <i>mental tests</i> to describe measures of intelligence
1892	APA founded with G. Stanley Hall as first president
1895	Breuer and Freud publish studies on hysteria
1896	Lightner Witmer founds first psychological clinic at the University of Pennsylvania
1904	University of Pennsylvania offers course of study in clinical psychology
1905	Binet-Simon scale developed
1907	First clinical psychology journal, <i>The Psychological Clinic</i> , is published
1909	Freud gives invited address at Clark University in Worcester, Massachusetts Healy founds Juvenile Psychopathic Institute in Chicago, Illinois
1916	Stanford-Binet developed at Stanford University by Terman
1917	Psychoneurotic Inventory (Personal Data Sheet) developed by Woodworth Clinicians break away from APA and form AACP
1919	AACP rejoins APA as Section of Clinical Psychology
1921	Army Alpha and Beta tests developed by Yerkes ACP founded Rorschach’s <i>Psychodiagnostik</i> published
1924	David Levy brings Rorschach Test to United States
1935	TAT developed
1936	Clinicians leave APA to form AAAP
1937	ACP and AAAP merge APA’s Section of Clinical Psychology abolished
1938	Bender-Gestalt introduced Buros publishes <i>Mental Measurements Yearbook</i>
1939	L. K. Frank coins term <i>projective technique</i> Wechsler-Bellevue developed
1943	MMPI developed
1945	Connecticut passes first certification laws
1946	AAAP rejoins APA
1947	Shakow Report published
1949	Boulder model outlined at APA Conference on Graduate Training in Boulder, Colorado
1951	Ethical guidelines developed by APA
1953	Skinner publishes <i>Science and Human Behavior</i> Term <i>behavior therapy</i> coined by Lindsley, Skinner, and Solomon
1958	Joseph Wolpe publishes <i>Psychotherapy by Reciprocal Inhibition</i>
1963	Community Mental Health Act signed by President Kennedy
1965	First professional school of psychology—Graduate School of Psychology at Fuller Theological Seminary in Pasadena, California
1968	First Psy.D. program—University of Illinois
1973	National Conference on Levels and Patterns of Professional Training in Psychology (Vail, Colorado)
1988	APS formed

patients with attention, kindness, and a structured, positive, and productive environment. Pinel further advanced treatment by developing a diagnostic system that differentiated melancholia, mania, dementia, and idiocy, presumably to tie specific diagnoses to specific treatments. Asylums in Belgium saw substantial change as **Joseph Guislain** (1796–1860) incorporated Pinel's program into their institutional plans. **Jean Esquirol** (1776–1840) led reform in France both by using Pinel's program and by providing the field with some understanding of the role of etiological factors such as age, environment, and events in mental health and illness (Brems et al., 1991).

Although a new awareness that patients could be helped, rather than simply hidden, developed during the late 18th and early 19th centuries, there were minimal advances in etiological theory (Nietzel, Bernstein, & Milich, 1994). The ongoing controversy remained between those who believed in physical causes of mental illness and those who advocated psychological or moral causes (Mora, 1985). It is clear, however, that groundwork for the field of clinical psychology was laid by the mental health reform movements of Europe and the United States.

It is also clear that the new emphasis on civilized care, respect, and morality was influenced substantially by the social forces and ideas of the time. Philosophers and writers were proclaiming the dignity and equality of all, not just the mentally ill (Nietzel et al., 1994). By the late 19th century, contemporaneous changes had occurred in science as well, and the use of scientific experimentation to objectify and quantify knowledge about human behavior was initiated by physiologists **Wilhelm Wundt** and **William James** (Brems et al., 1991). Fascinated by statistical analysis, **Sir Francis Galton** began to explore individual differences by applying quantitative methods to the assessment of acuity, motor skills, and reaction time. He established an anthropometric laboratory in 1882, and investigated the still-controversial idea of inherent intelligence. In 1885, he set up the world's first mental testing center in London. Anyone willing to pay a modest fee could take a battery of tests and receive a copy of the test results (Nietzel et al., 1994).

Agreeing with Galton's approach to the study of intelligence, an American by the name of **James McKeen Cattell** focused his research on reaction time differences among individuals. His doctoral mentor, Wilhelm Wundt, did not approve of this approach to the study of mental processes and discouraged Cattell from pursuing this line of research. Nonetheless, Cattell made significant contributions to measurement theory and practice, and was the first to coin the term *mental tests* to describe measures of intelligence (Nietzel et al., 1994). It was in this period (1892) that the first professional society of psychologists, the **American Psychological Association (APA)**, was formed.

Collaboration between **Sigmund Freud** and **Joseph Breuer** marked the advent of psychoanalytic theory. They focused on the causes and motives for behavior, rather than the mechanics of brain and nerve function associated with their predecessors (Brems et al., 1991). Their seminal work, *Studies on Hysteria* (1955), was a result of Breuer's consultation with Freud concerning a patient he had been treating and Freud's subsequent study of hysteria with Jean Charcot. The consequent influence of psychoanalysis on clinical psychology was immeasurable (for a more in-depth history of psychoanalysis, see S. Freud [1910], *The Origin and Development of Psychoanalysis*).

Influence of Lightner Witmer

On June 28, 1867, Lightner Witmer, the future “father of clinical psychology,” was born in Philadelphia, Pennsylvania (Reisman, 1981). Following his graduation from the University of Pennsylvania in 1888, Witmer worked as an instructor of English and history, an experience that stimulated his interest in psychological problems. Because he could find no course of study in the United States related to this interest, Witmer left Pennsylvania in 1891 to study with Wilhelm Wundt at the University of Leipzig. On earning his doctorate in 1892 under the supervision of Wundt, Witmer returned to the University of Pennsylvania where, following in Cattell’s footsteps, he directed the laboratory for experimental psychology. Besides his university position, Witmer worked as a psychologist at the Pennsylvania Training School for Feebleminded Children. In 1896, Witmer laid the foundation for the future course of American clinical psychology by founding the first psychological clinic (Reisman, 1976).

The clients of Witmer’s clinic were children experiencing learning difficulties or behavioral disturbances. One of his earliest clinic cases was referred by a Philadelphia school teacher, Margaret Maguire, who requested Witmer’s assistance in remediating a child who was a “chronic bad speller” (Reisman, 1976, p.42). Witmer accepted the challenge and requested several evaluations of the young boy, including an eye exam. The examination showed that the child needed corrective glasses, and when they were supplied, the boy’s spelling improved immediately. This case demonstrates one of Witmer’s early influences, the importance of assessment and diagnosis. Witmer believed that these practices were essential components to treating learning and behavioral problems in children and represented practical applications of psychology. Subsequently, he referred to this applied field as “clinical psychology” (Brotemarkle, 1931). Witmer’s therapeutic approach typically involved the use of behavioral interventions to teach clients new skills and knowledge, a therapy modality he termed “pedagogical treatment” (Kendall & Norton-Ford, 1982).

Witmer was responsible for initiating many aspects of clinical psychology. Under Witmer’s influence, the University of Pennsylvania began offering a course of study in clinical psychology in 1904, and in 1907, he began publishing the first clinical psychology journal, *The Psychological Clinic* (Bohart & Todd, 1988). Although Witmer continued to contribute to the field, not all of his subsequent work proved equally influential as the work characterized in his clinic.

Advances in Assessment and Impact on Clinical Psychology

The primary function of clinicians in the United States during the late 19th and early 20th centuries was the assessment of learning difficulties in children. Interest in child assessment prevailed in Europe during this period. In 1904, **Alfred Binet** and **Theodore Simon** were asked to develop a method that could reliably differentiate children with mental retardation from normally develop-

ing children in the schools of France. This request resulted in the original **Binet-Simon scale** (Binet & Simon, 1905) as well as the 1908 scale (Binet & Simon, 1908) and its revision (Binet, 1911). The Binet-Simon was an objective test assessing areas and levels of intellectual deficiency, and was used to guide special programs of education for children identified as deficient. Although Binet cautioned that the scale was not a completely objective measure of innate intelligence, the Binet-Simon was widely accepted throughout Europe and the United States.

The Binet-Simon scale and **Lewis Terman's** American revision, the **Stanford-Binet** (Terman, 1916), exerted a profound influence on both the measurement of intelligence and the development of clinical psychology in the United States (Peterson, 1925). Witmer, however, failed to accept the utility and popularity of the Binet scales, a decision that removed him from the mainstream of clinical psychology. He was alienated further by his rejection of the prevailing psychoanalytic views of Sigmund Freud that were introduced and accepted throughout the United States following Freud's invited address at Clark University in 1909.

That same year, psychiatrist **William Healy** founded **The Juvenile Psychopathic Institute in Chicago**, a child guidance clinic for juvenile delinquents (Reisman, 1976). Unlike Witmer, Healy focused on conduct disturbances in children rather than learning problems. Further, Healy employed the Binet-Simon scales in his assessment of children and adopted Freud's views of abnormal behavior. Subsequent child guidance programs were modeled after Healy's clinic. Witmer's clinical practices became more closely associated with school and educational psychology than with clinical psychology (Nietzel et al., 1994).

The demand for clinical services increased during this period, leading to new professional challenges. Foremost among these was the need for specialized training programs for clinical psychologists. Although clinical psychology programs and internships were developing, no formalized education was required to engage in clinical activities. Furthermore, the APA focused on the scientific aspects of psychology and provided little guidance on emerging issues surrounding clinical training and practice.

APPLICATION OF PSYCHOLOGY DURING WORLD WAR I

The United States' entry into World War I in 1917 presented psychology with an opportunity to engage in more clinical activities. Eager to predict the intellectual and psychological stability of recruits, the U.S. Army turned to psychology. Robert Yerkes, president of the APA, was asked to oversee the development of appropriate screening measures. The resulting **Army Alpha** and **Army Beta** tests were among the first group of intelligence measures developed (Yerkes, 1921). Army Alpha was designed for literate, English-speaking adults, while Army Beta was designed for illiterate or non-English-speaking recruits. The Army Beta Test served as the forerunner of performance tests of intelligence. An additional measure of this screening battery was the **Psychoneurotic Inventory** (also called the **Personal Data Sheet**), developed by **Robert Woodworth**, to detect abnormalities in behavior (Woodworth, 1917).

By the end of the war, millions of military personnel had been evaluated by psychologists. Interest in intelligence and psychodiagnostic assessment remained quite high, continuing until the next World War. Another important postwar development was the recognition of clinical psychology as a distinct discipline. Although disgruntled clinicians broke away from the more scientific APA in 1917 to form the **American Association of Clinical Psychology (AACP)**, this group rejoined the APA in 1919 as its Section of Clinical Psychology (Fernerberger, 1932). In 1921, according to Hilgard (1987), a new organization called the **Association of Consulting Psychologists (ACP)** was independently founded in New York. This group was notable for its publication of the *Journal of Consulting Psychology* and for its adoption of a code of ethics for professional psychology, the first organization to do so (Hilgard, 1987).

BETWEEN THE WORLD WARS: CONTINUED GROWTH OF CLINICAL PSYCHOLOGY

The period between World War I and World War II was notable for three general trends: (1) the continuation and expansion of assessment activities by psychologists; (2) the entry by psychologists into the medically dominated practice of psychotherapy; and (3) the increasing professional recognition of the practice of psychology.

Continued Domination of Psychological Assessment

As noted, psychological assessment continued to dominate the field between the World Wars. After World War I, clinicians continued to perform their traditional child-testing role, but also began to do adult testing, probably because of their wartime experiences with similar activities and responsibilities. Psychodiagnostic, intelligence, aptitude, and interest tests began to flourish. Other measures developed during these years included the Rorschach Inkblot Test (Rorschach, 1921), the Strong Vocational Interest Test (Strong, 1931), the Thematic Apperception Test (Morgan & Murray, 1935), and the Bender-Gestalt Test (Bender, 1938), all of which are in current use. Particularly noteworthy was the 1939 development of the **Wechsler-Bellevue Intelligence Scale**, an individual measure of adult intelligence (Wechsler, 1939).

Personality tests were developed widely following the success of Woodworth's Psychoneurotic Inventory during World War I. The first comprehensive, empirically derived personality test, the **Minnesota Multiphasic Personality Inventory (MMPI)** (Hathaway & McKinley, 1943), was published several years after the Wechsler-Bellevue Scale. In fact, so many novel testing instruments were developed during this time that Buros (1938) published the *Mental Measurements Yearbook* as a reference for clinicians and researchers.

Perhaps the most significant development between the wars was the introduction of projective tests, some of which are noted above. Although their roots extended back before World War I (e.g., Galton, 1879; Jung, 1910, 1918), it was not until 1921 that projective assessment, grounded in psychodynamic principles,

began to gain in popularity. During that year, Hermann Rorschach (1921) published *Psychodiagnostik*. In this seminal work, the Swiss psychiatrist outlined his method of using patient responses to ambiguous test stimuli (i.e., inkblots) to arrive at diagnoses.

Child psychiatrist **David Levy** brought the Rorschach to the United States in 1924. It came into prominence during the 1930s, a period of great psychoanalytic influence. Additional projective tests were introduced during this time, such as the aforementioned Thematic Apperception Test (Morgan & Murray, 1935) and the Bender-Gestalt Test (Bender, 1938). The term *projective technique* was coined several years later by **L. K. Frank** (1939). His article "Projective Methods for the Study of Personality" offered a rationale for the projective approach and stimulated research and theoretical efforts related to such techniques. Psychodynamically based projective assessment grew rapidly during this decade, resulting in expanded functions for clinical psychologists.

Growing Role of Psychologists in Treatment

The number of clinical psychologists engaged in the medically dominated activity of treatment increased in the years between World War I and World War II. Most clinical psychologists were working primarily with children's educational problems in child guidance clinics under the supervision of psychiatrists. Some, however, were extending their work to children with psychiatric problems, while others were moving out of the clinic setting into private practice. Psychologists' role in treatment was a natural extension of their assessment and consultative functions. Although psychodynamic theory was associated primarily with the practice of psychiatry, the writings of Freud and Adler (e.g., Adler, 1930) were particularly useful to clinical psychologists in their work with children.

Play therapy techniques derived from Freudian principles developed during this period (e.g., A. Freud, 1928), as did other therapies. **Carl Rogers** began to formulate client-centered therapy, his therapeutic alternative to psychoanalytic treatment during these pre-World War II years (Watson, 1953), although his ideas would not come into prominence until the 1940s and 1950s (Rogers, 1951). Behavior therapy, which would not become an integral part of clinical psychology until the 1960s, was also beginning to receive some recognition. Interest in behavioral applications was fueled by the fear conditioning work of **John B. Watson** and **Rosalie Rayner** (1920) and **Mary Cover Jones** (1924).

Struggle of Clinical Psychology to Shape Its Professional Identity

The practice of psychotherapy by psychologists created a tremendous professional struggle within the mental health field. Those psychologists interested and active in psychotherapy were frustrated by the medical profession, which clearly wanted psychotherapy to remain a medical activity. Additionally, many of their own colleagues in psychology were reluctant to accept those in clinical activity among their ranks for fear of diluting the traditional academic research

base. The psychoanalytic perspective of clinical psychologists also did not sit well with their more behavioral academic peers. Disenchanted with their colleagues, clinical psychologists abandoned the APA in 1936 to form the **American Association for Applied Psychology (AAAP)**. This new group consisted of those professionals interested in clinical, consulting, educational, and industrial psychology. Sharing similar professional interests, the ACP merged into the AAAP in 1937. The Clinical Section of APA was abolished at that time. The AAAP retained its independent status and focus until 1946, when it rejoined a reorganized APA (Wolfe, 1946).

The professionalization of clinical psychology began to take form by the end of the 1930s. There were advances in the roles assumed by clinical psychologists extending well beyond assessment and research, and the AAAP facilitated greater professional recognition by representing those interested in clinical practice. However, clinical psychology was still not recognized formally as an independent profession.

The APA assembled several committees to discuss and develop clinical training standards (e.g., APA Committee of Clinical Section, 1935). Virtually no formal suggestions emerged from their efforts (Reisman, 1976), possibly because of the reluctance of some to grant official status to colleagues engaged in “non-scientific” practice. As a result, no sanctioned clinical psychology training programs existed at that time. Formal recognition of the field of clinical psychology did not occur until after World War II.

WORLD WAR II AND ITS AFTERMATH: EVOLUTION OF CLINICAL PSYCHOLOGY

Influence of World War II on Clinical Psychology

In December 1941, World War II began as Japan attacked the United States at Pearl Harbor. Psychologists were again called on to guide the armed services in the selection and placement of soldiers (Harrell, 1945; Marquis, 1945). However, their assessment function soon extended to other professional activities (Britt & Morgan, 1946), such as working on discharge boards, conducting individual and group psychotherapy, serving as integral members of clinical treatment teams, and designing military equipment (i.e., human factors). Because of the great treatment demand presented by soldiers during this war, not enough psychiatric personnel were available to perform services, and psychologists were called on to fill the gap (Campbell, 1947). The expanded treatment role assumed by psychologists was especially noteworthy, as this domain had been controlled by psychiatry before the war.

This expansion of professional activities helped psychologists, including many who had been skeptical, realize that their academic and experimental training could be applied effectively to a variety of problems. This represented a major turning point in fostering attitudinal change among psychologists critical of clinical practice. Before the war, approximately 90% of psychologists in military service were employed in academic or governmental agencies serving in a nonclinical capacity (Andrews & Dreese, 1948). During the war, 50% of

military psychologists carried clinical responsibilities. Andrews and Drees (1948) noted that, after the war, the number of psychologists engaged in clinical activities increased threefold. The tide was clearly changing. Clearly, the demands of World War II shaped the field of clinical psychology (Miller, 1947). As Brems et al. (1991) noted, the assumption of this new independent treatment role for psychologists set the stage for future conflicts with psychiatry.

Professional Changes Following World War II

The wartime success of psychologists, accompanied by increased public support and general attitudinal change among academic psychologists, led to a reorganization of APA in 1946. APA became a more accepting environment for clinical psychologists, thereby promoting AAAP's rejoining of APA that year. Specifically, APA's bylaws were modified to include the advancement of psychology both as a science and as a profession, and membership requirements no longer included scholarly publications (Wolfe, 1946). This organizational recognition and support helped promote the development of clinical psychology as a profession.

Development of Training Programs in Clinical Psychology

After the war, psychologists expressed interest in graduate training beyond the traditional experimental training that they had been receiving (Britt & Morgan, 1946). Most universities, however, did not have training programs specifically designed for clinical psychology; the graduate programs continued to be experimental, with clinical experience obtained after formal graduate training (Shakow, 1976). Formal training programs, with governmental and APA support, were on the horizon, and ethical guidelines for the practice of psychology (APA Committee on Ethical Standards for Psychology, 1951) were soon to be established. Certification and licensing of practicing psychologists were initiated during these formative years as Connecticut passed the nation's first certification laws in 1945. This chapter presents a brief historical overview of the development of clinical psychology training programs. A more extensive discussion is provided in Chapter 3.

Formal training in clinical psychology was initiated by the **Veterans Administration (VA)** and the **U.S. Public Health Service (USPHS)** (Brems et al., 1991). Because of enormous demand placed on the VA, requests for services to soldiers wounded in World War II far exceeded the availability of mental health professionals. As a result, the VA and USPHS were willing to support clinical training of psychologists as a way to meet these needs; psychiatry did not have the resources to do it alone. The VA and USPHS requested that the APA specify clinical psychology training requirements and identify university doctoral programs providing adequate training. Financial support from the VA and the **Institute of Mental Health (NIMH)** was provided to support clinical training programs in these early years, and continues today (Brems et al., 1991). In fact, NIMH training grants increased from \$212,000 in 1948 (Garmez, 1958) to over

\$10 million in 1980 (Kiesler & Zaro, 1981). The support of these government agencies contributed to the rapid postwar growth of clinical psychology, although their contributions have not been uniformly praised (Sarason, 1981).

In response to a request by the VA and USPHS, the APA appointed a committee led by David Shakow to design a model clinical training program and to evaluate university programs. The work of this committee was documented in a report (APA Committee on Training in Clinical Psychology, 1947) known as the **Shakow Report**. Training in clinical psychology was expected to produce professionals well equipped to perform research, assessment, and psychotherapy. This seminal report included the following standards for training: (1) clinical psychologists should receive 4 years of training at the doctoral level (i.e., Ph.D.), including supervised practicum experiences; (2) the third year of training should consist of placement at an internship site; and (3) the final year should be devoted to dissertation-related activities. Curricular recommendations included six major areas of study: general psychology, related disciplines, psychodynamics of behavior, diagnostic methods, research methods, and therapy, with specializations completed during postdoctoral training. Furthermore, the committee recommended that master's-level training be discontinued. The NIMH-funded **APA Conference on Graduate Training** in Boulder, Colorado (1949), supported the recommendations of this committee. The conference participants supported the Shakow Report and further agreed that training of clinical psychologists should follow the scientist-practitioner model (APA Conference on Graduate Education in Clinical Psychology, 1950; Raimy, 1950). The scientist-practitioner model of training became known as the **Boulder model**, and existed relatively unchallenged until 1958.

At the **Conference on Graduate Education in Psychology** in Miami Beach, Florida (1958), the appropriateness of a **Doctor of Psychology (Psy.D.)** degree was considered. Conference attendees agreed to continue to support the Boulder model, but to explore both Psy.D. and master's-level training programs (Roe, Gustad, Moore, Ross, & Skodak, 1959).

The Tumultuous 1960s

The 1960s were years of great social change and tremendous growth and promise for clinical psychology. A notable development of these years was President Kennedy's signing of the **Community Mental Health Act (CMHA)** in 1963. The purpose of this legislation was to reduce the number of mentally ill institutionalized in large, nontherapeutic mental hospitals. The CMHA provided funds for the development and operation of a national network of community mental health centers. Clinical psychology benefitted greatly in that many clinicians became employed in these agencies. Again, governmental support promoted the evolution of clinical psychology.

The 1960s witnessed the proliferation of varied theoretical orientations, therapeutic techniques, and therapy formats. Once-popular Freudian principles and treatment strategies were being replaced by humanistic (Rogers, 1951) and behavioral models put forth in the 1950s. Behavioral applications were especially prominent during these years, due primarily to **Joseph Wolpe's** (1958)

publication of *Psychotherapy by Reciprocal Inhibition*, in which he outlined treatment procedures based on the classical conditioning principles of Russian physiologist **Ivan Pavlov**.

Another major factor in the emergence of behavior therapy during these years was the operant conditioning work of **B. F. Skinner**. Skinner's early research demonstrated that one could alter animal behavior by use of reinforcement and punishment procedures (e.g., Skinner, 1938). He later demonstrated that behavioral principles could be applied to human problems as well. Extension of Skinnerian principles can be traced to the publication of *Science and Human Behavior* (1953), in which Skinner framed psychotherapy in behavioral terms. That same year, the first documented use of the term *behavior therapy* by Lindsley, Skinner, and Solomon (1953) was presented in a scientific paper describing the impact of reinforcement on behavior in psychotic patients. Although behavioral applications first emerged during the 1950s, their use expanded widely during the 1960s. Growth of behavior therapy and declining interest in psychodynamic models has continued to the present (Conway, 1988; Smith, 1982), although many contemporary clinicians identify themselves as eclectic in therapeutic orientation (Zook & Walton, 1989).

Ph.D. versus Psy.D. Debate

In this period of diversification and growth in clinical psychology, the debate regarding professional schools of psychology and the Psy.D. degree re-emerged with great force. At the Conference on Manpower and Psychology in Princeton, New Jersey (1962), it was again suggested that professional schools of psychology be permitted. Most proponents of professional schools argued that personnel shortages plaguing the mental health professions would be remedied by the development of Psy.D. programs.

The appropriateness of the Boulder model was challenged also at the **Conference on the Professional Preparation of Clinical Psychologists** in Chicago, Illinois (1965). Conferees agreed to maintain the Boulder model as the training format for clinical psychologists with a reduction in the research requirement. As a result, research mastery was no longer mandated for clinical psychology trainees (Hoch, Ross, & Winder, 1966).

The Psy.D. debate was resolved to some extent at the **National Conference on Levels and Patterns of Professional Training in Psychology** in Vail, Colorado (1973) (Korman, 1974). Attendees focused their efforts on affordable mental health services for those who had insufficient resources. Critics of the Boulder model argued that research skills were irrelevant in clinical practice, and argued instead for an emphasis on assessment and psychotherapy training. Two significant recommendations emerged from this conference: (1) the title of "psychologist" could be used by those with appropriate training at the master's level; and (2) Psy.D. programs could provide appropriate training for clinical psychologists (Korman, 1974). These notable changes clearly reflected the growing diversity in the field.

The first Psy.D. program was developed by the University of Illinois in 1968, although formal acceptance of the degree did not occur until after the Vail

Conference. Illinois' program emphasized clinical field experiences rather than research (Peterson, 1976). The first professional school of psychology not affiliated with a university, the Graduate School of Psychology, was associated with Fuller Theological Seminary in Pasadena, California. This program was started in 1965 and accredited by APA in 1974 (Brems et al., 1991). Other free-standing professional schools (i.e., nonuniversity-affiliated) were created during these years (e.g., California School of Professional Psychology, 1969) (Dorken & Cummings, 1977).

The **APA Training Conference in Salt Lake City**, Utah (Bickman, 1987), was significantly less controversial than the Vail Conference. The significant recommendations emanating from this meeting were summarized by Bickman (1987) as follows: (1) research should continue to be an integral component of doctoral training in Ph.D. programs; (2) after 1995, professional schools of psychology are expected to be affiliated with regionally accredited universities; (3) both the Psy.D. and the Ed.D. are to be recognized as appropriate degrees entitling the person to be called "psychologist"; and (4) greater diversity in terms of age, religion, gender, and sexual preferences should be encouraged in graduate training.

THE FUTURE OF CLINICAL PSYCHOLOGY

Clinical psychology continues to expand its role to meet evolving societal needs (DeSantis & Walker, 1991). Emerging subspecialties include neuropsychology (Chapter 15), pediatric psychology (Chapter 16), and forensic psychology (Chapter 17). Other areas of focus undoubtedly will develop in response to sociocultural and professional interests.

Currently, the field is confronting complex challenges. Growing professionalization of clinical psychology has again created conflict between clinicians and researchers in the APA. As a result, a group of traditional academic psychologists broke from the APA in 1988 and formed the **American Psychological Society (APS)**. This new society emphasizes empirical study of psychological principles. Other ongoing challenges include decreased governmental support for mental health services and research; pressures from the insurance industry to alter service delivery systems, formats, and costs; and recently proposed health care reforms by the Clinton Administration and members of Congress. Each of these forces creates uneasiness among clinical psychologists and professional instability within the mental health field. Further evolution of clinical psychology is inevitable as the field responds to each challenge.

SUMMARY

Clinical psychology has grown dramatically since its formative years, and historical and sociocultural influences on the field are apparent. Early interest in empiricism, particularly the study of individual differences, helped shape clinical psychology's foundation in research and assessment. Clinical treatment applications emerged in response to the societal demands of the late 19th and

early 20th centuries as clinical psychologists ventured into the once medically dominated area of treatment. Treatment services of clinical psychologists became essential to soldiers returning from World Wars with a multitude of psychological needs.

Governmental and public support during postwar periods fostered the development of clinical psychology as an independent profession. This trend was especially apparent following World War II. Funding was provided for training programs and internships, professional recognition was given by APA to those interested in clinical applications, and public sentiment toward clinical psychology was high. Licensing and certification laws, along with ethical principles for practicing psychologists, emerged during this period.

A field once associated with assessment and remediation of learning problems in children now encompasses a wide range of professional activities, including research, assessment, and treatment. Client populations served by clinical psychologists have long since expanded to include adults and families, and clinical problems now encompass clients with neurotic and psychotic disorders. Finally, settings include, but are not limited to, universities, medical schools, law enforcement agencies, and hospitals.

Present-day clinical psychology continues to be shaped by sociocultural pressures and historical influences. Major factors influencing the field include (1) increasing conflict between researchers and clinicians in professional organizations; (2) economic instability leading to decreased governmental support for training programs and clinical research; (3) growing pressure from the insurance industry to alter mental health service delivery modes and treatment costs; and (4) proposed reform in U.S. health care policy. The response of clinical psychology to such pressures has shaped its course throughout history and will undoubtedly continue to do so.

STUDY QUESTIONS

1. What contributions did Benjamin Rush and Dorothea Dix make to the treatment of the mentally ill? Describe Rush's theory of mental illness.
2. Who were the key contributors to institutional reform in Europe in the late 18th and early 19th centuries? Who was responsible for developing an advanced diagnostic system?
3. Briefly trace the key American and European leaders of reform during the 18th and 19th centuries.
4. What was Lightner Witmer's contribution to clinical psychology? Describe his professional training and development. Who most influenced his work? Who were Witmer's initial clients, and what discoveries were made in his work with these clients?
5. What was the primary function of U.S. clinicians during the late 19th and early 20th centuries? How did Alfred Binet and Theodore Simon influence the assessment of children during this period?
6. Trace the history of the Stanford-Binet in terms of its development and application. How did Witmer fit into this picture?
7. The role of psychologists underwent significant changes during World War I. Why?
8. What are the Army Alpha and Army Beta tests? The Personal Data Sheet? Who developed each, and for what purpose?

9. Discuss the changing role of psychologists during the period between World War I and World War II in terms of both assessment and treatment.
10. Develop a chart of all key figures in clinical psychology during the 19th and 20th centuries. Divide the chart into three columns. In the left column, list the names of each individual. In the middle column, list important dates associated with each figure. Finally, in the right column, list the contributions of each individual (specifically associated with the dates in the middle column).
11. How did the advent of World War II influence the development of clinical psychology? What clinical activities grew during this time?
12. Trace the history of the American Psychological Association from its inception to the present. How did the political events of each time period influence the corresponding changes in this organization?
13. Why did the VA and USPHS initiate formal training in clinical psychology? How was formal training accomplished?
14. What is the Boulder model, and what is its significance to education and training in clinical psychology?
15. When and where was the Psy.D. degree first considered? Why was it considered? When was it formally accepted?
16. What was the purpose of the Community Mental Health Act of 1963?
17. When was the APS founded, and for what purpose?

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CHAPTER 2

Models

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Sarah is a 32-year-old mother of two small children, a girl age 4 and a boy age 2. She has been married for 11 years to a man she met in college. Sarah earned a bachelor's degree in architecture and had a successful and exciting career before deciding to take several years off to raise a family. Her husband is a partner in a new sporting goods store and has little time to spend at home. Throughout college, Sarah had periodic bouts of feeling "down in the dumps," during which she had to drag herself to class and did not want to be around her family and friends. The feelings only lasted for several days, and she attributed the spells to stress. Her current problems seem to have begun during her pregnancy. On several occasions, unexpectedly, her heart began to race, she became short of breath, she felt dizzy and nauseous, and it seemed as if the room was spinning and she might faint. The episodes lasted a few minutes but were terrifying. At the time, she thought they were probably due to the pregnancy and did not tell anyone. Some time after her daughter was born, she had two similar experiences of panic. One time she was in the supermarket and had to leave the store hurriedly and sit in her car until she calmed down. The other time, she was driving down a fairly busy neighborhood street with her child in the front seat and had to pull over quickly until she could get herself back together.

Now, Sarah feels down most of the time. She has a hard time falling asleep, and if she does manage to get to sleep, she usually wakes up very early. She has crying spells several times during the day and does not want to leave the house. Occasionally, she will go out with her husband to see a movie but will not go to the store unless someone accompanies her. She is afraid to drive in case she has another attack. Sarah feels very alone and does not know where to turn, but she does feel like she must do something to end her misery.

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

INTRODUCTION

Take a few minutes to read over and think about the above case description. What is Sarah's main problem? What kinds of additional information would be helpful in determining her problem? How much family and childhood history would you want to gather? Is it necessary to diagnose Sarah? If so, what type of diagnosis would you give—is it a depressive illness, an anxiety disorder, a personality disorder, or a combination of several problems? How do you think such problems generally develop? Finally, how would you approach helping Sarah overcome her difficulties? What would be the focus and nature of psychological treatment?

There are a number of ways to conceptualize Sarah's presenting problem. You will most likely formulate your own idea of the nature of Sarah's problem, including a rough estimate of how it developed and how to help her overcome her difficulties. It is also likely that your assumptions relating to the nature of the problem and necessary treatment are founded on your own particular belief system regarding personality development and human nature. In short, your conceptualization is probably based on a theory of personality to which you have been most exposed and that agrees with your personal philosophy.

Although the professional clinical psychologist's case conceptualization is based on extensive training and experience, his or her opinion is also heavily influenced by **theoretical orientation**. Theoretical orientations, or psychological models, provide a framework to organize knowledge and make sense of the potentially overwhelming amount of data concerning human reality. Within clinical psychology, orientations often serve to provide an explanation of how people become who they are and what constitutes positive adjustment versus maladjustment. In addition to providing a framework to define and explain the development of psychological problems, orientations in clinical psychology to some extent dictate what constitutes appropriate methods and goals of therapeutic intervention. Different orientations are defined by distinct approaches to assessment of psychological problems, by the typical process and expected outcome of therapy, and by the importance and method of conducting relevant research.

The significance that a clinical psychologist gives to his or her theoretical model varies. However, in a survey of 479 members of the Clinical Psychology division (Division 12) of the American Psychological Association, Norcross and Prochaska (1983) found that over 94% of the Ph.D.-level psychologists in their sample believed theoretical orientation frequently influenced their practice of psychotherapy. The most commonly identified orientations tend to be **eclecticism, psychodynamic/psychoanalytic theory, behavioral or cognitive-behavioral models, and humanistic/experiential/phenomenological models**. Within the psychiatric community, the medical or **biological model** probably predominates. This list is certainly not exhaustive, as researchers have identified approximately 100 distinct philosophies of psychotherapy (e.g., Harper, 1975).

To gain an appreciation of the diversity of views across different theoretical models in clinical psychology, four of the most prominent models will be reviewed. The models presented include psychoanalytic theory, behaviorism/cognitive behaviorism, the phenomenological theories (i.e., humanism and

existentialism), and the biological or medical model. Eclecticism will not be presented as a distinct model in this chapter. Eclecticism refers to the attempt by some psychologists at integrating various theoretical orientations into one unifying system of psychotherapy. **Synthetic eclecticism** refers to the integration of distinct theories, while **technical eclecticism** relates to the adoption of a variety of differing therapy techniques. At present, no comprehensive eclectic model exists. As Patterson (1989) notes, "Current eclectic approaches and attempts at integration in psychotherapy have not been successful" (pp. 159–160). Despite the fact that no such unifying theory exists, a large percentage of psychologists identify themselves as eclectic. Therefore, the eclectic movement may be a significant but disorganized force within psychology.

In the following discussion, for each model presented the following philosophical positions will be addressed: (1) the basic assumptions of personality development and adjustment; (2) the deterministic nature of the theory; (3) the nature and focus of treatment; and (4) the importance of research in validating the theory.

PSYCHOLOGICAL MODELS

Psychoanalytic Theory

The most important or influential theoretical orientation, or theory of personality, has no doubt been the psychoanalytic view as originally postulated by Freud (1949, 1957, 1967). Psychoanalysis originated as a speculation on the causes of certain types of psychopathology. It then evolved into a theory of normal and abnormal personality and into a type of treatment for psychologically disturbed individuals. According to psychoanalytic theory, personality development and psychopathology are determined by unconscious motivations, instinctual and irrational drives, psychosexual and aggressive impulses, and ego defense mechanisms such as repression. Patterns of normal and abnormal behavior are established in early childhood but may not actually surface until later in adulthood. Psychoanalysis is a deterministic view of human nature, as the individual is largely seen as the product of forces beyond his or her immediate awareness or control.

PERSONALITY DEVELOPMENT. According to Freud's (1949, 1957, 1967) initial conceptualization of psychoanalysis, three "systems" of the human mind exist—the **unconscious**, the **preconscious**, and the **conscious**. The unconscious aspect of the mind contains elements such as instincts or drives that actively seek to gain access to consciousness. However, psychic forces typically prevent the instincts or drives from entering consciousness. The preconscious, on the other hand, contains elements that can become conscious with effort by the individual. The mind also possesses three components known as the **id**, the **ego**, and the **superego**. These components resemble sources of energy, with the id roughly corresponding to the unconscious. The id represents restrained energy of pent-up drives (primarily aggressive and sexual). The ego corresponds to the preconscious and conscious systems of the mind and represents the interaction

between the individual and reality. The superego is the moral watchdog of the unconscious and maintains the parental values internalized during childhood.

A person's **psyche** is seen as the product of the clashes between various forces of the mind—primarily between the instinctual drives of the id and the reality orientation of the ego, which finds the impulses of the id objectionable. If the superego (or conscience) “determines” that the id impulses are morally unacceptable, or if the ego determines that they are at odds with reality, then the drives are denied access to consciousness by ego defense mechanisms. This continual conflict between basic unconscious instincts and the moderating processes of the moral superego and reality-based ego lead to the dynamic nature of psychoanalytic theory.

Freud held the belief that the human mind seeks to maintain a state of equilibrium in terms of energy generated by the unconscious drives. High states of tension, caused by instinctive drives, are undesirable, and the tension must be dissipated by gratifying the instinct. Freud also believed that instincts are basically sexual in nature, although he did not limit “sexual” strictly to genital pleasure. Thus, psychopathology is viewed in terms of sexual trauma (or ungratified sexual instincts) from early childhood. Sexual development according to psychoanalytic theory progresses through a series of well-known “**psychosexual stages**” (see Table 2-1). Each stage is identified by a different physical locus of impulse, beginning in the mouth region (**oral stage**) and progressing through the anal region (**anal stage**) to the genitalia (**phallic stage**). Successfully advancing to the next psychosexual stage involves adequate gratification of impulses at the previous stage. Unfulfilled impulses will lead to adjustment problems later in life.

The conscience, or superego, develops in response to the classic **Oedipus complex** when the young boy develops unacceptable sexual attraction to his mother. Fearing retribution by the father (in terms of **castration anxiety**), the child learns to identify with the father and adopt aspects of the father's personality. In internalizing the father's set of moral beliefs, the child develops the conscience or superego, and the incestuous sexual urges are repressed. Somewhat similar events occur in the development of the superego in females.

Central to psychoanalytic theory is the concept of states of anxiety. A state of anxiety is produced when an unacceptable id impulse threatens to creep into the consciousness. Thus, the ego becomes aware of the impulse and seeks a manner in which to limit the threat. The strategies that the ego uses to defend itself and the conscious mind from id impulses are termed **defense mechanisms** (see Table 2-2). As Giovacchini (1983) notes, the principal aim of all the defense mechanisms is to repress unacceptable impulses. In other words, the ego seeks to keep the impulses that represent an internal danger from reaching consciousness through use of defense mechanisms. This process is not accomplished through conscious effort by the individual and occurs outside of awareness.

Neuroses, or forms of psychopathology, are defined in terms of the types of defense mechanisms employed to combat the unacceptable impulses and by the level of psychosexual development at which the individual is functioning. In response to psychic conflicts involving unfulfilled instinct gratification, the individual typically regresses to the previous stage of psychosexual development at which he or she maintains comfort or homeostasis. Certain forms of

psychopathology are seen as involving specific psychosexual stages and distinct defense mechanisms. For instance, an obsessive-compulsive individual is seen to have regressed to the anal stage and typically uses the defense mechanisms of reaction formation and intellectualization.

ASSESSMENT AND TREATMENT. Because psychological disturbance is the result of unsuccessful resolution of intrapsychic conflicts rooted in the past, treatment is a long-term process of analyzing the internal conflicts and restructuring the personality. Psychoanalytic treatment is covered in more detail in Chapter 9. The contribution of psychoanalysis to psychological assessment is the development and use of projective personality instruments such as the Rorschach Ink Blot Test or the Thematic Apperception Test. Such instruments are not used with every patient, and any formal assessment performed is generally aimed at uncovering and elucidating intrapsychic conflicts.

Briefly, the psychoanalyst has several tools to use in treatment. The most important therapeutic strategy in psychoanalysis is the use of transference, which develops between the patient and the therapist. **Transference** involves the process by which the patient comes to attribute characteristics of important figures from childhood to the therapist. The therapist, through **interpretations**, a second tool, helps the patient recognize unrealistic and infantile feelings directed at the therapist. The therapist also uses transference interpretations to

Table 2-1. Psychosexual Stages

Personality development evolves as the child progresses through a succession of psychosexual stages, each involving a primary erogenous zone (sight of stimulation and pleasure). Satisfactory gratification ensures smooth progression to the next stage; under- or overgratification results in fixation at the stage and regression to that stage in adult life.

Stage	Source of gratification and result of fixation
Oral (birth–2 years)	Erogenous zone centered around the mouth. Sexual gratification obtained from sucking, eating, and other oral activities. Faulty resolution results in excessive eating, drinking, smoking, and so on. Also may result in an overly sarcastic and cynical individual.
Anal (18 months–3 years)	Erogenous zone centered around the anal area. Pleasure and instinct gratification involve feces expulsion and retainment. Fixation may result in obstinance, stubbornness, stinginess, and perfectionism. Alternately, faulty resolution can lead to excessive generosity.
Phallic (3–6 years)	Major source of pleasure involves manipulation of the genitalia. Primary instinctive conflicts center around the Oedipal or Electra complex. Thus, regression to or fixation at this stage leads to overconcern with masculinity (brashness and machismo) for the male or promiscuity and/or seductiveness for the female.
Latency (6–puberty)	Sexual drives lie dormant and preoccupation shifts to skill development, learning, and involvement in peer-related activities.
Genital (puberty–adulthood)	Sexual drives reappear, but with successful resolution of previous stages, the individual evolves from a selfish and pleasure-driven child to a well-socialized adult. Sexual gratification is obtained through healthy heterosexual relationships and eventually marriage. Otherwise, unresolved conflicts emerge throughout the adult life.

unmask unconscious conflicts, thus making the patient more aware of the unconscious forces contributing to his or her psychic state and behavior.

A third therapeutic tool used by the psychoanalyst is **dream analysis**. Dreams are believed to represent unconscious impulses that appear during the state of sleep when a person's defenses are dropped. By analyzing the **manifest content** (that part of the dream that is actually remembered) and the **latent content** (the unconscious part of the dream represented by symbolism), clues to the nature of psychic conflicts are identified. **Free association** is another technique the psychoanalyst employs to detect clues used in identifying intrapsychic conflicts. This procedure involves instructing the client to relax and verbalize any thoughts that come to mind. It is hoped that some piece of evidence of conflict will slip into consciousness and be expressed via the unrestricted verbiage. Similarly, **hypnosis** is occasionally used to gain partial access to the corridors of the unconscious in an attempt to uncover hidden conflicts leading to current psychological problems.

The primary goal of psychoanalysis is to explore the unconscious and change the individual's motivation from unconscious drives to conscious voli-

Table 2-2. Ego-Defense Mechanisms

Ego-defense mechanisms are *unconscious*, irrational methods of protecting the ego from anxiety. Anxiety involves threats to the ego from dangers associated with the external world, tension caused as the ego attempts to control unacceptable id impulses, and conflicts between the moral superego and actions directed by the ego that produce feelings of guilt. If rational methods of protecting the ego fail, then anxiety is reduced through unconscious distortions of reality.

Defense mechanism	Explanation
Repression	The most basic defense mechanism in which painful, dangerous, and anxiety-provoking thoughts are prevented from entering conscious awareness.
Fixation	Being developmentally arrested in a stage and unable to develop mature adult behaviors because of stress or anxiety.
Displacement	Substituting an available or nonthreatening object or person for an available or threatening target. Attitudes and feelings toward the unacceptable object are directed toward the safer alternative.
Rationalization	Rational and logical justification of otherwise anxiety-provoking thoughts and behaviors.
Reaction formation	Unacceptable and objectionable thoughts are kept from awareness (repressed), and their opposites are adopted and expressed.
Projection	Attributing one's own anxiety-provoking and unacceptable impulses, motives, or characteristics to others.
Denial	Refusing to acknowledge unacceptable and anxiety-provoking ideas, motives, and behaviors.
Intellectualization	Removing the emotional charge from painful or hurtful situations or handling them in a logical and rational manner.
Identification	Increasing feelings of worth by adopting the characteristics of someone (or group) you hold in high regard.
Regression	Retreating to an earlier, more immature, and childish form of behavior or developmental stage in response to stress and anxiety.
Sublimation	Substitution of socially or morally acceptable ideas or behavior for unacceptable ones.

tion. The therapist assists clients to work through and eliminate personality conflicts left from faulty psychosexual development. In addition, the client learns to “shore up” the ability of the ego to handle the demands of reality. Successful treatment results in the restructuring of one’s basic personality—thus the need for extensive and long-term involvement in the therapy process.

RESEARCH CONCERNS AND CRITICISMS. Major criticisms of Freud’s model fall roughly into two categories: conceptual concerns and questionable empirical support for the theory. In terms of basic conceptualization of human behavior, many critics disagree with Freud’s overemphasis on biological drives while ignoring social, societal, and cultural influences. As Burger (1990) notes, a number of Freud’s early disciples splintered from his theory because of his deemphasis of such factors on personality development.¹ Other conceptual criticisms have involved a negative reaction to the concept of penis envy by many women, including Karen Horney (1939). There has also been criticism of Freud’s method of collecting data supporting his theory. His supporting evidence was largely gathered through the use of case studies in which he was the therapist. Burger (1990) identifies three difficulties with this procedure. First, the theory is based on observations of an unrepresentative sample of individuals. His patients tended to be upper-class citizens and were psychologically maladjusted. Second, since Freud was collecting the data, he may have (deliberately or not) focused only on information relevant to his theory. Third, Freud may have actually influenced his patients to respond in a manner consistent with his theory.

Psychoanalytic theory has often been criticized within the research literature for the fact that it is not testable, falsifiable, and amenable to scientific validation (Nagel, 1959; Popper, 1959, 1962, 1972). A major reason is that the theory involves global and general assumptions concerning the causes of human behavior and psychopathology, which are ill-defined. Kline (1981), in a review of a large number of studies of Freudian theory, determined that the general assumptions cannot be empirically tested. Other reviews of the empirical literature examining the validity of psychoanalytic theory (e.g., Eysenck & Wilson, 1973; Fisher & Greenberg, 1977) have revealed methodological problems, such as not considering other plausible explanations for results and no attempts at replication of findings. Thus, the concepts and constructs within the theory are virtually impossible to measure and test. According to the theory, the roots of all human behavior and psychological problems begin in some ill-defined part of the mind. The mental events believed to be causing behavior are unobservable and difficult to study objectively.

In defense of psychoanalytic theory, Giovacchini (1983) notes that the validity of psychoanalysis should be analyzed in terms of its success in achieving the treatment goal (generating greater psychological insight). He states that

¹These former disciples, such as Otto Rank, Alfred Adler, and Carl Jung, usually differed with Freud on some aspect of classical psychoanalytic theory such as the Oedipal complex. Although each of these individuals developed his own theory, the form of each theory was very similar to psychoanalysis. Consequently, psychoanalysis and these variations on it by former disciples have been labeled psychodynamic approaches.

treatment seeks to bring about “psychic integration” (p. 58), which cannot be measured objectively or operationally defined in a manner consistent with the research procedures of logical positivists. Giovacchini (1983) also notes that the primary construct in psychoanalysis that needs to be proven valid is the concept of the **dynamic unconscious**. He states that should this concept be “proven invalid, then psychoanalysis would crumble” (p. 59). He identifies four lines of research that support the concept of a dynamic unconscious: (1) posthypnotic suggestibility, (2) occurrence of slips of the tongue (parapraxes) or simple lapses in memory such as “forgetting” familiar names, (3) symptoms that appear to make little rational sense, and (4) presence of dreams of which the meaning can be discovered via free association.

Empirical validation of psychoanalytic theory is a difficult process aggravated by the fact that some analysts view psychoanalysis as a theory, some as a method of study, and others as a treatment technique. The goals of therapy often provide the means for evaluating treatment effectiveness of a particular approach to abnormal behavior. Since the aim of psychoanalysis is to help the client develop insight into intrapsychic conflicts, the analyst is in the best position to determine progress and treatment efficacy. Within such a framework, it is virtually impossible for psychoanalytic theory to be proven false, making the theory of questionable scientific value.

Phenomenological Models

The phenomenological models, particularly the **humanistic/client-centered** approaches and existentialism, are more than theories of personality and psychological adjustment. These models are often seen as a philosophy of life or guidelines by which to live one’s life. Humanism and existentialism are phenomenological, in that the central concern is the personal experience of the individual or client. The unique perceptual world of each person is the primary focus of treatment. In this respect, these models are closely related to Kuhn’s (1971) paradigmatic view of science, which postulates that individuals create “reality” via idiosyncratic perceptions of the world. Objective truth or reality, as defined by the logical positivist approach, is a facade because each person experiences the world with a unique set of sensations and interpretations. Such dismissal of objective truth therefore places emphasis on reality as created by each individual.

Phenomenological models reject the deterministic view of human nature. Behavior is neither the product of uncontrollable unconscious instincts and biological drives nor the result of environmental contingencies of reinforcement. The individual is responsible for making choices in how to behave and experience the world. Clients in therapy learn to recognize their ability to direct their own life in accordance with the aspirations of their “self.” Consistent with the importance of moment-to-moment “being,” the personality (or more accurately the self) is in a perpetual state of evolution. Human nature is seen as constructive, since we have the capacity to continually choose alternatives and create our own experiences. We shall describe client-centered therapy as one example of this orientation.

CLIENT-CENTERED THEORY AND PERSONALITY DEVELOPMENT. This theoretical orientation developed from the evolution of Carl Rogers's (1942, 1951, 1961) approach to individual psychotherapy. The primary feature of this theory is that humans have an inherent capacity to actualize their own potential. Since each person's potential is unique, primary importance is given to the individual's experience and perceptions of life. The inherent self-determination is evident early in development. In infancy, the young child instinctively "knows" which physical sensations are rewarding to him or her. Recognition of one's own physical sensations is an initial stage in creating the self (and in later recognition of internal values) and represents the establishment of the **organism**. Through maturation and cognitive development, the organism becomes the integration of internal and external perceptions. The **self-concept** develops when the individual differentiates the physical self from the environment. Through continued interaction with others, the social self develops and contributes to the self-concept. Self-concept refers to the organized and consistent self-image.

In response to the development of a self-concept, the need for **positive regard** arises. The need for positive regard can be satisfied only by obtaining the affection and approval of others. This need is seen as universal and becomes important in the development of abnormal behavior. Positive regard from significant others is often conditional in that the supplier attaches requirements to be met before regard is given. If no strings are attached and the positive regard is provided unconditionally, the child comes to regard him or herself positively. This is rarely the case, however. More typically, the child subordinates his or her personal values in order to obtain conditional positive regard, thus generating **conditions of self-worth**. Self-worth then becomes contingent on meeting the conditions put forth by the suppliers of positive regard.

If the conditions of worth are too restrictive, aspects of the individual's experience are denied and **self-actualization** is hindered. Should the conditions of worth not be overly limiting and the person can continue to experience his or her own regard, the individual can develop a flexible sense of self. This flexible sense of self, which is not dependent on restrictive conditions of worth, is able to judge personal experiences according to the **innate or organismic valuing process**. When this innate valuing process is disrupted by conditional regard, the child is unable to reach his or her potential and becomes **self-alienated**. The conditions of worth are internalized into the self-concept. To maintain the self-concept, experiences are perceived and defined in accordance with the standards of others instead of within the individual's own values. Over time, the self-concept becomes more and more distorted and inaccurate. Conflicts between the innate valuing process and conditions of worth are resolved through distortions or denials of experience in order to maintain the integrity of the self-concept.

If new experiences are highly incongruent with the self-concept, the balance of the self-concept may be disrupted. In this case, anxiety or disorganization of the self-structure may result. Such disorganization may lead to psychopathology such as psychoticlike behavior. If experience and self-concept are highly discrepant, defensive behavior such as **rationalization, fantasy, and projection** may occur. This results in an inhibited ability to self-actualize based on the adoption of others' standards of values instead of reliance on the innate valuing process.

ASSESSMENT AND TREATMENT. The concept of formal assessment leading to diagnosis is antithetical to person-centered theory and therapy (Adams & Cassidy, 1993; Corey, 1986). Objective assessment is seen as potentially interfering with the goal of understanding the individual's subjective experience as it changes the focus of therapy to information and history gathering. Assessment may also result in the therapist taking a judgmental attitude toward the client. Clients are encouraged and expected to rely on their own resources and move toward personal growth without direction, interpretation, or evaluation by the therapist. Rogers's personality theory developed directly from his **nondirective approach** to therapy (Holdstock & Rogers, 1983). His goal in therapy was to increase congruence between the self and experience. Thus, the focus of person-centered therapy is the unique experience of the client. Certain conditions of the therapeutic environment, particularly characteristics of the therapist, must be met in order to encourage the self-actualizing tendencies of the individual. It is hypothesized that an accepting therapeutic environment cultivates the self-actualizing tendencies, which then leads to behavior change.

To establish an environment that facilitates the realignment of self with experience and encouragement of self-actualization, the therapist must possess certain key characteristics. Those characteristics are **empathy, genuineness, and unconditional positive regard**. First, it is critical for the therapist to understand accurately the moment-to-moment thoughts and feelings of the client. This involves temporarily experiencing the world from the client's perspective in a nonjudgmental manner. An understanding of the client's world (empathy) is expressed via **clarifying statements, reflecting, rephrasing, and simple acceptance statements** and nonverbal behaviors such as "Yes, I understand" or head nods. Clarifying statements may involve comment on the meaning of something the client said, but the therapist does not make traditional interpretations. Interpretations are seen as judgmental because they impose an external set of values on the client, which is contrary to the goal of realigning the self with subjective experience.

Being genuine or "congruent" within the therapeutic relationship involves responding to the client as a human, not just within the role of a therapist. This also necessitates that the therapist have an accurate understanding of his or her own feelings and the ability to communicate these feelings in an appropriate manner should the situation call for it. Serving as a foundation for empathy and genuineness is basic unconditional positive regard for the client. This involves a complete acceptance and valuing of clients and their potential for growth regardless of their thoughts and behaviors. This attitude involves faith in the basic trustworthiness of human nature and the belief that everyone has the capacity to work toward self-actualization. Empathic understanding and responding are important for communicating unconditional positive regard to the client, and genuineness is needed to ensure that the therapist does not convey contradictory messages.

Therefore, an accepting and warm therapeutic environment facilitates the process of change. The goal of successful therapy is for the client to adopt positive self-regard. This is accomplished through the therapist's unconditional acceptance, recognition of the client's experiential world, and clarification of meanings to the individual. The process of therapy involves bringing the self into harmony with previously denied experiences. Self-awareness and recogni-

tion of personal experiences are continual processes that result in a perpetual evolution of the self-concept. Individuals learn to realize personal responsibility in establishing their experiential world and come to have a more internally based self rather than distorting their experiences by focusing on externally based conditions of worth.

Paradoxically, in spite of Rogers's negative attitude toward assessment research, he and his students conducted some of the earliest research on psychotherapy. Early in the development of his theory, Rogers was interested in evaluating the degree of change in terms of desired enhancement of the client's self-concept. To measure this change, he initially used a method called the **Q-sort**, which involves a number of statements relating to the self that the client arranges in order to construct a description of the self-concept. Rogers and his associates (Rogers, 1961; Rogers & Dymond, 1954) provided a number of studies in which this procedure was employed as a measure of progress in therapy, and he reported the results of early studies that used a variety of projective tests and personality instruments (e.g., the Minnesota Multiphasic Personality Inventory) to assess personality changes following client-centered therapy (Rogers, 1951). He and his associates also provided some psychometric data on the Q-sort as a measure of change (Rogers, 1951; Rogers & Dymond, 1954) and developed a psychotherapy process scale to define and measure therapeutic change (Rogers & Rablen, 1958).

RESEARCH CONCERNS AND CRITICISMS. Much of the research concerning validating person-centered theory has involved an examination of the relationships between therapist variables (empathy, unconditional positive regard, and genuineness) and treatment outcome. Several reviews (e.g., Shlien & Zimring, 1970; Truax & Mitchell, 1971) have supported the conclusion that these therapist variables are associated with client improvement in personality and behavior change. As Patterson (1989) notes, "The therapist conditions are, of course, widely recognized and accepted. . . . [T]hey are accepted as important, even necessary for effective psychotherapy, but not as sufficient" (p. 150). Thus, there are many factors beyond therapist empathy, positive regard, and genuineness that appear to be necessary for successful treatment.

Person-centered theory, and phenomenological models in general, have been criticized for imprecise concepts and constructs (Walsh & Peterson, 1985). As with psychoanalysis, ill-defined constructs in the phenomenological models are difficult to prove or disprove. Burger (1990) summarizes other criticisms of phenomenological/humanistic theories. He notes that these theories rely on the concept of individual free will, which appears to be inconsistent with a traditional view of science. The traditional scientific method attempts to uncover causal relationships between variables. Burger (1990) also states that methodological concerns involving research supporting the humanistic theories suggest that "much of what humanistic theorists say must be taken more as a matter of faith than scientific fact" (p. 302). In addition, person-centered/humanistic therapy may be of use with a limited population of individuals, primarily those who are already fairly high functioning. Those with more severe psychological difficulties may not have the resources and/or the mental capacity to benefit from the process of enhancing personal growth (the goal of therapy).

Walsh and Peterson (1985) state that "the most basic criticism to which

humanistic psychology can be subjected is that none of its proponents presents an integrated, internally consistent system of psychology” (pp. 150–151). As such, the humanistic approach is more of a philosophy of life than a scientific theory, or as Holdstock and Rogers (1983) comment, “The theory [is] a way of life” (p. 196).

Behaviorism/Cognitive Behaviorism Models

Behavior therapy developed in the 1950s and 1960s into a formalized model of psychopathology out of dissatisfaction with theories such as psychoanalysis and humanistic models, which relied on subjective and mentalistic concepts. A global description of the theoretical assumptions of behavior therapy would be misleading because the model actually involves several distinct but related viewpoints. In general, various emphases within behavior therapy (e.g., **radical behaviorism**, **social learning theory**, and **cognitive-behavioral theory**) differ in the importance given to cognitive events such as thought patterns and self-statements. However, the different emphases share several key factors.

First, behavior therapists maintain that abnormal behavior is acquired by the same learning principles that shape normal behavior (Mahoney & Arnkoff, 1978; O’Leary & Wilson, 1987). Psychopathology may be influenced by biological and genetic predispositions (such as in schizophrenia, autism, and some affective disorders such as bipolar depression), but disorders are acquired primarily through basic learning principles such as **positive reinforcement** and **punishment**. Second, behavior therapists adhere to a scientific study of human behavior and psychopathology. Mentalistic and subjective concepts are avoided, and emphasis is placed on studying and treating observable behavior. Within the more cognitively oriented approaches to behavior therapy, cognitive processes are operationally defined in terms of observable components. Speculations about internal mechanisms and instinctual drives are also denied, as development of theory is closely tied to objective, empirical data.

RADICAL BEHAVIORISM. The radical approach to the behaviorism model is based on **operant conditioning** principles as defined and elaborated by B. F. Skinner and his followers. This emphasis has also been called **behavior modification** or **applied behavior analysis**, terms that highlight a major goal of behaviorism—the alteration of specific patterns of behavior via procedures founded on empirically derived conditioning principles. The Skinnerian approach is considered radical behaviorism because of the proposition that behavior is controlled exclusively by environmental factors. The probability of a given behavioral response occurring is governed by environmental contingencies; if the behavior is rewarded, it is more likely to reoccur, whereas if it is punished, it is less likely to be repeated in the presence of the same discriminative stimulus (in conjunction with the cue that was connected to the particular behavior).

A defining feature of radical behaviorism is the dismissal of the importance of mental or subjective events in causal explanations of behavior. Although subjective events are not denied, radical behaviorism holds that behavior can be

explained solely in terms of observable stimuli and responses. Because of such restriction of clinical investigations to only objective events, radical behaviorism had been criticized for being overly simplistic and mechanical. However, procedures based on operant conditioning principles have been shown to be effective with a variety of clinical populations and have particular utility in changing the behavior of children, institutionalized adults, and retarded individuals. Typically, the procedures based on this approach make up only a part of the repertoire skills available to and used by contemporary behavior therapists, since few ascribe solely to one behavioristic perspective.

STIMULUS–RESPONSE (S–R) BEHAVIORISM. The **S–R behaviorism approach** is based on the pioneering experimental work of Pavlov, Guthrie, Hull, and other early behaviorists, and the later clinical adaptations by Wolpe and other early “behavior therapists.” This emphasis recognizes the importance of conceptual variables in the causal explanation of behavior. Normal and abnormal behavior is believed to follow the principles of **classical or instrumental learning theory**. Hypothetical mediating variables, such as “fear” and “anxiety,” are implicated in the causation of behavior, but such constructs are firmly tied to environmental events occurring before and after the behavioral response in question.

This approach is more accepting of internal constructs than is the Skinnerian approach, but the mediating constructs are not formulated in the same manner as those in the cognitive approaches. These mediating constructs are viewed more as intervening variables than hypothetical constructs (MacCorquodale & Meehl, 1948). The S–R approach still relies on observable events for conceptualization of behavior problems and psychopathology. The most popular techniques associated with the S–R approach involve Wolpe’s **systematic desensitization** and similar procedures based on the principles of learning. These techniques will be further defined and elaborated in Chapter 8.

SOCIAL LEARNING APPROACH. The social learning approach goes even further with inclusion of mediating variables in the explanation of behavior. The primary influences of social learning theory came from the work of Bandura (1977a, 1977b), who built on the principles of the aforementioned S–R theorists. According to social learning theory, behavior is frequently regulated by operant or classical conditioning principles. However, the influence of the environment is more typically mediated through cognitive processes, which are shaped by past learning experiences.

An important concept in social learning theory is the process of **modeling** (also called **vicarious learning**, **observational learning**, or **symbolic modeling**). In this type of learning, direct reinforcement of behavior is not necessary. A behavior pattern is strengthened or weakened through observation of another person or exposure to instructional or imaginal material. Most typically, modeling refers to learning of appropriate behaviors via observation of another individual’s behavior and response consequences. This observation can take place directly or through reading, television, and so forth.

Bandura (1977a, 1977b) recognized the importance of expectations in the causation of behavior. In particular, he identified **self-efficacy**, or an individual’s appraisal of his or her ability to cope with a particular situation, as an important

determinant in behavior. Self-efficacy and outcome expectations (the belief by an individual that his or her actions will lead to a particular outcome) represent the importance social learning theorists give to a person's subjective appraisal of reality. Psychopathology is therefore seen as due in part to low self-efficacy and negative outcome expectancies. The social learning approach led to treatment procedures designed to increase a person's expectations for behaving in an appropriate manner or coping effectively with a given situation. Such procedures include various training programs such as assertiveness and social skills.

COGNITIVE BEHAVIORAL APPROACH. Of the behavioral approaches already mentioned, the cognitive behavioral emphasis, as the name suggests, places the most significance on cognitive processes mediating behavioral responses (including psychopathology). This approach recognizes cognitive events such as thought processes, self-statements, beliefs, and expectations as legitimate "real" events that influence behavior and are therefore valid topics for empirical investigation and clinical intervention (Mahoney & Arnkoff, 1978; Meichenbaum, 1977; O'Leary & Wilson, 1987). Contrary to more traditional behaviorism theory, subjective interpretations of experiences are targets for modification. Within the cognitive behavioral movement, several distinct but similar formulations have gained popularity.

Perhaps the most popular of the cognitive behavioral formulations is Aaron Beck's (Beck, Rush, Shaw, & Emery, 1979) cognitive therapy for depression, which has been expanded to include therapy for personality and anxiety disorders. The basic assumption of Beck's theory of depression involves the depressed individual's adoption of illogical patterns of thought regarding himself or herself, the world, and the future. This pattern of negative thinking is termed the **cognitive triad** and refers to a negative self-evaluation, a negative view of the world, and negative beliefs concerning the outcome of future events. Such thought processes arise from erroneous conclusions drawn from neutral situations, by selectively attending to isolated aspects of situations, by exaggerating the importance of events (particularly perceived negative events), and by overgeneralizing the significance of isolated events on one's life. The depressed individual falls into a self-perpetuating cycle involving distorted attitudes that cause negative perceptions, which lead to experiences resulting in negative feedback about one's self and abilities, which further strengthens the distorted attitudes (and so forth).

The goal of therapy is to restructure the distorted attitudes and illogical beliefs. The primary technique employed is termed **cognitive restructuring**, which involves helping the depressed individual monitor and systematically refute illogical and negative self-statements. More traditional behavioral techniques, such as mastery and pleasure assignments, graded homework assignments, and activity scheduling, are also used to provide the client with more positive experiences on which to build the restructured thought processes.

A second major influence within the cognitive behavioral approach is Albert Ellis's (1973) **rational emotive therapy**. Ellis views a well-adjusted individual as one who behaves and thinks in a rational manner. Maladjustment, therefore, is the product of an irrational belief system ruled by self-evaluation based on illogical "shoulds," "oughts," and "musts." These judgmental and

illogical self-directives guarantee that the individual will produce a negative self-evaluation, which inevitably lowers the sense of worth and personal satisfaction. The aim of therapy is to confront and dispute the distorted belief system, which results in an alteration of maladaptive thoughts and behavior patterns. Although Ellis's confrontational style has sometimes been criticized as demeaning to the client, his basic conceptualization of the role of thought patterns in maladaptive behavior has gained acceptance with some clinicians.

An overview of the various emphases in behaviorism/cognitive behaviorism reveals a relatively diverse model of normal and abnormal behavior. The Skinnerians and S-R based theories appear more deterministic, as behavior is largely the product of environmental influences. The individual maintains some freedom to pick and choose his or her environmental influences, but behavior remains largely shaped by forces outside the individual's immediate control. Social learning theory and the approaches recognizing the importance of cognitive mediating factors are less deterministic. The individual's behavior is the product of personal expectations, beliefs, thought patterns, and self-statements, which are developed via learning principles but are more under the direct influence of the person. Still, the degree of choice in creating one's destiny falls short of the level of free choice espoused by the phenomenological models.

RESEARCH CONCERNS AND CRITICISMS. Radical behaviorism has traditionally been criticized by psychoanalysts and humanists as neglecting key features of psychological functioning such as emotions, cognitions, and the role of the unconscious. Walsh and Peterson (1985) outline several criticisms of behaviorism in terms of its historical allegiance to empiricism. First, empiricism (and therefore behaviorism) is too narrow in focus and overly simplistic. The truly empirical approach is not able to address such issues as complex psychological development over time. Second, behaviorism is unable to address metaphysical issues such as ethical concerns and personal values. The third criticism is based on a philosophical contradiction within empiricism. Behaviorism was founded on the premise that only objectively observable behaviors are fair game for empirical investigation. However, as Walsh and Peterson (1985) note, "All knowledge is based in perceptual experience" (p. 149) which is actually a private, individual, and subjective phenomenon. Therefore, behavioral theory is dependent on subjective perceptions just as is humanism or psychoanalytic theory.

Behavior modification procedures based on conditioning principles have also been criticized (Cockerham, 1989). It has been questioned whether humans can be conditioned to automatically respond to stimuli, and if so, whether the strength and duration of the conditioning are sufficient in real-world situations to produce adequate behavior change. In addition, behavior modification may not be adequate to handle complex mental disorders requiring more than the learning of new behaviors.

Cognitive therapy procedures have not escaped criticism. Mahoney (1980, 1985) identified a number of critiques of cognitive behavior therapy, including the tendency to view human nature as overly rational and reasonable. As with more traditional forms of behaviorism, cognitive behavior therapy has traditionally failed to address unconscious processes. This form of therapy tends to

downplay emotions, viewing feelings as controlled by cognitions and beliefs. In fact, there has been some suggestion that the relationship between cognitions and emotions is not as strong as generally believed (e.g., LaPointe & Harrell, 1978), and there may be mediating variables (not a direct causal relationship) between thoughts and feelings (Craighead, Kimball, & Rehak, 1979; Sutton-Simon & Goldfried, 1979). As within other forms of behaviorism, the cognitive behavior therapist is often seen as the educator or expert and as somehow more rational than the client. This is a rather judgmental point of view when compared to the more collaborative nature of the therapist/client relationship typical of other types of therapies (e.g., person-centered therapy). However, the evolution of cognitive behavior therapy has resulted in some progress on these points, particularly with regard to recognition of unconscious processes (Mahoney, 1993).

The Biological or Medical Model

The influence of the **medical or “disease” model** on current theoretical conceptualization and treatment of mental illness is readily apparent. The terms that clinical psychologists, psychiatrists, and related mental health professionals use suggest that the field gravitates toward the physiological model. First, the term **psychopathology** itself literally means disease (“pathology”) of the mind (“psycho”), thus suggesting a biological basis for the mental disorders. Second, many mental health practitioners speak of “diagnosing” patients just as physicians diagnose a physical ailment. Psychological diagnoses depend on interpretation of behavioral “symptoms,” a cluster of which form a clinical “syndrome,” which represents a distinct disorder or mental “illness.” Use of such medical terminology points toward a fundamental bias in conceptualizing behavioral problems according to the basic premises of the medical model.

The more extreme positions of the medical or disease model view mental illness as the result of physiological, biochemical, or genetic causes. Mental illness is seen as the behavioral manifestation of a physiological dysfunction. Conceptualizing mental disorders as physical disturbances is not a recent phenomenon. Several thousand years ago, Hippocrates hypothesized that peculiar behavior was the result of an unhealthy brain. This view gave way to the mysticism of the Middle Ages when the medical community believed psychopathology to be the result of supernatural phenomena. In the 19th and 20th centuries, physicians once again conceptualized psychopathology as the product of physiological disease. At that time, advances in studies of human anatomy and physiology led to the search for connections between specific physical diseases and resulting mental illness. This search was at least partly due to the discovery of syphilis as the culprit in certain types of psychotic behavior patterns.

Given the significant impact of the psychoanalytic, humanistic, and behavioral theories previously mentioned, the question arises as to why the medical model remains so influential. Cockerham (1989) summarizes three factors that appear to account for the persistence of the medical model within the psychiatric community. First, psychiatrists undergo extensive medical training and are socialized into the medical community. As a result of that orientation, it is not

surprising that psychiatrists tend to conceptualize mental disorders in terms of physical and medical problems. Second, the current medical model defines mental disorders in part as conditions that respond to medical treatments (such as drug therapy), not just as conditions resulting from biochemical or physiological dysfunctions. Third, Cockerham (1989) notes that psychiatrists are attempting to gain status within the medical community by returning to a scientifically precise approach to the study and treatment of mental disorders. Contemporary psychiatrists are attempting to distance themselves from more insight-oriented theories by again searching for physiological causes of psychiatric problems.

In addition to the above influences, the medical model remains popular in part because some psychological models are adopting some of the principles of the biological position. For instance, whereas the behavioral movement originally began in part as a rejection of the medical model (Ullmann & Krasner, 1965), behavioral medicine has gained considerable popularity, and behavior therapists often attempt to describe behavioral medicine as a division of behavior therapy (Brownell, 1982).

Within the medical model, abnormal behavior is due to natural causes, and each disease is evidenced by specific clusters of symptoms (syndromes) that are caused by internal, biological processes. Underlying causes of mental disorders are grouped into three general categories:

1. **Infectious diseases** are caused by the infiltration of the body by parasitic organisms such as bacteria and viruses. Examples of mental illness caused by infectious diseases include encephalitis (inflammation of the brain), which leads to dementia-like symptoms such as impaired memory and abstract thought processes, and syphilitic infection. Syphilis of the brain was common in the 18th and 19th centuries and often led to psychotic-like behavior, which included delusions of grandeur, neglect of personal care, and significant decline of cognitive functioning.

2. **Systemic diseases** involve some type of malfunctioning of an organ or organ system, resulting primarily from genetic causes. An example of a systemic disease is diabetes, which involves impaired metabolism of carbohydrates. The emphasis of research concerning systemic disease processes has focused primarily on studies of central nervous system (the brain and spinal cord) structure and function and on the role of heredity in the development of mental disease. The “disease” processes involved in schizophrenia and depression are generally studied via the systemic disease approach. The roles of central nervous system abnormality and heredity in the etiology of schizophrenia and depression will be briefly reviewed below.

3. **Traumatic diseases**, involving physical dysfunctions resulting from external, environmental causes, make up the third category of sources of behavioral symptoms. Within this category, disorders are the result of some intrusion of the body by an external agent such as physical force (e.g., a blow to the head) or the ingestion of poison. The sequelae of a closed head injury is an example of a traumatic disease that may result in a variety of behavioral symptoms ranging from loss of consciousness (coma) to delirium (disorientation and a state of impaired consciousness) to memory problems and personality disturbance.

Several recent advances in neuroscience and psychopharmacology have contributed to the popularity of the disease model. Perhaps the most influential research has dealt with the apparent biochemical substrates involved in schizophrenia and depression, the role of heredity in schizophrenia and depression, and the asserted success of pharmacotherapy with these disorders. The roles of these factors with depression and schizophrenia will be briefly discussed in order to illustrate the types of information contributing to the popularity of the medical model and resulting from the attempts at locating biological bases for mental disorders.

DEPRESSION. Support for the biological disease model of depression comes largely from studies examining the effectiveness of antidepressant drugs in relieving symptoms of depression and on the associated neurotransmitters believed to be involved. **Neurotransmitters** are the chemical compounds that transmit impulses between nerve cells (neurons). The primary neurotransmitters implicated in depression are **norepinephrine** and **serotonin**, as **antidepressant drugs** (such as **tricyclic antidepressants** and **monoamine oxidase inhibitors**) increase the availability of these chemicals at nerve cell receptor sites. Increased availability of the neurotransmitters is associated with alleviation of some depressive symptoms in a subset of depressed individuals. Therefore, depression is hypothesized to result from a deficiency of serotonin or norepinephrine in the central nervous system.

Consistent with assumptions of the disease model, one type of depression (**bipolar disorder**) appears to involve a strong genetic influence (e.g., McGuffin & Katz, 1989). However, twin and adoption studies of other types of depressive disorders do not indicate a large genetic contribution (Blehar, Weisman, Gershon, & Hirshfield, 1988). For affective disorders other than bipolar, there appears to be much less heritability or genetic influence (Blehar et al., 1988). Because of these inconsistent findings, many contemporary proponents of the medical model subscribe to a **diathesis–stress** model instead of holding to the belief that one physiological dysfunction leads to a particular mental disorder. The diathesis in the model reflects a genetic predisposition to develop a disorder, where the predisposition seems to vary according to disorder type and among individuals. Stress in the model represents the importance of environmental factors in the development and manifestation of the disorder. In the case of depressive illness, bipolar disorder is seen as being more heavily influenced by genetic factors (the diathesis part) than the environment. Conversely, development of major depression, dysthymia, and other affective disorders is influenced more by environment than by genetics or heredity. The diathesis–stress approach remains consistent with the fundamental assumption of the medical model, which supports a biological basis for mental disorder.

SCHIZOPHRENIA. Studies of the effects of **antipsychotic drugs** seem to suggest that one particular neurotransmitter (**dopamine**) is associated with schizophrenia. Antipsychotic drugs (especially the **phenothiazines**) seem to act on dopamine pathways in the brain. After the drug has been taken for several weeks, some symptoms of schizophrenia abate (especially the *positive* symptoms such as hallucinations and delusions). Further evidence supporting a disease model of schizophrenia involves analysis of **computer tomography**

scans of schizophrenic patients. This brain-imaging technique has revealed that some schizophrenics have enlarged ventricles (cavities filled with cerebrospinal fluid) in the brain. This suggests that at least some schizophrenics suffer from a type of brain malformation. Unfortunately, it is not known whether excess dopamine receptors and enlarged ventricles are secondary to the disorder or are somehow the cause. To this point, the evidence remains circumstantial.

Recognition that schizophrenia tends to run in families has been evident since it was first recognized as a disorder (e.g., Gershon, 1979; Heston, 1977). Recent research indicates that heredity is an important factor in the etiology of schizophrenia. First, studies have shown that monozygotic (identical) twins have an increased likelihood of developing schizophrenia than dizygotic (fraternal) twins. If one identical twin has schizophrenia, there is approximately a 50% chance of the other twin either having or developing the disorder, a rate much higher than for fraternal twins. Also, incidence of schizophrenia is higher for children who were born to schizophrenics but grew up in a foster home than for the biological children of the foster parents. For a child born to two schizophrenic parents, the chance of developing the disorder ranges from 25 to 50%, depending on the severity of illness of the parents. Finally, close family members of an individual with schizophrenia have a greater probability of developing the disorder than the general population. Although the genetic studies of schizophrenia point to a significant heritability factor, as with the affective disorders there is still room for environmental influence. As such, a diathesis-stress model appears to provide a more accurate theory of etiology than a purely biological explanation.

RESEARCH CONCERNS AND CRITICISMS. There are two primary criticisms of the biological or medical model (Cockerham, 1989). First, the focus of treatment is on controlling rather than curing disorders, relying on relieving symptoms rather than eliminating the cause of abnormal behavior. Cockerham (1989) notes that such emphasis is due to the belief that it is possible to stabilize and return deviancy to the natural state of normal behavior, a viewpoint that neglects social contributors to mental disorders.

Another major problem with the biological model is that, although some medical procedures control deviant behavior, the approach has not been capable of explaining the etiology of mental disorders. The implication of certain biological mechanisms (e.g., neurotransmitters) in the alleviation of certain symptoms is circumstantial evidence for suggesting that those mechanisms somehow caused the disorder. There exists a myriad of other factors leading to the aberrant physiological process and consequently to the manifestation of the disorder. As Cockerham (1989) states, "The medical model's reliance upon control of or relief from symptoms of mental disorder still leaves unanswered the question of *what* actually causes insanity" (p. 78).

FACTORS INVOLVED IN CHOOSING AN ORIENTATION

Clinical psychology as a profession struggles to remain a scientific discipline. This is in part evidenced by the **scientist-practitioner model** (or **Boulder**

model) by which most Ph.D. clinical psychologists are trained. Given this desire to train professionals in research methods as well as clinical skills, one would assume that clinical psychologists choose their theoretical orientations based on proven utility of the theory and efficacy of theory-based therapy techniques. Unfortunately, this does not appear to be the case. In one of the larger surveys of clinical psychologists, Norcross and Prochaska (1983) identified a number of factors that therapists reported as important in their selection of a theoretical orientation. The most influential factors in order of stated importance were clinical experience, the clinician's values and personal philosophy, graduate and postgraduate training, life experiences, and the clinician's internship experiences. Outcome research was reported, on average, to have somewhere between "weak influence" to "some influence" on choosing a theoretical orientation and fell behind nine other factors in amount of influence.

Additional factors have been identified as important in choosing a theoretical orientation. These include the orientation of one's own therapist (Steiner, 1978), self-concept of the therapist (Walton, 1978), the theoretical orientation of one's major professor (Sammons & Gravitz, 1990), and inadvertent factors such as supervising encounters (Cummings & Lucchese, 1978). These findings illustrate the fact that variables other than sound empirical support of a particular theory heavily contribute to clinical psychologists' adoption of a particular orientation. Surprisingly, Ph.D.-level clinical psychologists with less than 10 years of experience appear to weigh outcome research more heavily than do more experienced therapists (Norcross & Prochaska, 1983). This tendency is probably the result of two factors. First, for a majority of clinical psychologists the graduate and postgraduate years represent the time in their professional lives during which they are more heavily exposed to research (primarily through the master's thesis and dissertation research). This also tends to be the most productive time in a psychologist's professional life in terms of research publication. Second, as clinicians gain more and more therapy experience over time, their subjective evaluations of treatment successes and failures gain more influence. In short, they think that they learn what does and does not appear to work, according to clinical experience. The more the clinician is removed from treatment research, the more he or she will rely on personal experience in choosing an orientation. This also likely accounts for the tendency of practitioners to change orientations at some point in their professional careers. The main point is that clinical psychologists adopt and change theoretical orientations according to criteria other than empirical support for the particular model.

THEORETICAL MODELS AND ORIENTATIONS: ARE THEY NECESSARY?

Although theories and models are necessary in both basic and applied psychology, an allegiance to a particular model or theory is not. As a matter of fact, a scientific approach to clinical psychology would dictate an ongoing skepticism of all theories and models. The point is that a number of clinical psychologists, particularly practitioners, believe that psychology should be based in art, intuition, literature, and/or philosophy rather than science (Sechrest, 1992). With this thought in mind, let us look at the origins of such

beliefs, the factors that perpetuate the beliefs, and some of the negative effects of theoretical models and orientations.

The Great Man Phenomenon

From the preceding descriptions of theoretical models, one characteristic is strikingly evident. With psychoanalysis, person-centered therapy, and behaviorism, one or two primary influential leaders are associated with the instigation and rise of each theory. One individual and his surrounding group of disciples are responsible for the development of a comprehensive theory of human nature and associated set of therapy practices and techniques. Over time, as each model gained popularity, supporters flocked to the orientations (much as followers flock to charismatic religious leaders), not necessarily because of strong empirical foundations, but rather because of personal charisma and/or interest or fit with the particular philosophy of life espoused by the leader and theory (see the above discussion concerning adoption of an orientation). Thus, theoretical orientations seem to have evolved into what Cummings and Lucchese (1978) call psycho-religions or into what Adams (1984) refers to as psychology cults.

Personal Investment in the Theory

As Popper (1959, 1962, 1972) notes, a theory or model has scientific value only to the extent that it can be refuted. However, adherents to particular orientations seem to be concerned more with protecting the integrity and existence of the theory than with determining whether more feasible explanations exist. As Adams (1984) notes, there are many reasons why psychologists are generally resistant to changing their theoretical beliefs. Part of the problem may be due to the inadequacy of research methods in clinical psychology (Barlow, 1981), but is more likely the result of a desire to maintain professional identity and the need to earn a living. Quite simply, if one orientation and set of treatment techniques is proven no more effective than any other (or than the absence of treatment), then the psychologists' years of training and commitment to the orientation become worthless. Further, consumers are left confused, and suppliers of third-party payment for services are less likely to reimburse practitioners. Thus, attitudes toward outcome research can become hostile, and "research can become an emotionally and politically volatile issue" (Adams, 1984, p. 91). As Sechrest (1992) notes, similar reasons have undermined attempts to establish standards of practice in clinical psychology.

Proliferation of Orientation-Based Organizations

An examination of the structure of the American Psychological Association reveals a splintering of clinical psychology into various theoretically based specialty groups (e.g., divisions). The trend toward membership in professional organizations (e.g., the Association for Advancement of Behavior Therapy) and divisions leads to clinical psychologists labeling themselves as client-centered

therapists, family-systems therapists, psychoanalysts, biofeedback therapists, and so on, terms that reflect their orientation rather than their professional discipline (clinical psychologist). Adams (1984) comments that such proliferation of interest groups leads to several problematic practices. First, the theoretically based groups are often interested more in training people according to their theoretical biases than in training them to be clinical psychologists (which involves being a scientist-practitioner). This results in the practice of offering licensing and credentialing in theory-based techniques (through workshops) to individuals who may or may not have an adequate professional background. Proliferation of such groups offering credentials also floods the profession and the public with an overwhelming number of "specialists." This in turn raises questions about which groups are eligible for third-party reimbursement and which are credible and legitimate service providers. Adams (1984) states that "the progression of these interest groups to quasi-disciplines is a source of constant but often unacknowledged difficulties for professional associations and for consumers" (p. 91). Sex therapists, sex abuse counselors, biofeedback therapists, marital counselors, and neuropsychologists are only a few of these quasi-professional business people. The specialty groups seem to become interested more in professional survival than in establishing empirically sound procedures. Psychology's failure, because of aggressive resistance by some practitioners, to establish criteria for competence makes it impossible to distinguish between legitimate and charlatan practitioners (Sechrest, 1992).

Impact of Models on Training and Education

The majority of doctoral-level clinical training programs (and predoctoral internships) identify themselves as psychodynamic, behavioral, or humanistic. Although training in research methodology is a requirement in most graduate schools, the primary goal of these programs appears to be indoctrination in the particular theoretical orientation held by a majority of the faculty or one's major professor. Thus, theoretical orientations tend to be perpetuated through persuasion rather than the scientific validity of the theory. To aggravate the problem, some programs doubt the feasibility or necessity of the Boulder model of clinical psychology training. These schools do not believe it is necessary to base clinical practice on scientific knowledge and research. At present, the American Psychological Association allows individual programs to be evaluated according to the tenets of the particular model to which they ascribe, a practice that perpetuates adherence to empirically questionable theories. Adams (1984) suggests that programs be forced to identify themselves as scientific versus nonscientific rather than by which theoretical orientation is espoused by a majority of faculty.

SUMMARY

Theoretical orientations maintain a number of utilitarian functions, such as helping the clinician conceptualize psychological problems and guiding the nature and course of treatment. However, psychological models should be scientific theories that derive their usefulness according to accuracy based on

empirical validation. As noted in the discussion above, clinical psychologists do not always adopt and maintain an orientation based on the scientific merit of the model or theory. The practice of blindly sustaining faith in a particular model relegates clinical psychology into a pseudoreligion and is clearly contrary to the scientist-practitioner model to which (it is hoped) the field aspires.

In Adams's (1984) critical evaluation of theoretical models in clinical psychology, he identified a number of recommendations that would encourage the field to proceed in a more scientific direction. The following is a summary of those suggestions.

1. Psychologists should avoid becoming personally invested in theoretical orientations and return to a more scientific approach to psychology. This entails returning to either a logical positivist or a realist (Manicas & Secord, 1983) philosophy of science rather than adopting and/or maintaining a paradigmatic view (Kuhn, 1971). The paradigmatic view suggests that reality is a function of idiosyncratic and individual perceptions of the world. Within this view, any theory is as valid as another, depending on the perspective of the evaluator. The consequence of adopting such a philosophy is that no theory can be disconfirmed or otherwise objectively evaluated, thus perpetuating membership in various theoretical "schools."
2. Methods of evaluating theories need to be devised that are independent of the theoretical positions themselves. Classification and measurement procedures that are derived from the theory contaminate objective evaluation of that theory. Part of the problem with objectively and atheoretically classifying and measuring theoretical assumptions is that no adequate definition of mental disorder currently exists (Wakefield, 1992a, 1992b). Until a more unbiased and clear conceptualization of mental disorder is agreed on, analysis of theoretical positions relating to etiology of disorders will be extremely difficult.
3. Instead of focusing on establishing all-encompassing and global theories of human behavior, clinical psychology should concentrate on establishing theories explaining specific phenomena (e.g., depression and schizophrenia). Limiting investigations to such events allows clearer evaluation of theory against empirical evidence.
4. To date, not enough is known about the etiology and development of clinical disorders. Until clinical psychologists have a clearer understanding of what they are treating, research should focus on the causes and development of types of abnormal behavior rather than being overly concerned with evaluation of treatment methods.

If clinical psychology is to survive as a helping profession rather than a cult, its procedures, practices, and standards must be based in scientific knowledge and data. Theoretical orientations are rarely conducive to those aims.

STUDY QUESTIONS

1. Why are theoretical models important in clinical psychology? Describe their influence on clinical practice.

2. Name the four most common theoretical models.
3. Define *eclecticism* and discuss its value in contemporary clinical psychology.
4. Discuss Freud's conceptualization of normal and abnormal behavior. According to Freud, what factors serve as key determinants in the development of personality?
5. What are the three "systems" of the human mind identified in Freudian theory? Describe each.
6. Discuss the major concepts of Freud's theory of personality, including structural elements, psychosexual stages, critical developmental conflicts, and defense mechanisms.
7. What is the role of anxiety in psychoanalytic theory?
8. Describe the "tools" available to psychoanalysts in their clinical activities.
9. What is the primary goal of psychoanalysis?
10. Discuss the major conceptual and empirical criticisms of the psychoanalytic model.
11. What is the central concern of the phenomenological models? How does it differ from other major theoretical models presented?
12. Describe the major concepts of Rogers's client-centered theory and therapy.
13. Discuss the criticisms of phenomenological models. Do they appear to be valid?
14. What is the principal cause of abnormal behavior according to the behavioral model?
15. List and describe the various behavioral approaches discussed in this chapter.
16. Discuss the role of self-efficacy in determining behavior.
17. How did Pavlov, Watson, Skinner, and Bandura influence evolution of the behavioral model and its clinical applications?
18. What is the role of cognition in cognitive behavioral theory and treatment? What is its impact on behavior, if any?
19. What are the primary criticisms of the behavioral model?
20. How do proponents of the biological/medical model understand psychopathology?
21. According to the medical model, underlying causes of mental disorders can be divided into three general categories. Name these three categories.
22. What factors have contributed to the growth of the medical model within the psychiatric community?
23. Discuss our biological understanding of depression and schizophrenia.
24. Describe the major criticisms of the medical model.
25. What factors influence one's adoption of any theoretical orientation?
26. Are theoretical orientations necessary? Explain why or why not.

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CHAPTER 3

Education

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HISTORY AND INTRODUCTION

As discussed in Chapter 1, the beginning of formal education and training in clinical psychology probably began with Lightner Witmer. Witmer received his doctorate from the University of Leipzig in 1892 and assumed the role of director of the University of Pennsylvania Psychology Laboratory (Nietzel, Bernstein, & Milich, 1991). He coined the term *clinical psychologist* (Strickland, 1988) and established the first psychological clinic in 1896 at the University of Pennsylvania (Korchin, 1976), where his first case as a clinical psychologist was a “chronic bad speller” (McReynolds, 1987, p. 851). This was a monumental event, as psychologists had previously been interested principally in the general behavior and individual differences of humans, not their well-being. In 1896, Witmer described his clinic at an American Psychological Association (APA) meeting, but he received limited support because, as suggested by Reisman (1966), psychologists of that period were primarily laboratory scientists with little interest or training in the application of psychological principles to the well-being of individuals. Moreover, Witmer apparently had a “talent for antagonizing his colleagues” (Reisman, 1966, p. 46). Nevertheless, within 15 years, five additional clinics were established in the United States, four of which were associated with psychology departments.

During the early 1900s, clinical psychology students gained practical experience in clinics and such settings as the Vineland Training School, the Boston Psychopathic Hospital, and the Worcester State Hospital (Pottharst, 1976). The nature of clinical education and training varied across psychology programs, but most typically consisted of general psychology training followed by a clinical internship that provided practical experiences. As the recognized need for

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

psychologists expanded, so did the number of psychologists who identified themselves as clinical psychologists. During these early years, and continuing even today, there was not complete agreement on what constituted a clinical psychologist, what this person should know, and what this person should be able to do. In 1924, the Clinical Section of the APA recommended that clinical psychologists have a **Doctor of Philosophy (Ph.D.)** degree in psychology and 4 years of experience, one of which was to be under supervision (Kendall & Norton-Ford, 1982; Reisman, 1981). This recommendation also supported a scientist-practitioner model of training, in which a balance of research and clinical training was recommended. Later, in 1931, the APA Committee on Standards of Training for Clinical Psychologists was formed, although there seemed to be little or no attempt to ensure adherence to any of their recommendations. In 1938, the first volume of the *Journal of Consulting Psychology* carried articles discussing the training of clinical psychologists and a recommended 1-year internship (Derner, 1965). In the same year, Shakow (1938) presented his now archetypal recommendations for an internship year in a psychiatric hospital. This recommendation was later echoed by Rogers (1939) in his description of clinical training. In 1938, Poffenberger recommended that the doctoral degree be a prerequisite for membership in the newly formed American Association of Applied Psychology (Derner, 1965). The doctorate described by Poffenberger was the **Doctor of Psychology (Psy.D.)** degree, which emphasized preparation for clinic service and, to a lesser extent, academic research. The awarding of this degree continues to spark controversy as a function of the imbalance of emphasis between research and clinical practice.

Although the foregoing events helped to shape early notions of clinical training, it was World War II that created the need to reach a consensus. Assessment and testing were the principal activities of clinical psychologists prior to World War II, with the greatest emphasis being on children and their mothers. Following the war, the United States was faced with thousands of returning veterans whose need for psychological services far exceeded the human resources of the mental health system of the time. It was estimated that 4,700 *new* clinical psychologists were needed to provide a full range of psychological services, including assessment and therapy, in Veterans Administration (VA) facilities (Darley & Wolfe, 1946; Kendall & Norton-Ford, 1982). The VA and the United States Public Health Service approached the APA with the task of specifying the nature of adequate clinical psychology training and eventually identifying programs that met these criteria. Carl Rogers, then president of the APA, asked David Shakow to chair a Committee on Training in Clinical Psychology. The committee report, presented in September of 1947, was entitled "Recommended Graduate Training Program in Clinical Psychology," and became known as the **Shakow Report** (Shakow et al., 1947). The report stated 14 general principles in three major areas: diagnostics, research, and therapy, emphasizing both the scientific and the professional aspects of clinical psychology. Programs were encouraged to graduate well-balanced clinical psychologists who could provide clinical services and contribute to the field of psychology in their research efforts. By 1947, 22 universities had training programs in clinical psychology (Reisman, 1981).

Training conferences have been influential in further shaping the educational preparation of clinical psychologists. Two years after the publication of the Shakow Report, representatives of the profession met for a conference in Boulder, Colorado, to discuss training (Raimy, 1950). This continues to be considered the most important conference on clinical training that was ever held. Representatives of major universities endorsed a single model of education and training, which essentially agreed with that proposed by the Shakow committee. This model, now referred to as the **Boulder** or **scientist-practitioner model**, required proficiency in research and professional practice leading to the Ph.D. degree, and included a 1-year professional internship. Based on the recommendations of the Boulder Conference and the stated needs of the Veterans Administration and U.S. Public Health Service, the APA formed an Education and Training Board to monitor the training of clinical psychologists and accredit graduate and internship training through its Committee on Accreditation.

Several major training conferences that addressed clinical training to some extent followed the Boulder Conference, each emphasizing somewhat different issues. Space limitations do not permit discussion of each conference. The major conferences and a number of their principal foci are outlined in Box 3-1. We will, however, discuss a few of these conferences and their recommendations.

The Vail (Colorado) Conference of 1973, entitled the "National Conference on Levels and Patterns of Professional Training in Psychology," resulted in approximately 150 resolutions that could be summarized by the major themes (Korman, 1974) outlined in Box 3-1. Among the major resolutions, the conferees recognized the acceptability of the Psy.D. degree, originally proposed by Poffenberger, in which the primary emphasis of training was on the direct delivery of professional services and the evaluation and improvement of those services (Korman, 1974). Additionally, the Vail Conference directed attention to the professional trained at the master's level. The conferees agreed that subdoctoral-level personnel could provide many of the services offered by doctoral-level psychologists. This position opened a controversy that remains today, despite the ever-increasing numbers of clinicians holding master's degrees in psychology.

The Salt Lake City Conference was sponsored by the APA and hosted by the University of Utah in July of 1987 (Bickman, 1987). The conference yielded 67 recommendations that focused on four themes: unity, diversity, quality, and humanity. Three of the more important recommendations supported (1) education in a broad core of general psychology, (2) affiliation of accredited programs with regionally accredited universities or housed within academic units of regionally accredited universities, and (3) multileveled training ranging from high school through postdoctoral levels with greater depth and specialization being introduced at the advanced levels. The conferees also recommended that the APA, in consultation with the Council of Graduate Departments of Psychology, study the issues in graduate education at the master's level and consider the feasibility of a national conference.

Box 3-1
Training Conferences

<i>Date</i>	<i>Location</i>	<i>Focus of conference</i>
1949	Boulder, CO	Training for clinical psychology
1951	Evanston, IL	Training for counseling psychology
1955	Stanford, CA	Psychology in mental health
1958	Estes Park, CO	Training in research in mental health
1958	Miami Beach, FL	Graduate training in psychology
1965	Chicago, IL	Diversification in clinical training
1973	Vail, CO	Diversity of training models; people trained, people served, people serving
1981	LaJolla, CA	Quality control in professional psychology training
1985	Hilton Head Island, SC	Training of clinical child psychologists
1986	Mission Bay, CA	Graduate education and training in professional psychology
1987	Salt Lake City, UT	Graduate training in psychology
1987	Gainesville, FL	Internship training in psychology
1988	Houston, TX	Clinical training for work with seriously mentally ill
1988	Georgetown, Washington, DC	Clinical training for work with children and adolescents with severe mental disorders
1988	Los Angeles, CA	Training of racial/ethnic minority students
1990	Washington, DC	Public-academic linkages for clinical training
1990	Gainesville, FL	Scientist-practitioner education and training
1990	Norman, OK	Applied master's training in psychology
1992	Washington, DC	Training in clinical geropsychology

Several more recent training conferences over the years 1987 through 1992 were co-sponsored by the National Institute of Mental Health (NIMH). Paul Wohlford, chief of the Psychology and Education Program Division at NIMH, also co-organized several training conferences over this period, which addressed the training of psychologists to meet the needs of underserved populations, each category being addressed at a separate conference: seriously mentally and persistently mentally ill (Houston Conference of 1988), children and adolescents with severe mental disorders (Georgetown University Conference of 1988), racial/ethnic minorities (Los Angeles Conference of 1988), and older adults (Washington, D.C., Conference of 1992). Wohlford also co-organized a NIMH conference on public-academic linkages for clinical training (Washington, D.C., Conference of 1990) that attempted to foster training of clinical psychologists that involved the marriage of public mental health programs with academic training programs.

A very controversial conference on applied master's training in psychology was recently held in Norman, Oklahoma, in 1990. Much of the controversy of that conference stemmed from the APA's unwillingness to recognize master's-level training as sufficient for the practice of applied psychology. Many doctoral-level psychologists had turned their heads from the issue of master's-level training in spite of the hundreds of individuals graduating each year with master's degrees in psychology and meeting the needs of many underserved populations. Conference recommendations included standards for applied master's programs, standards for curricula, credentialing, and appropriate titles for individuals with master's-level training in psychology.

Although the many training conferences have influenced how and what is taught in clinical psychology programs, many of the same issues are repeatedly discussed over the years as psychologists continue to question the educational preparation of students. Although clinical psychologists will probably never reach a consensus on all of the education and training issues addressed at these conferences, it is important for the development of the field that the educational preparation of clinical psychologists continue to be questioned and evaluated.

MODELS OF EDUCATION AND TRAINING

No issue has sparked more controversy with respect to clinical training than that of the relative weight given to the scientific and practice-oriented aspects of education and training. The first major model for integrating these components of clinical psychology was the Boulder model recommended in the Shakow Report and also articulated by Thorne (1947). More recently, the essential characteristics of the Boulder model were clarified at the National Conference on Scientist-Practitioner Education and Training for the Professional Practice of Psychology in Gainesville, Florida, in 1990 (Belar & Perry, 1991). According to the conferees:

The scientist-practitioner model of education and training in psychology is an integrative approach to science and practice wherein each must continually inform the other. This model represents more than a summation of both parts. Scientist-practitioner psychologists embody a research orientation in their practice and a practice relevance in their research. (p. 7)

As the controversy over the weight assigned to the scientific and professional aspects of education and training grew in intensity, considerable pressure was brought to bear on the field of clinical psychology to consider alternative models of clinical training, particularly those that placed greater emphasis on clinical practice. Critics argued that programs that attempted to implement the Boulder model of training ignored the mental health staffing needs of the nation (Adler, 1972); were disparaging of clinical psychology as a profession; were using relatively inexperienced and untrained individuals to provide clinical training; were not providing an adequate theoretical background for integrating theory, research, and practice; were not providing many of the vital courses for clinical practice (Matulef & Rothenberg, 1968); and were not training students to "realize their research potential within a practice-oriented work setting" (Goldfried, 1984, p. 477). It is our impression that these criticisms resulted from the

fashion with which the Boulder model was implemented, rather than the model itself. There was rarely an integration of science and practice. Students were taught separately to engage in research and to perform clinical work. Barlow, Hayes, and Nelson (1984) have provided an excellent discussion of how to integrate science and practice in their book *The Scientist-Practitioner*.

In this climate, alternative models have developed that include more practice-oriented training leading to a Psy.D. degree, more practice-oriented professional training within psychology departments (e.g., University of Illinois; Peterson, 1968), professional schools of clinical psychology associated with universities (e.g., Adelphi University, Rutgers University), and free-standing professional schools of clinical psychology (e.g., California School of Professional Psychology). Thus, it becomes important to clarify the distinction between the various degrees and training models. In the following sections we draw distinctions between training models, location of training program, and degree offered.

PH.D. VERSUS PSY.D. DEGREE

The Psy.D. degree was recommended by Poffenberger in 1938 and again endorsed by conferees at the Vail Conference in 1973, where they distinguished between the Psy.D. degree for service training and the Ph.D. degree for more scientific training. Peterson (1968, 1976) who began the first Psy.D. program while at the University of Illinois, has been an eloquent advocate of professional training. He argued that the need for professional psychologists was not being met by the Ph.D. programs; that "there is no way to train professional psychologists thoroughly except through explicitly professional programs" (1976, p. 795); that existing Ph.D. programs did not support the value of professional work; that there was no way to restructure the existing Ph.D. programs so that a student could receive adequate professional training in the 4 or 5 years allotted for training; and that there was an issue of professional identity raised for practitioners receiving the Ph.D. degree, which he viewed as a research degree.

Alternatively, McFall (1991) has argued persuasively for strong scientific training. In his "Manifesto for a Science of Clinical Psychology," McFall states that "scientific clinical psychology is the only legitimate and acceptable form of clinical psychology" (p. 76), and that clinicians should be trained to "think and function as scientists in every aspect and setting of their professional lives" (p. 85). The focus of his view is to assure quality in the services clinical psychologists render by offering services that have scientific support of effectiveness. Thus, "the primary and overriding objective of doctoral training programs in clinical psychology must be to produce the most competent clinical scientists possible" (p. 84).

On the middle ground, the Salt Lake City Conference (Bickman & Grosslight, 1987) recognized a continuum of emphases on applied or practice-oriented training versus research- or scientific-oriented training. The conferees concluded that "the integration of science and practice is a goal for both practitioners and scientists working in applied areas. We affirm the distinction between and legitimacy of both the Psy.D. and Ph.D. degrees" (p. 10).

Several of the earliest concerns regarding the relatively poor professional preparation of clinical Ph.D. students have been addressed by the new APA accreditation criteria. For example, a minimum number of hours of practicum experience and direct supervision are now specified. Whether these criteria elevate the professional training in the Ph.D. programs to a level that is adequate for the demands of the profession is perhaps largely dependent on the quality of the supervision, instruction, and breadth of experiences provided on each practicum and in the classroom. At present, there are, unfortunately, no empirically derived quality assurance criteria for students practicing their skills as clinical psychologists (Bent, 1986; see Edelstein & Berler, 1987). However, efforts have been made toward quality assurance in professional training at the La Jolla Conference on Quality Control held in 1981, at the Mission Bay Conference of the National Council of Schools of Professional Psychology (Bourg et al., 1987), and through the published results of a national self-study survey of professional schools (Callan, Peterson, & Stricker, 1986).

In spite of the advances made through these efforts to articulate the "needed" skills and knowledge, we still do not know what is required to be a competent professional clinical psychologist. The principal problem is that conceptualizations of clinical competence have generally been *rationally* rather than *empirically* derived. In the absence of suitable criteria and evaluation methods, we are merely guessing about what and how much training is needed (cf. Edelstein & Berler, 1987).

PROFESSIONAL SCHOOLS

Professional schools of psychology have developed both within regionally accredited universities (e.g., Baylor University, Denver University, Rutgers University, University of Illinois) and as free-standing units unaffiliated with universities (e.g., California School of Professional Psychology). Many of the same issues that have enveloped the offering of the Psy.D. degree have surfaced in discussions of the education and training of psychologists in professional schools. While some professional schools (e.g., California School of Professional Psychology) do offer the Ph.D. degree, most, if not all, professional schools of psychology place relatively more emphasis on professional practice than scientific training.

Both the relative emphases on research and practice and the free-standing nature of some professional schools have come under attack by numerous psychologists. Although the Vail Conference recommendations encouraged the development of free-standing graduate programs, the Salt Lake City Conference (Bickman & Grosslight, 1987) resolutions stated that in order to be accredited, doctoral programs "must be academic units within or affiliated with regionally accredited universities" (p. 3). The conferees argued that:

University settings are more likely than free-standing schools to provide high quality education in psychology because they display the following characteristics: greatest quality and quantity with regard to libraries and laboratory facilities; greatest number and breadth of full-time faculty; the presence of broad-based intellectual stimulation that comes from interaction with scholars in cognate fields such as sociology, political

science, anthropology, medicine, psychology, psychiatry, etc.; self-study and multiple peer review quality control systems endemic to the university process; financial stability, and therefore programmatic stability, due to the breadth and diversity of its funding base; non-proprietary/tuition-driven economic base, thus precluding financial basis for decisions about student choice and retention" (Bickman & Grosslight, 1987, p. 3).

MASTER'S-LEVEL TRAINING

The role of master's-level training in clinical psychology has been an issue for more than 30 years, in spite of the fact that the proportion of educational institutions offering master's degrees continues to increase. Over 200 psychology departments offering only master's degrees award over 8,000 master's degrees annually (Lowe, 1990). Approximately 80% of these master's degrees are in applied psychology, including clinical psychology. In spite of the number of master's degrees awarded annually and the significant amount of clinical services provided to underserved populations, the granting of the master's degree in clinical psychology continues to be debated.

Several general issues continue to fuel the debate. The first involves the question of whether master's-level training is sufficient to ensure competent provision of psychological services by graduates. To our knowledge, there are no data supporting the contention that greater experience and training, as offered in many doctoral programs, result in greater competence (Durlak, 1979; Hattie, Sharpley, & Rogers, 1984; Stein & Lambert, 1984). In fact, the report of the APA Task Force on the Evaluation of Education, Training, and Services in Psychology (1982a) revealed that "there is no evidence that any specific educational or training program or experience is related to professional competence" (p. 2).

Although the APA has set fairly rigorous criteria for the evaluation of doctoral-level training, it has yet to determine or adopt such criteria for master's-level programs. Fortunately, the Council of Applied Master's Programs in Psychology (CAMPP), a relatively new organization, accepted this challenge. Representatives met at the University of Oklahoma in June of 1990 with the goal of reaching a consensus on four training issues: training outcome standards, curriculum, credentialing of programs, and organizational membership for master's-level graduates. However, we currently have no assurance that programs will adopt the CAMPP standards. Moreover, there are currently no mechanisms for overseeing the evaluation and accrediting of master's-level programs. While the public is protected to some extent through the accreditation of doctoral programs, no such safeguards exist for master's-level programs.

In addition to recommending many specific competencies, the CAMPP conferees recommended that "graduates of applied master's programs in psychology have a title that appropriately identifies them as professionals in the field of applied psychology" (Lowe, 1990, p. 86). The CAMPP recommendations would appear to resolve two basic issues in master's-level training: competency and labeling. The labeling issue stems from the problem of who can call themselves psychologists. As Periman and Lane (1981) have indicated, it is somewhat confusing from the consumer's standpoint that both clinicians with doctor-level training and clinicians with master's-level training are entitled to the same professional title. Currently, clinicians with master's degrees in psychology are entitled with different professional labels across the country, ranging from

counselor to psychological examiner to psychologist, depending on the state in which one practices (Dale, 1988; Periman & Lane, 1981). The accreditation process could enhance current training practices and provide some standard against which the public and licensing boards could measure the adequacy of training provided in master's degree programs.

In spite of these issues, the future of master's-level training appears bright. More than 24,000 individuals with master's degrees in psychology are currently delivering services around the United States, and the market in most states does not appear to be showing signs of saturation.

APA ACCREDITATION

All of the conferences discussed in the foregoing section have influenced the nature of clinical training since the 1940s, when criteria for acceptable programs were sought by the APA following prompts and financial support from the VA and the U.S. Public Health Service. The **accreditation** of doctoral programs has occurred under the auspices of the APA Education and Training Board since it adopted the report of the Boulder Conference as a basis for their initial accreditation criteria. Both doctoral clinical psychology graduate programs and doctoral clinical psychology internships are accredited by the APA. In the December 1992 issue of the *American Psychologist*, 173 accredited pre-doctoral training programs and 412 accredited internships were listed. "Accreditation implies quality in education, training, and professional service. It is both a process and a status by which institutions or programs are publicly recognized as having met certain criteria or standards of performance" (Nelson & Aletky, 1987, p. 231). The committee:

exercises professional judgment in making decisions on programs being considered for accreditation by APA under the current *Accreditation Criteria and Procedures*. It also develops guidance documents and data gathering instruments necessary to carry out this function, institutes programs for the training of site visitors and provides a consultation to programs. (American Psychological Association, 1980, p. 8)

The publication of the APA *Accreditation Handbook* in 1980 was a monumental step. It contains detailed descriptions of the accreditation process, accreditation criteria for graduate programs and internships, instructions for the site visitors who evaluate the training programs, and various suggestions for guiding the accreditation process from the perspectives of both the training program and the site visitors. The *Handbook* was a much needed document for graduate programs and internships that previously had no explicit criteria with which to build and prepare for evaluations by site visitors. Box 3-2 provides an outline of several accreditation principles.

Since its inception, the APA Education and Training Board has continued to revise its policies and procedures for accreditation as the field of clinical psychology has evolved. In 1984 the APA Board of Directors authorized the Education and Training Board to appoint the Task Force on the Scope and Criteria for Accreditation to conduct a major review of the APA accreditation practices, with attention to the scope of future criteria for accreditation and other procedural issues that might be implicated. The Task Force began meeting in 1986

Box 3-2**Accreditation Principles and Criteria**

The APA accreditation criteria state that:

- A. It is the responsibility of the faculty to integrate practice with theory and research early in the program.
- B. Students should form an early identification with their profession. Faculty should be available to demonstrate and model the behaviors that students are expected to learn. A close working relationship between faculty and students is essential.
- C. The foundation of professional practice in psychology is the evolving body of knowledge in the discipline of psychology. While programs will vary in emphasis and in available resources, sound graduate education in general psychology is therefore essential in any program. The curriculum shall encompass the equivalent of a minimum of 3 academic years of full-time resident graduate study. Instruction in scientific and professional ethics and standards, research design and methodology, statistics, psychological measurement, and history and systems of psychology must be included in every doctoral program in professional psychology. The program shall, further, require each student to demonstrate competence in each of the following substantive content areas:
 1. biological bases of behavior (e.g., physiological psychology, comparative psychology, neuropsychology, sensation, psychopharmacology),
 2. cognitive-affective bases of behavior (e.g., learning, memory, perception, cognition, thinking, motivation, emotion),
 3. social bases of behavior (e.g., social psychology; cultural, ethnic, and group processes; sex roles; organizational and systems theory), and
 4. individual behavior (e.g., personality theory, human development, individual differences, abnormal psychology).

Competence may be demonstrated in a number of ways: by passing suitable comprehensive examinations in each of the four areas, [by] successful completion of at least three or more graduate semester hours (or equivalent quarter hours) in each of the four areas, or by other suitable means. These curriculum requirements represent the necessary core but not a sufficient number of graduate hours for a degree in professional psychology. All professional training programs in psychology will, in addition, include course requirements in specialty areas. [American Psychological Association, 1986, pp. 5-7]

The section on accreditation criteria goes on to elaborate training in specific skills (e.g., assessment, treatment, data analysis), APA policies, ethical standards, *APA Standards for Providers of Psychological Services*, and *APA Standards for Educational and Psychological Tests*, among others. Access to training in related fields is emphasized, as are research training, the canons of science, and scholarship. Further, programs are required to develop comprehensive student and program evaluation systems.

to discuss and make recommendations regarding several issues, particularly with regard to the following: (1) access to the accreditation process for doctoral education and training programs in speciality areas of professional psychology in addition to those currently recognized (clinical, counseling, and school psychology), for example, clinical neuropsychology, applied developmental psychology, mental retardation, health psychology, and pediatric psychology; and (2) access to the accreditation process for certain types of postdoctoral training programs in professional psychology.

PROS AND CONS OF ATTENDING AN ACCREDITED PROGRAM

In 1986, the APA recommended, in a Model Licensing Law, that state licensing boards should require that one graduate from an APA-accredited program in order to be licensed. To our knowledge, no state licensing or certification boards have adopted this criterion at this time. However, the VA will hire, as psychologists, only those who have earned a Ph.D. degree from an APA-accredited program. This is particularly important in view of the fact that the VA is the largest employer of psychologists in the United States. However, one need not graduate from an accredited program to be licensed to practice as a psychologist in the United States. Therefore, with a doctorate from a regionally accredited university, one can usually become licensed and enter private practice or be hired by private, state, and federal agencies, with the exception of the VA system. The principal disadvantage of graduating from a nonaccredited clinical program is that many academic positions and some clinical positions require a degree from an APA-accredited program.

In summary, accreditation is a highly desirable process sought by clinical training programs. The accreditation process ensures that clinical training programs undergo annual self-evaluations and external evaluations at least every 5 years. This results in accredited programs graduating individuals who have met acceptable standards according to site visitors who represent the field and members of the Committee on Accreditation who represent academic and public interests.

INTERNSHIP TRAINING

The vast majority of doctoral programs require students to be enrolled for 4 years of full-time education, followed by either 1 year of full-time or 2 years of half-time **internship**. Curiously, the history of the internship is longer than that of the other doctoral curricula, because prior to the Boulder Conference, all clinical training occurred in internship-like settings (Korchin, 1976, p. 72). Perhaps for this reason, Shakow (1938) placed significant emphasis on the internship as an integral part of clinical training, recommending that it provide four basic functions: (1) to develop further "facility with already acquired techniques," (2) to "saturate the student with experience in the practical aspects of psychopathology," (3) to "further develop the students' experimental-objective

attitude,” and (4) to “get the student acquainted with the types of thinking and attitudes of his colleagues in other disciplines” (Shakow, 1938, pp. 74–76).

To satisfy these functions, the APA developed accreditation standards for internships that have remained virtually unchanged for the subsequent 30 years. The current standards still mirror Shakow’s recommendations and involve such criteria as a 1-year full-time or 2-year half-time requirement, access to numerous role models, and the development of several abilities such as research, therapeutic, and interpersonal skills.

There remained concern for several years that these accreditation guidelines were an insufficient solution to the problem of internship regulation. Subsequently, because of the increasing numbers of internship settings and the somewhat vague guidelines determining their functions and structure, the APA established a committee that evolved in 1968 into the **Association of Psychology Internship Centers (APIC)**. The purpose of the APIC was to provide a clearinghouse for internship information and centralization for issues related to the APA. Among the various functions that APIC has fulfilled are the establishment of uniform procedures for tendering internship offers, the annual publication of a directory of internship centers, and the provision of a formal liaison between internship centers and the Education and Training Board of the APA (Burstein, 1981). APIC also moved gradually toward greater control of the structure and evaluation of internship training, successfully providing suggestions for both entrance and exit requirements for internships, as well as methods for evaluating intern performance in relation to these criteria. In 1991, APIC began formally addressing postdoctoral training and changed its name to the **Association of Psychology Postdoctoral and Internship Centers (APPIC)**.

The diversity and the occasional complete lack of specific evaluative criteria for intern performance found by the APPIC committee are suggestive of the current scarcity of data on internship training. In general, available research has taken the form of surveys targeted either at internship directors’ attitudes toward preinternship preparation of students (e.g., Petzel & Berndt, 1980; Shemberg & Keeley, 1974; Shemberg & Leventhal, 1981) or at the interns’ satisfaction with their internship experience (e.g., Khol, Matefy, & Turner, 1972; Rosenkrantz & Holmes, 1974). Surprisingly, there continues to be a dearth of research directed toward the systematic evaluation of either the specific learning experiences occurring at internship relative to APA recommendation (e.g., Kirk, 1970; Tucker, 1970) or intern performance relative to minimum competency standards in spite of past admonishments.

In response to the need for greater attention to internship training, the National Conference on Internship Training in Psychology was held in Gainesville, Florida, in 1987, this being the first conference singularly devoted to internship training. Although many issues were considered by the conferees, the principal recommendations were that (1) the internship be a 2-year process (1 year predoctoral and 1 year postdoctoral), (2) all training occur within APA-accredited internship programs, (3) all interns be funded at a level commensurate with experience, and (4) internship training occur only after a student has an accepted dissertation proposal and has completed all coursework and supervised practice. Although most of the Gainesville Conference recommendations have been met with general acceptance, the Council of University Directors of

Clinical Psychology voted unanimously to oppose a 2-year internship as an unnecessary and financially burdensome addition based on opinion rather than empirical evaluative data. The Gainesville Conference raised the perennial question of when graduate programs and internships will establish specific training and education criteria for purposes of graduate and internship program evaluation. Many of the issues raised in the various training conferences discussed in this chapter could be handled effectively if educational and training criteria and evaluative data were available (Edelstein & Berler, 1987).

The first portions of this chapter have laid out the historical development and continuing evolution of training in clinical psychology, including the multiple degree options and varying emphases on the scientific and practitioner aspects of training. Next we discuss the four complementary and interrelated core areas of graduate training: academic coursework, teaching, research, and clinical experience. We also provide in Box 3-3 some tips on preparing to apply for graduate school in clinical psychology and eventually the clinical internship.

ACADEMIC COURSEWORK

Undergraduate Level

The overwhelming majority of students applying to graduate school in clinical psychology have completed the requirements for a major in psychology at their undergraduate institution. One need not have been a psychology major. We recommend, however, that a number of psychology courses be completed and that the overall emphasis be in a natural (e.g., biology, chemistry) or social (e.g., sociology, anthropology) science. These majors provide the prerequisite background in science, math, and abnormal behavior. Coursework for a major in psychology includes a number of basic or “core” courses and a series of advanced courses. Box 3-4 provides the general outline of the undergraduate psychology curriculum at West Virginia University as one example of undergraduate training. As is typical, there are a number of required courses that provide a basic understanding of psychological principles and that form the foundation for entering most areas of psychology. This typically includes a number of courses from the basic experimental and physiological areas to provide an understanding of basic behavior principles as developed through infrahuman (nonhuman animal) research, how those principles may be extended to humans, and the biological and physiological substrates underlying behavior. This core area of study is very likely to include laboratory courses. Finally, the psychology major is usually required to take additional courses that focus on specific areas, such as clinical, developmental, experimental, or organizational psychology. The goal throughout such curricula is to provide the student with a broad exposure to the foundations of psychology as a science, and to build on that foundation with advanced coursework in specific areas of interest to the student.

The student applying to graduate school will likely be concerned about the acceptable grade point average (GPA) required for admission. Applicants should

Box 3-3**Pointers on Applying to Graduate School and Internships**

In many ways, the process of applying to graduate school and internships is highly similar, so we will proceed by focusing on graduate school applications and noting the differences that are important for internships.

Getting Started and Application Timelines

Obtain information on 10 to 30 programs during the summer and fall *prior* to the academic year for which admission is sought. Helpful sources include APA's *Graduate Study in Psychology and Associated Fields*, the *Peterson Guide to Colleges and Universities*, the published list of APA-accredited programs in the *American Psychologist*, and for internships, APPIC's *Guide to Doctoral Internships in Psychology*.

Review materials obtained from programs and consult with a faculty adviser to narrow the list down to 6 to 12 programs that are a good match with the student's credentials: research and clinical interests, GPA and entrance exam scores, master's versus doctoral training. Do *not* take a "shotgun" approach in the hope of getting accepted somewhere—applications with a poor match between student and program waste the effort of all involved.

Submit applications *before* their designated due dates, generally in December to mid-February (some master's programs take applications into April or May). Late or incomplete applications are rarely considered, as the screening process for interview and admission decisions begins very shortly after the stated deadline.

Application Requirements

All programs will require the official academic transcript to document coursework and grades. It should be sent directly from the college transcript office (photocopies are not acceptable). Be sure to order the transcript at least 6 weeks in advance so that it will arrive before the deadline.

Two to three letters of recommendation will be required from faculty or professionals (not family friends) who can comment on the student's skills, general knowledge, motivation and potential to succeed, and ability to work with others, as well as any negative aspects that might impede success. This is where the contact resulting from extracurricular research, teaching, or clinical experiences is very important. Students have the right to ask their potential referees if they will be able to write a strong letter of recommendation so that there are no surprises.

Graduate schools generally require the general test of the Graduate Record Examination, and may want other scores such as the Psychology Advanced Test of the GRE or the Miller Analogies Test. Information on applying for these tests is generally available from the admissions office of one's own undergraduate institution. These tests must be taken early enough to have the scores sent to the programs prior to application deadlines, especially if the student is concerned that his or her performance may require taking the test a second time. Workshops and study guides are available to help students prepare for these examinations.

The personal statement is one of the most important aspects of the appli-

cation, yet it often receives the least attention from applicants. The statement provides a sample of writing style, so it is strongly recommended that the student ask for feedback from faculty advisers on early drafts, that the final version be carefully proofread, and that format and typing be attended to carefully. Phrases such as "I have always been interested in psychology and in helping people" rarely add to the quality of the statement and often do not even ring true (whether or not they are true). The statement should include information on extracurricular activities relevant to psychology, current plans for practice after graduation (e.g., private practice, academia, research), interest areas currently being developed, and how those areas mesh with the program to which the student is applying. Mentioning specific faculty members with similar interests can help establish or strengthen a match with the program. Including a well-prepared vita or resume can also add to the quality of the application.

Getting Accepted

After reviewing sometimes several hundred applications, admission committees will narrow their primary choices to a dozen or so applicants who will be invited for an interview. Interviews may be done over the phone or face to face in a group or individual format. The interview process can vary widely from program to program, but generally if a personal or phone interview is offered, it is in the applicant's best interest to participate. The process is one of finding the best fit between applicant and program. Thus, it is important to ask questions as well as be prepared to answer them.

Following interviews, the admissions committee prepares a primary and alternate list of acceptees. Notification

is often made first by phone and then by letter. Students generally have until April 15 (the notification and decision date is the first Monday in February for internships) to notify a program of their intent to accept an offer of admission. It is recommended, however, that students rank order their preferences so that once an offer of admission is made by a higher ranked program, they can immediately decline the offers of lesser ranked programs. Holding multiple offers only complicates the process for all involved and suggests that the student does not have clear priorities.

Chances of acceptance to a program vary with the number of applicants, the student's qualifications, and how carefully the student has selected the programs to which he or she has applied. Because the field of psychology historically has been dominated by white males, there is a trend toward seeking qualified female and minority applicants. Thus, gender and ethnicity may play a role in the application process; however, the academic qualifications of accepted students continue to remain high.

Failure to Obtain Admission to a Program

The process outlined above is highly competitive, and many applicants are declined admission at any particular program. Rejection should give the student pause to consider his or her career choices and the process by which he or she decided on particular programs. Most important, rejection allows time to continue working in the field so that the student may acquire experience and skills that will make his or her application more competitive the following year.

The personal experience of the first
(Continued)

author perhaps provides an example of how to remain determined. Despite fine credentials, Dr. Scotti received one offer of admission to a master's program on his first attempt to enter a doctoral program. After completing the master's degree, he failed to gain admission to a doctoral program and so worked for several years as a master's-level clinician in an institutional setting. During that time, he continued to gain research and clinical experience, but even so, admission to a doctoral program took two more attempts before final acceptance at a program from which he had previ-

ously been rejected twice. Finally, Dr. Scotti is an assistant professor in the clinical doctoral program at West Virginia University, ironically a program that had once rejected his graduate application. The moral of the story is, "if at first you don't succeed, try and try again." In the meanwhile, acquire the skills and experiences that will make you a more competitive applicant (time alone will only decrease your desirability), choose programs wisely, and gain input on your application from faculty advisers and current graduate students.

check the specific minimum requirements stated in graduate school brochures and the latest edition of *Graduate Study in Psychology* published by the APA, as these can vary widely from program to program. A general rule would likely be that the psychology and overall GPA should exceed 3.0 for applicants to master's programs and exceed 3.3 for doctoral programs, with APA-accredited programs typically having higher standards. The applicant must realize that doctoral programs receive approximately 200 to 800 applications per year for perhaps a dozen positions, allowing many programs to be highly selective.

Graduate Level

The academic curriculum in a graduate program in clinical psychology generally fills the first 2 years of training with required practical courses in assessment, diagnosis, and therapy, as well as more advanced versions of courses in animal learning, physiology, and research design and statistics. Typically, the coursework in most 2-year master's programs does not differ significantly from the first 2 years of a doctoral program, although some master's programs require less coursework in research methodology and statistics. The emphasis in both is on the acquisition of skills that can be applied in supervised practicum experiences. The goal of most applied master's programs is to turn out practitioners of psychology qualified to work in a number of settings. Regulations regarding the professional independence of master's-level practitioners vary from state to state. Only West Virginia and Vermont license master's-level psychologists for independent practice. Other states license individuals with master's degrees in psychology for independent practice, but not under the title of psychologist. For example, in California, master's-level clinicians can be licensed as **Marriage, Family, Child Counselors**, who are usually more limited than licensed psychologists in the scope of their practice.

Box 3-4**Outline of the Undergraduate and Graduate Psychology Curricula at West Virginia University*****Undergraduate major in Psychology****Required Courses*

Introduction to Psychology
 Psychology as a Profession
 Research Methods
 Organismic Factors
 Behavior Principles
 Statistics

One of the Following

Introduction to Human Development
 Introduction to Social Psychology

One of the Following

Cognition and Memory
 Conditioning and Learning
 Perception
 Physiological Psychology

Four of the Following (including additional courses in the above "choice" areas)

Leadership and Human Relations
 Personal and Social Adjustment
 Sex Roles and Behavior
 Prenatal and Infant Behavior
 Child and Adolescent Psychology
 Adulthood and Aging
 Social Psychology
 Psychological Assessment
 Comparative Personality Theory
 Psychology of Adjustment
 Survey of Behavior Modification
 Community Psychology
 Abnormal Psychology
 Exceptional Children
 History and Systems
 Seminar in Psychology

Additional Nonrequired Courses

Teaching Practicum
 Field Experience Practicum
 Directed Research/Studies
 Honors Investigation and Thesis

*Denotes Professional Master's courses.

Doctoral program in Clinical Psychology*Required Courses*

Research Design and Data Analysis I
 Research Design and Data Analysis II
 Child Behavior Modification* or
 Adult Behavior Therapy*
 Behavioral Assessment I (Theory)*
 Behavioral Assessment II (Testing)*
 Experimental Analysis of Behavior*
 Introduction to Clinical Psychology*
 Ethical and Legal Issues*
 Clinical Neuropsychology
 Behavior Pathology*
 Social Behavior
 History and Systems

*Examples of Specialized Seminars**

Advanced Therapy Techniques
 Developmental Psychology
 Issues in Developmental Disabilities
 Program Evaluation
 Paradigmatic Behavior Therapy
 Behavior Theory and Philosophy
 Single-Case Experimental Design

Required Practical Experiences

Master's Thesis Research (optional
 Professional Master's Program)
 Doctoral Preliminary Examination
 Doctoral Dissertation Research
 Additional Directed Research
 Teaching Practicum (optional)
 Clinical Practicum (20 hours/week for
 six semesters; three semesters for
 Professional Master's Program)
 Internship (1 year, full time, at APA-
 accredited training site; 6 months,
 full-time, for Professional Master's
 program)

The doctoral training program, be it the Ph.D. or Psy.D, extends the basic level of training by offering a variety of didactic courses and seminars on such topics as approaches to intervention and assessment, program evaluation, and current research relating the etiology and treatment of various psychological disorders. Box 3-4 outlines the graduate clinical curriculum at West Virginia University for both the doctoral and professional master's programs as one example of such curricula. Here one can see the commonalities over the first 2 years, with the additional development provided to doctoral students after completing the basic core courses. A typical Psy.D. or professional program might vary from the Ph.D. curriculum presented here by having a lesser emphasis on research. Although a range of options exist across the various graduate training programs, students, particularly at the doctoral level, are usually expected to complete their coursework on a full-time rather than a part-time basis.

Doctoral programs previously required additional coursework demonstrating competency in two foreign languages, and an "inside" and an "outside" minor. The language requirement has largely been dropped in favor of coursework allowing greater emphasis in other areas of specialization. Additionally, many believed that mastering a foreign language was of questionable benefit, since English remains the primary language of scientific publication (see Bird, Heron, Meehl, & Paterson, 1947, for a historical perspective on this topic). Some doctoral programs continue the "inside" minor in which the student selects an area of concentration within psychology that is related to future career goals and interests, such as additional courses in statistics, developmental psychology, animal learning, or particular clinical populations. One area of concentration that has recently been recommended for inclusion into clinical training is that of psychopharmacology, resulting in much debate during recent years. Proponents argue that such training would enable psychologists to be full-service providers by enabling them to both administer psychotropic medication and conduct therapy. Others argue that such training would lead psychologists away from understanding the nonbiological influences on human behavior and toward the reduction of psychological problems to "simple-minded physical concepts, such as biochemical imbalances" (Breggin & Tirnauer, 1992, p. 3). The "outside" minor, where it is still required, has been met by taking additional graduate-level coursework outside of psychology, such as in philosophy (particularly philosophy of science), computer science, or sociology, with the goal of providing the broader educational background historically required by the doctoral degree.

Doctoral Candidacy

The admission to a doctoral program in clinical psychology usually proceeds in two stages. Typically, one is first admitted to the clinical program and completes the basic required courses outlined earlier and the master's thesis. The student must then complete and pass a competency or preliminary examination to demonstrate his or her level of proficiency in research and clinical issues. The student will then be admitted to doctoral candidacy and be allowed to propose and conduct the doctoral dissertation, complete additional course-

work, and eventually apply for a doctoral internship position. Generally, the student is permitted to select the members of the preliminary examination committee who will approve the topic areas and judge whether the student has passed or failed. Failure of the competency examination typically results in the student being required to leave the graduate program. The preliminary examination varies widely from school to school, and some master's programs may also require a competency examination before awarding the master's degree. For example, the Department of Psychology at Bradley University (Peoria, Illinois) previously required their master's candidates to take, or retake, the **Psychology Advanced Test of the Graduate Record Examination (GRE)**. At the doctoral level, there is a wide range of methods for demonstrating competency to be admitted to candidacy. At the State University of New York at Binghamton, the student selects six interrelated topic areas to study, preparing a comprehensive review paper in one area, completing written examinations in two or three areas, and then undergoing an oral examination before the preliminary examination committee in the remaining areas. The system at West Virginia University has varied over the years, and has recently been reduced to a single 35-page publication-quality comprehensive review or conceptual paper. These two systems of preliminary examination are but a sample of the wide range of procedures, although they probably represent the ends of the continuum.

TEACHING EXPERIENCES

Some undergraduate institutions will allow students to assist faculty with large lecture courses, and may even provide course credit (under a title such as "teaching practicum") for the experience. Typically, the student has already successfully completed the course in which he or she will serve as an assistant. The duties of the teaching assistant at this level may be to attend and assist with lectures, provide tutoring or study sessions, or supervise the laboratory component of a course. At the level of graduate training, most programs require that the graduate student assist with large undergraduate lecture courses, providing some of the lectures, proctoring exams, and assisting with grading. In many cases, graduate students teach entire sections of an undergraduate course. In fact, many universities (rightly or wrongly) rely on graduate teaching assistants to teach many of the introductory psychology courses, freeing faculty to teach the graduate and advanced undergraduate courses. The experience of teaching, obtained in this formal manner or through less classroom-oriented experiences such as participating in workshops or conference symposia, is an invaluable component of graduate training. This is true whether or not the student intends to enter an academic setting. Teaching allows students to become comfortable with presenting structured material and their own ideas before an audience, and with addressing questions and challenges "on their feet." Such skills are important to clinical psychologists, whether they intend to teach, provide consultation to organizations, conduct group therapy, or present their research findings at professional conferences. The desired outcome skill in each of these areas is effective oral communication with an audience, be it an audience of 1, 10, or 100.

RESEARCH EXPERIENCES

Undergraduate Level

A number of possibilities for involvement in research activities exist for undergraduates, at both the applied and basic experimental levels. Most colleges and universities will offer a course titled "independent research," "directed studies," "directed research," or the like, in which undergraduate students may earn credit for assisting faculty or graduate students with ongoing research projects. The role of the undergraduate research assistant in such projects typically includes collating and entering data on computers, an important and necessary step in the research process, although a somewhat menial task. Involvement even at this level opens the opportunity for undergraduates to get to know faculty and graduate students and to become familiar with the specifics of a particular research project. In the best of cases, undergraduates may join in research lab meetings and have the opportunity to participate in the design and implementation of projects. This may involve assisting with library research, subject recruitment, conduct of subjects through the research protocol (such as a laboratory procedure or questionnaires), and direct observation in natural settings or scoring of videotapes. A wide array of research areas and directions are generally available particularly at the larger colleges and universities. These may include animal behavior studies, human behavior in controlled laboratory or community settings, or applied clinical research into aspects of psychopathology and treatment. Because the complete list of research possibilities is as wide as the field of psychology itself, interested students should begin by consulting with faculty at their institution.

An especially popular vehicle for gaining psychological research experience is the **senior project** or **honor's thesis**. In this course the undergraduate student is primarily responsible for developing and conducting a research project, under the guidance of a faculty member who has agreed to serve as the student's mentor. Consequently, the project itself is usually an extension of that faculty member's ongoing research. Generally, a proposal is developed and presented at a meeting where other members of the undergraduate thesis committee evaluate the merit of the project and provide constructive feedback. The student then conducts the project, usually with the assistance of the faculty or graduate students, presenting a final paper reporting on the study and its findings at the final thesis defense meeting. The purpose of the undergraduate thesis should be to extend and develop the research skills that the student has begun to acquire in the research assistant activities described earlier. Completion of an undergraduate thesis suggests a more advanced level of research competence and involvement than is acquired from the typical series of statistics and research design courses. A note of caution about performing an honor's thesis: projects of this nature should be carefully planned to be completed within the senior year, which may require that planning begin during the second semester of the junior year.

Whether or not one completes an undergraduate thesis, it is important that students seeking entry into graduate school participate in several research projects, at either the basic or applied level, and not necessarily in clinical psychol-

ogy per se. Research skills are important in graduate school. Equally important are the collegial relationships one builds with faculty and graduate students outside of the classroom setting. Personal contact with faculty during research meetings and related activities is a very important factor in obtaining letters of recommendation. Such contacts allow faculty to more fully comment on the student's preparation for graduate school, as opposed to writing a letter that states only the student's letter grade in a large, impersonal lecture course.

Graduate Level

Once in graduate school, the emphasis on research activities can differ dramatically according to the requirements of the particular program. Typically, a Ph.D. program will require the completion of a **master's thesis** and **doctoral dissertation**. Professional and Psy.D. programs, on the other hand, vary considerably, with one program requiring a dissertation while another may require a "doctoral paper," which is usually something less than a traditional dissertation document. Other professional psychology programs have no dissertation requirement. Instead, students "take two comprehensive examinations to demonstrate and defend their clinical competence and scientific proficiency" (McNett, 1982, p. 11). Participation in the ongoing research of faculty may also be expected, and at some programs is required. In fact, one model of graduate training is to accept students for admission contingent on their match with the research interests and needs of a particular faculty member. Programs may vary in how strictly they require the student to then remain under the tutelage of that faculty member. Other programs accept students without requirements as to with whom they will conduct their research activities, although there is generally a match of broad interests between the student and the faculty as a whole.

The master's thesis should be a closely supervised research experience during which the student learns the steps in conducting a project, from inception of the basic idea to be investigated to final analysis and presentation. As with the honor's thesis, the topic area is likely to be an extension of the research area of the faculty member serving as the thesis chairperson. Unlike the honor's thesis, however, the research is more likely to be a larger scale investigation, with a more complex experimental design, and it is more likely to be of publication quality. Again, because the primary goal is learning to conduct research, the student should expect close supervision from her or his mentor. A useful timeline is to plan for completion of the thesis by the second to third year of graduate school, generally meaning that a proposal will be submitted by early in the second year. The doctoral dissertation is likely to be developed and proposed during the fourth year of graduate training, with data collection being complete prior to starting the internship. Delays beyond this timeline can lead to longer times in graduate school and may interfere with the acceptance of post-doctoral positions or formal employment, particularly in an academic setting. The dissertation is generally less closely supervised by the dissertation chairperson, as the project is meant to be a demonstration of the student's ability to develop a novel research idea and independently conduct a major research endeavor. Thesis and dissertation projects are rarely of sufficiently small scale

that the graduate student can truly perform them completely independently; this is one important area in which undergraduate students can lend assistance and thus begin to gain their own research experience, as described at the start of this section.

CLINICAL EXPERIENCES

Undergraduate Level

A range of experiences, from volunteer placements to supervised practicum programs, are open to the undergraduate student seeking experience with clinical populations. Most community mental health centers, psychiatric hospitals, developmental centers, women's shelters, and adolescent treatment programs will accept individuals as volunteers performing jobs as varied as assisting with recreational activities, providing instructional programs, handling crisis hotlines, providing peer counseling, or being a big sister or big brother. Generally, if these same agencies accept the student for a practicum placement, as compared to a volunteer position, the range of tasks and the responsibility of the student increases, as does the level of supervision by agency staff. Practicum placements at the undergraduate level are most typically unpaid positions; however, many colleges and universities offer a course that allows students to earn a variable number of credits and a grade for the experience. Although it may be desirable to obtain experiences of this sort with the clinical population that the student intends to work with as a professional, for most students it is too early to have such well-defined career goals. The practicum placement, as with undergraduate research experiences, is meant to (1) provide the student with experience relevant to entering and succeeding in graduate school or the job market, and (2) help the student explore the many options available within the field of psychology. It would be the rare student who has defined his or her career goals based on a small number of undergraduate research or clinical experiences, and the rare graduate program that would fully expect the student to commit solely to those interest areas.

Graduate Level

Graduate school programs vary greatly in the amount of clinical experience offered to students, when clinical experience will begin, and the settings in which it will occur. Painting with some very general brush strokes, one might expect to gain clinical experience during graduate school in several ways: (1) the department teaching clinic, (2) the clinical case conference, (3) supervised community practica, and (4) the internship. Often, a graduate program will be closely associated with a clinic setting, such as the campus counseling center, or with specific community-based programs, such as grant-funded intervention projects, or will even have its own teaching clinic within the Department of Psychology. These types of settings provide the student with closely supervised clinical experiences in assessment and therapy in which, in the best of cases, the

student receives supervision by faculty or advanced students through co-therapy, direct observation through one-way mirrors, or “bug-in-the-ear” (a transmitter device that allows the supervisor to surreptitiously prompt the student during the session). The student may take a small number of cases in such settings to learn procedures in a highly structured environment. The clinical case conference, or what is sometimes called **grand rounds** allows the student to hear presentations of cases conducted by advanced students or faculty, and to ask theory or technique-oriented questions.

During supervised **community practice**, the student will typically work from 1 to 2 days per week in a local mental health agency, and may receive a stipend for such work. In such settings, the student is likely to receive a larger caseload than in the departmental clinic setting. She or he receives supervision on-site from professionals working at that agency. Cases are likely to represent the full range of those individuals, couples, and families seeking services from that agency.

Finally, the student completes an internship that meets the requirements of the graduate program. At the master’s level, this may mean a 6- to 12-month internship, generally full time, at a site arranged by the student or the department. A variety of doctoral internship options exist, both APA-accredited and nonaccredited, but generally if the student is enrolled in an APA-accredited graduate program she or he must complete an accredited internship. Doctoral internships may be part of large consortiums that might include, for example, a university medical center and a range of inpatient and outpatient settings. The intern will typically rotate among two to four settings during the year, spending 3 to 6 months in any one particular setting. For example, during one rotation the intern may work with adolescents on an outpatient basis, while on the next rotation the work may involve chronically mentally ill adults in an inpatient setting. Internships, or rotations within internships, may be selected to receive training with specific populations or techniques, or for their varying emphases on clinical work and research. The optimal situation would be an effective integration of research and practice. The internship year is the capstone experience to clinical training in which one gets the chance to fine-tune skills, learn new techniques, consult with professionals in other fields, and generally reach the level of responsibility and independent functioning necessary for professional practice.

A WORD ABOUT POSTDOCTORAL TRAINING

Some doctoral students, on completion of their formal graduate training, choose to seek a **postdoctoral** experience. The goals are usually very specific, with the experience focusing on refining research and/or clinical skills in a specific area of concentration, such as anxiety disorders, clinical neuropsychology, behavioral medicine, chronic mental illness, or developmental disabilities. Postdoctoral students may have the opportunity to work on major grants or intervention projects, or be involved in the supervision of doctoral-level interns. This also is a year to build one’s vita by publishing completed projects or

initiating new ones in the hopes of increasing one's desirability in the job market. The postdoctoral experience can allow the student additional time to develop more fully expertise in specific areas of specialization, such as those discussed in the other chapters of this text.

PROFESSIONAL DEVELOPMENT

Ethical Standards

The APA has been the major professional organization for psychologists for over 100 years. One of the primary goals of the APA has been to develop and uphold ethical standards for clinical practice, assessment, and research (human and infrahuman). As such, the APA publishes and regularly revises a number of documents important to the student of psychology, at the undergraduate and graduate levels, including *Ethical Principles of Psychologists* (American Psychological Association, 1981, revised 1992) and *Ethical Principles in the Conduct of Research with Human Participants* (American Psychological Association, 1982b). Relevant to clinical experiences and practice are guidelines that govern issues of professional responsibility, competence, moral and legal standards, public statements, privacy and confidentiality, welfare of the consumer, professional relationships, and development and use of assessment techniques (American Psychological Association, 1981, 1992). Recently, the APA has also provided guidelines for the provision of services to ethnic, linguistic, and culturally diverse populations (American Psychological Association, 1993).

Research with either humans or infrahumans must carefully address the costs and benefits to the participating subjects and the scientific community of conducting a specific research study. Researchers must avoid exploitation and coercion of subjects, provide for a full **informed consent**, protect subjects from physical or psychological harm, provide assurance of **confidentiality**, and offer the opportunity to decline or withdraw from participation, among other ethical principles (American Psychological Association, 1982b). The basic ethical principles are also extended to the proper care and use of infrahuman research subjects, including proper care and housing, and clear scientific justifications for the research and experimental procedures (American Psychological Association, 1985). Federal law requires the prior approval of research protocols by an **Institutional Review Board** at any agency or institution of higher education that receives federal monies, such as student loans or other subsidies. Additionally, when submitting a paper for possible publication, many professional journals require a statement from authors that the ethical guidelines for research have been followed.

These guidelines are meant to protect the rights of the consumer of psychological services and the participant in psychological research (be they human or infrahuman participants). Violations of ethical principles are considered to be a serious matter, with the consequences ranging from censure, required remediation of interfering conditions (such as a therapist being remanded for substance abuse treatment), dismissal from APA membership, and suspension or revocation of professional licensure. With the potentially serious repercussions for violation of ethical principles, both to one's clients or research subjects and to

one's professional career, it behooves the student to become familiar with the APA standards early in his or her career. The intent of such professional guidelines and ethical standards is to specify for the profession the *minimally accepted standards* of conduct, service, and quality assurance. Such guidelines assist the professional in setting high personal standards, while simultaneously allowing the profession to police itself by determining when individuals are not meeting those minimum standards.

PROFESSIONAL ORGANIZATIONS

A large number of major and minor professional organizations and special-interest groups exist within psychology and related fields that represent the highly varied clinical and/or research interests of the field. Membership in professional organizations provides the benefits of associating with colleagues who share similar interests locally, nationally, and internationally. Most organizations hold annual meetings and publish a newsletter and perhaps a journal or two. Professional identity is developed through membership in such organizations and through attendance of conferences and special-interest group meetings. The latest ideas in clinical practice and research are shared, professional contacts are made (i.e., networking), job openings are announced, and job interviews are conducted at such meetings. Conference attendance is also an important vehicle for obtaining continuing education credits. In many states, licensed psychologists are required to attend workshops and other educational activities in order to keep their knowledge and skills up to date and have their license renewed. This activity is documented through continuing education credits, where one credit is received for each hour of participation in continuing education activities. Not all states require continuing education for licensure renewal, and some also may allow credits to be earned for completing a test on a set of readings.

The APA offers an annual convention attended by thousands of psychologists from around the nation and the world. Conference attendance is so large that upward of five hotels are often reserved for the numerous presentations, including symposia, workshops, poster sessions, and division and special-interest group meetings. The APA is divided into over 40 divisions (such as Personality and Social Psychology, Society for the Psychological Study of Social Issues, Clinical Psychology, Theoretical and Philosophical Psychology, Community Psychology, Psychology of Women, and Health Psychology), each often having several sections to represent most fully the diversity of interests, careers, and theoretical positions contained within this large organization. The APA also has affiliate organizations in each state that typically hold their own annual meetings, have a newsletter, and may publish a journal. Stresses within this behemoth of an organization have led to the formation of splinter groups and organizations, such as the Psychonomic Society, the American Psychological Society, and the American Association for Applied and Preventive Psychology. Much of the dispute centers on the relative emphasis on applied professional versus basic research issues and activities, a historical problem addressed earlier in this chapter.

Many subspecialties are represented by the divisions within the APA, but

also by alternate organizations. These include the Association for Behavior Analysis, the Association for Advancement of Behavior Therapy, the Society for Behavioral Medicine, the Society for Research in Child Development, the American Association on Mental Retardation, and the Association for Black Psychologists, to name but a very few. Most professional organizations encourage the involvement of undergraduate and graduate students, and enroll them as either student or affiliate members. Students have reduced membership fees and similarly reduced membership rights, such as inability to vote in organization elections.

Student attendance at professional conferences is encouraged by most professional organizations. It is here that students may (1) begin to make contacts with other professionals; (2) learn about the various graduate school, internship, postdoctoral, and employment opportunities; (3) enhance their general knowledge of psychology; and (4) refine special areas of interest. Presentation of papers, as part of a symposium, panel discussion, or poster session, is an important vehicle for networking with professionals with similar interests. Conference presentations help begin the process of building one's vita, with such presentations often representing the initial stages of ideas or projects that will eventually be refined and completed for publication in professional journals. Box 3-5 provides more discussion of this important professional activity and how students may become involved.

CONCLUDING REMARKS

The undergraduate student preparing for graduate training in clinical psychology typically completes the academic requirements for a major in psychology, but is rarely required to engage in additional clinical or research activities. We have noted that it is often the case that students will approach their academic advisers late in their junior year or early senior year and inquire about applying to graduate school. They may well have met the major requirements and may even have an excellent grade point average, but at this late point in their undergraduate careers, it will become increasingly difficult to obtain the extracurricular experiences outlined above that form the solid foundation required for graduate training. Although these activities are available at many undergraduate institutions, they require more effort on the part of the student to seek out and perform. It is highly desirable at the undergraduate level to blend academic classroom learning with practical research and clinical experiences, as the major thrust of many graduate programs is to turn out professionals competent in clinical practice and the generation and consumption of scientific research. Given that this combination of knowledge, experience, and skill is the basis of the scientist-practitioner model, it behooves the student to demonstrate minimal competencies in research and clinical areas when applying to graduate school.

We hope that this chapter has given the reader a historical perspective on the development of clinical psychology as a profession. Additionally, it should be clear that there is not always agreement as to what constitutes adequate training in clinical psychology. The field continues to hold conferences to reach

Box 3-5
Publication and Conference Presentations

One of the most difficult accomplishments of the professional psychologist is the acquisition of skills leading to the successful publication of research. The development of these skills needs to begin early in one's career, even at the undergraduate level. This is where the involvement in extracurricular activities becomes so important. Although many undergraduate programs require a course in which professional writing skills are developed, this is often inadequate for actual writing at the professional level. By becoming involved with faculty and graduate students in their writing projects, the student learns the basics of library research, protocol development, and professional writing style.

The *Publication Manual of the American Psychological Association* (1994) provides a model for the technical aspects of professional writing, while working closely with faculty and developing professionals provides for additional modeling and feedback. Undergraduate students who are conducting an honor's thesis or graduate students may be interested in the recent *Dissertations and Theses from Start to Finish* (Cone & Foster, 1993). In the best of cases, an advanced student may even be asked to write portions of a potential publication, with the adviser giving guidance and corrective feedback. The senior or honor's thesis at the undergraduate level, and the master's thesis and dissertation at the graduate level, also provide excellent opportunities for developing professional writing skills.

Students should be voracious readers of the professional literature. Graduate students often will have the opportunity to assist faculty in their reviews of manuscripts submitted for publication as part of the role many faculty play on the editorial boards of professional journals. These latter two examples provide excellent resources for judging how and how not to write a manuscript for publication.

Somewhat less rigorous is the writing required for submission of papers to professional conferences, either as posters or as part of a symposium. Generally, such works will come out of supervised research experiences directed by faculty or graduate students. Generally, a 200- to 500-word abstract of the proposed presentation is developed and submitted to the program committee of the sponsoring organization. On acceptance, the paper is more fully developed and presented at the conference. Symposium papers are presented aloud as part of a panel on the same topic. Poster presentations provide details of the research in written form and allow for ease of conversation between the presenter and interested poster attendees.

The process of submitting works for publication and presentation can begin early in one's career by submitting to undergraduate journals, such as *Modern Psychological Studies* (published at the University of Tennessee at Chattanooga); to the conferences of state psychological associations and the regional associations of national organizations; and to undergraduate conferences, such as those conducted by many Psi Chi chapters (the national honorary for psychology students). While such activities help develop professional writing skills, they also add to the student's vita and improve the quality of applications to graduate school, internships, or employment.

a consensus on such important issues as doctoral- and master's-level training and curricula, the relative importance of the scientist and practitioner aspects of training, and the emergence of Psy.D. and professional schools of psychology. Even the internship, what it should be and how long, remains in flux, despite its being the earliest component of clinical training to have emerged.

There are many paths to a clinical degree in psychology. We hope that this chapter has shown readers the path in which they are most interested, and how they might succeed in reaching their destination.

STUDY QUESTIONS

1. Discuss some of the early historical influences on clinical psychology training.
2. What historical event was most influential in the development of formal standards for training psychologists engaged in clinical activities?
3. Identify the contents of the Shakow Report.
4. Differentiate between the Boulder Conference and the Vail Conference in terms of their recommended models of training.
5. What do the Psy.D. and Ph.D. have in common? How do Psy.D. and Ph.D. programs differ in courseloads, research requirements, clinical emphasis, and professional opportunities?
6. What is the primary training focus of professional schools? Discuss the arguments for and against free-standing schools of psychology.
7. What is the value of having an accreditation process for graduate psychology programs?
8. What are the primary functions of the internship experience?
9. Describe the undergraduate coursework most commonly required for graduate school admission.
10. What is the purpose of a competency examination? When is it given and to whom?
11. In addition to coursework, what other experiences may be valuable to a student training in clinical psychology?
12. Discuss the various research and clinical opportunities available to trainees at both the undergraduate and graduate levels.
13. Why do some students opt to complete postdoctoral training after obtaining their doctorate?
14. Discuss the major areas of focus in the *Ethical Principles of Psychologists*.

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PART II

Evaluation and Assessment

Assessment and interviewing have been the cornerstone in the armamentarium of clinical psychology throughout the history of the discipline. Although evaluation of clients and patients in preparation for treatment has varied over the years (ranging from projective assessment of unconscious dynamics to identifying precise behavioral targets), its importance has remained consistent. In the 1970s, 1980s, and 1990s, consonant with the notion that there are specific treatments for particular types of problems, assessment has assumed a greater empirical basis. The trend has been away from loosely interpreted projective responses to more objectified personality appraisals and careful behavioral analyses of environmental factors that appear to elicit and maintain psychopathology. In this part of the book, the chapters are all reflective of enhanced empiricism.

In Chapter 4, Robert L. Hale and Elizabeth A. Green provide a practical definition of intelligence and trace the historical roots of such testing to differentiate children who were having difficulty in school. The skills required for administering and interpreting tests are detailed, and the technical and theoretical issues of the most frequently administered tests are described.

In Chapter 5, William H. O'Brien and Stephen N. Haynes first review the conceptual foundations of the behavioral approach and then the procedures used to collect data, such as event recording, interval recording, real-time recording, and momentary-time recording. Settings in which behavioral assessment is carried out are described. Also, the strategies of self-monitoring, questionnaires, and permanent product analyses are examined. Underscored is the importance of functional relationships in the behavioral analysis.

Yossef S. Ben-Porath and James N. Butcher, in Chapter 6, introduce the reader to the importance of research in the practice of objective personality testing. The chapter begins with discussion of psychometric issues and then continues with a historical survey of objective testing and how such tests are constructed. Specific emphasis is accorded to the MMPI-2 and MMPI-A and use of computer technology.

In Chapter 7, Arthur N. Wiens and Angelique G. Tindall present important guidelines for conducting unstructured clinical interviews. Suggestions include beginning the interview with open-ended questions, keeping questions to one issue at a time, observing nonverbal behavior, using language appropriate to the client's level of comprehension, and ending the interaction. The authors point out that it is important to have a good understanding of the biological, psychological, and social factors that contribute to the client's problems.

CHAPTER 4

Intellectual Evaluation

ROBERT L. HALE and ELIZABETH A. GREEN

INTRODUCTION

If Adam and Eve were not the first evaluators of intelligence, who were? Did they compare their sons and believe one more intelligent than the other? Perhaps Adam thought Cain was the most intelligent, while Eve knew Abel was the brighter. If so, both may have been correct depending on their personal definitions of intelligence. What do we mean when we say a person is more or less intelligent? Today the concept of intelligence has both lay and professional meanings. We must define what intelligence is before we can discuss it.

DEFINITION OF INTELLIGENCE

When a layperson says that someone is intelligent, he or she frequently means something quite different from a psychologist making the same statement. Lay and professional definitions of intelligence can be distinguished by the degree to which they are influenced by the concept of **individual and social worth**.

Originally, the concept of individual and social worth was linked with professional definitions of intelligence. Studies like Goddard's *The Kallikak Family* and *The Criminal Imbecile*, Danielson and Davenport's *The Hill Folk*, and Dugdale's *The Jukes*, all published in the early 1900s, firmly ingrained in both professionals' and laypersons' minds the concept that mental ability and individual worth were related. Terman (1916) stated this viewpoint bluntly: "In other words, not all criminals are feeble-minded, but all feeble-minded are at

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

least potential criminals” (p. 11). While these linkages have remained close to the surface in lay definitions of intelligence, they are not part of today’s professional use of the term.

In 1921, the *Journal of Educational Psychology* published the now famous piece that asked 17 of the leading experts to define intelligence. A review of the definitions given by the experts who replied shows little evidence of the linkage of intelligence with individual worth. What was apparent, however, was a lack of specific agreement on any formal definition of intelligence. In 1975, Wechsler, reflecting back on the fact that nearly as many definitions of intelligence were offered as contributors who replied, remarked: “Since 1921, there have been many symposia on intelligence and innumerable articles and books on the subject. A count of the views expressed in them would show no greater percentage of agreement today than it did two generations ago” (p. 135). An additional 20 years and many more scholarly publications have not changed this situation.

Although there does not appear to be a movement toward a single consolidated theory of intelligence, and most theorists would agree that existing intelligence tests cannot and do not deal with most of the behaviors that might be subsumed under the word *intelligence*, it does not mean that the term is useless. As Wechsler (1975) stated:

What is not admissible is the assertion that because there are so many views “nobody really knows what one is talking about” when one uses the term intelligence or the equally false assertion that it is all a matter of semantics. . . . An average adult and a normal 12-year-old will understand the word intelligent if it is used in a meaningful context. [p. 139]

Even though there remains a great deal of controversy concerning the specific structure of intelligence, and all the specific behaviors that constitute intelligent behavior are not agreed on, three primary behaviors that constitute intelligence are generally agreed to. As Snyderman and Rothman reported in 1987, when 1,020 experts were asked to rate 13 behavioral descriptors that might characterize intelligence, there was a phenomenal degree of consensus on three of the descriptors. A full 96% of the respondents agreed that **abstract reasoning**, the **capacity to acquire knowledge**, and **problem-solving ability** were important components of intelligence. Beyond these three characteristics, however, there were increasing levels of disagreement among the experts. With respect to the currently available intelligence tests, there is little agreement about what each measures beyond these three terms, or on how the scores generated by the test should be used. However, most experts allow that the global score from our current intelligence tests measures these three components in some fashion.

PRACTICAL VERSUS THEORETICAL USE

Most intelligence tests are given to individuals to answer questions concerning that individual and not as part of a research project investigating the construct of intelligence. When talking about field-based problems where intelligence is actually being measured with a currently available test, one must emphatically make the distinction between the different theoretical definitions

of intelligence on the one hand and the tests and scores that are designed to measure intelligence on the other. When Boring (1923) reacted to the seemingly hopeless efforts of others to agree on the definitions of intelligence by stating that it “must be defined as the capacity to do well on an intelligence test,” he focused practical attention where it belongs—on the tests themselves.

Psychologists use **intelligence tests** and the scores they generate (IQs and subtest scores) to make very practical decisions. Although the tests may not measure all (perhaps not even any) of the constructs involved in various theoretical definitions of intelligence, in many situations, they allow clinicians who use them to make statements about individuals with more confidence in the truthfulness of those statements than they could if the intelligence test were not used.

To fully understand the appropriate use of intelligence tests, we must know something about the history of their development, the skills necessary for giving and interpreting them, what the better available tests are, and finally, their current uses and abuses. The remainder of this chapter discusses these issues.

HISTORY OF INTELLIGENCE TESTS

European Influences

The fundamental history of intelligence testing is basically confined to 20th-century America. However, like a child whose record begins at birth, but is influenced by events prior to its birth, so too was the development of intellectual assessment influenced by events prior to 1905, when the grandfather of modern intelligence tests, the Binet-Simon Scale, was developed. The more important of those early European events included the establishment of Galton’s anthropometric laboratory at the International Health Exhibition in 1884; the development of the statistical techniques of correlation by Karl Pearson and Charles Spearman; the concern with precise measurement of various types of perceptual, memory, reading, and conceptual differences in the laboratories in Germany; and the focus on higher mental functions in France. The influence of the researchers from England, Germany, and France on American psychologists, combined with the social–political environment in the United States during the early 20th century, provided the perfect environment for the growth and development of intellectual assessment. In measuring intelligence, the Europeans initially concentrated on the gross measurement of physical attributes. Later their research began to focus on processes that we would today agree are cognitive instead of physical. Finally, they provided the statistical sophistication to evaluate the worth of intellectual measures. The influence of the Europeans need not further concern us except that one should keep firmly in mind the fact that the 1905 Binet-Simon was given its impetus for construction by the Minister of Public Instruction in Paris one year earlier. The minister appointed a committee, of which Binet was a member, to find a way to separate mentally retarded from normal children in the schools (Sattler, 1982). Originally, mental test results were to be used to determine how well children should do in school.

Robert L. Hale and
Elizabeth A. Green

In the United States, the assessment of mental ability provided a way of organizing an American society, which by all accounts was very chaotic. The social-political turmoil in the beginning of the 20th century must be understood if we are to comprehend why the assessment of intelligence became so important in the United States. Many factors that were part of the American experience in the early 20th century directly contributed to the growth of the mental measurement industry. The most influential factors were (1) massive immigration with ethnic and racial diversity; (2) urbanization; (3) the growing influence of science; (4) the progressive educational movement; (5) World War I; (6) the supposed utility of the Army tests; (7) the putative empirical relation between race and IQ; (8) stricter school attendance laws; and (9) the belief in a competitive meritocratic society. As noted above, the early development of the mental test by Binet clearly stemmed from an expressed need to differentiate between those French children who could be successful in traditional educational programs and those who could not. Goddard, who first translated Binet's scales into English in 1910, used the test to distinguish among the "feeble-minded" children attending the Vineland Training School in New Jersey. With some revisions and a change in the scoring of the test by incorporating the concept of the intelligence quotient, Terman produced the Stanford revision in 1916. This revision was similarly used to differentiate "feeble-minded" from normal children in California. Thus, the first modern intelligence test began with a perceived need to differentiate between children and continued to have as its primary purpose the detection of mental differences in people.

As stated previously, the sociopolitical situation in America was quite chaotic. This situation demanded the detection of individual differences so that those differences could be used to order an educational system in a rapidly changing society. This educational system was seen not only as a method by which America could educate its citizens, but also as a method of teaching cultural values (good citizenship).

Immigration into America during the early 20th century was putting tremendous stress on the educational system. In the early 20th century, there were more immigrants than ever before, and those arriving came from cultures that required more time to adjust to American life. The impact of immigration early in the 20th century on the social fabric of America was enormous. In terms of sheer numbers, "between 1901 and 1910 alone, nearly nine million people migrated to this country—more than the combined populations of the states of New York, Maryland, and New Hampshire in 1900" (Kownslar & Frizzle, 1967, pp. 600–601).

Another migration should be noted. Blacks from the South, provoked by Jim Crow laws and the rise of the Ku Klux Klan and later reinforced by the availability of jobs during World War I, migrated in ever-increasing numbers to northern urban centers. They brought with them little formal education. Both blacks and society at large would later attempt to remediate this lack of education.

The beginning of the 20th century was also the end of the age of the robber barons and the beginning of a new social awakening in the United States. No longer was America going to tolerate the building of fortunes for a few on the

backs of immigrant labor. In 1901, Theodore Roosevelt succeeded William McKinley as president. Roosevelt and the country took on a new social responsibility concerning the immigrant. The immigrant was to be set free from the daily grind of work and poverty and educated into the American melting pot. Immigrants were no longer to be looked on as nationally identifiable pools of cheap labor.

Social reform was also evident in the passing of the Keating-Owen child labor act in 1916. Even though it was declared unconstitutional 2 years later by the Supreme Court, it heralded an age of concern for children. Other evidence of concern for youth and the educational process can be found in the fact that the last state to enact laws requiring child school attendance was Mississippi in 1918. This combination of child labor and compulsory attendance laws assured that most youngsters would be in school. The task of turning these children into competent Americans then fell to the public schools. It was not just a coincidence that Terman, who had served for many years as a public school administrator, completed the Stanford revision of the Binet test in 1916. Necessity, as usual, was the mother of "invention," or in this instance, revision. Intelligence tests were seen as a possible way to organize children within the schools. The stress put on the public schools through social reform might have in and of itself led to a rapid increase in the use of IQs within education. World War I, however, interrupted this reform movement. After the war, the perceived success of intelligence test results during the war, combined with the rejuvenated stress on education, accelerated the use of IQ as an organizing factor.

Influence of World War I

When the United States declared war on Germany on April 6, 1917, a major task faced America. The country quickly had to form an efficient military unit. Robert Yerkes, the president of the American Psychological Association, offered the services of psychologists to the military.

In a remarkably short time of about 1 month, Lewis Terman, Edward Thorndike, Henry Goddard, Robert Yerkes, and others designed tests of intelligence for the Army. Their purpose was to classify men according to their intellectual ability and to assist in selecting the most competent for leadership positions as well as to eliminate the incompetents. Over 1.7 million men were evaluated with the Army Alpha and Beta tests. It was the publicly assumed success of these intelligence tests in the face of a national emergency that contributed to the increased use of such assessment outside the military.

It was also at this point that misunderstandings and misinterpretations of exactly what these mental tests could and could not do were first pointed out. For example, Goddard accepted the Stanford-Binet 16-year mental age norm as representing the average adult attainment level. He also defined the term *moron* as meaning an adult who could obtain a mental age of up to 12 years. Using the Army Alpha and Beta test results that indicated that on the average, mental age was approximately 13, Goddard argued that the Army results established that half the persons in the United States were little better than morons. Walter Lippman correctly argued that Goddard's conclusion, stating that the average

mental age of adult Americans was only 13 years, was neither correct nor incorrect but simply nonsense: "Nonsense because it would be equivalent to the assertion that the average intelligence of adults is below the average intelligence of adults" (Pastore, 1978, p. 323).

Whether the Alpha and Beta tests were useful to the Army is debatable. However, the developments that led to these first group tests of mental ability were significant for testing in general. Arthur Sinton Otis, a graduate student of Terman's prior to the war, developed several of the objective item-scoring formats so necessary for group paper-and-pencil tests. Most notable was his suggestion that, instead of asking questions that required recalling answers, one might present a stimulus with several possible response alternatives. This innovation led directly to the multiple-choice item format. Terman introduced Otis's ideas to the committee developing the Army tests. Otis was asked to join this group. His methods of item construction proved to be both effective and economical. It was only a short time before the methods of group assessment found their way into schools, with publication of the *Otis Group Intelligence Scale* and the *National Intelligence Tests* by the World Book Company in 1918.

Before continuing, a review of what the measures of intellectual functioning had been able to demonstrate is in order. First, on a limited basis, the tests were successful in demonstrating that they could differentiate between children who could be successful in academics and those who could not. The Stanford-Binet had been able to differentiate between pupils judged by their teachers to be adequately achieving and students who were inadequately achieving. Second, the public believed that the tests had demonstrated on a very large scale that they could differentiate leadership ability in Army inductees. Third, and perhaps most important, the report from the Army psychologists brought to the public's attention the alleged differences in mental ability among blacks and whites as well as inductees from eastern Europe. While these racial differences were based on inadequate statistical procedures and analyses, the incorrect racial interpretations given to the data ultimately captured the public's attention. The incorrect interpretations fit nicely into the social prejudices then prevalent. Today, many people still believe that intelligence tests are biased against various racial groups, and they hold the tests in contempt.

Post-World War I Influences

After the war ended, America was able to turn her attention inward to her own pressing needs. The war interrupted the earlier social reform movement directed toward the European immigrant and the black migrant. After the war, things changed. The new immigrants were viewed unfavorably. America had just fought a war supposedly to preserve democracy. In 1917, the Bolsheviks had taken over political control of Russia, and the immigrants from Europe were considered a threat to American democracy.

Blacks were also seen as threatening. They had moved north during the war and remained there. The economy was slowing, and competition for a declining number of jobs became fierce. In 1919, 23 cities had race riots, and there were

many local strikes accompanied by a national steel strike. The social mood in America was a strange mixture of racism, isolationism, and the national push toward self-improvement. As examples of the latter two characteristics of this mood, it can be noted that in 1920 (1) the Senate rejected the Treaty of Versailles, (2) the government refused to allow the United States to join the League of Nations, and (3) prohibition was passed.

With these details about post-World War I America, some light can be shed on the frequent criticism that intelligence tests based on middle-class values prevented the entry of foreign-born minorities into the United States. In 1924, Congress established quotas on the number of immigrants who could enter the United States. The English, Irish, and Germans received the largest quotas. Even though congressional debates concerning the Immigration Act constantly referred to the Army data to support eastern and southern European exclusion, it does not necessarily follow that the Immigration Act was a direct result of the low mental abilities reported for these immigrants. Many social variables were stacked against the southern and eastern immigrants, most notable being the fact that they were perceived as advocates of socialism. Whatever the cause, the flow of immigrants from eastern and southern Europe slowed to a dribble, and there was a time when more people were being deported from Ellis Island than were coming in.

If immigration exclusion was one response to the alien presence, Americanization, remedial socialization, and vocational training, all of which were school centered, were others. Besides exclusion and deportation, the progressive educational movement (founded in 1919 and supported by John Dewey after he joined in 1927) promised educational reform, which would provide some answers to the immigration and migration problems. Intelligence tests were reviewed as one tool that could help the schools remediate America's social and educational problems.

School Organization

Mental ages, or IQs, have never been the primary organizational metric used in schools. Intelligence test results were simply, albeit naively and often inappropriately, used to secondarily organize an educational system that had previously adopted chronological age as the primary method of organization. The complete separation of children into separate "graded" classrooms, each with its own teacher, was reportedly accomplished first by John Philbrick, who organized the Quincy, Massachusetts, grammar school in 1847. The Ohio State Commissioner of Education reported that between 1854 and 1855, nearly 150 towns had converted to age-graded schools. **Intelligence quotients**, which were first available with the 1916 Stanford-Binet, allowed the tracking of pupils within the broader age categories. The claim is often made that these special educational and vocational training programs effectively prevented the upward social mobility of the immigrant groups. The data, however, do not support this conclusion. Jews, who initially scored low as a group on intelligence tests and who have faced centuries of anti-Semitism, presently have the highest family

incomes in the United States. Their IQs had risen past the national average by 1920. Polish IQs, which averaged 85 in the earlier studies—the same as that of blacks today—had risen to 109 by the 1970s. This 24-point rise is greater than the current black–white difference (15 points). The current Polish family income is well above that of the typical Anglo-Saxon family. Even the traditional black–white income differences have disappeared in college-educated persons with similar family characteristics.

Early Attitudes

One of the unfortunate linkages in the history of intellectual assessment is the well-documented prejudicial attitudes of Terman and Goddard. It is unnecessary to reiterate the racial slurs in their writings. Their Social Darwinistic attitudes did a great disservice to the IQ. Through the influence of these men, the original intent of Binet (to identify and assist children who were in need of special educational services) was frequently changed to one of rank-ordering children. Children who scored exceedingly low were often denied any opportunity for an educational experience. This denial of service legally ended with the *P.A.R.C. v. Commonwealth of Pennsylvania* decision in 1972. This decision established the right of all children to an appropriate education. Because mentally retarded children could not be denied educational programs, the decision put an end to one of the major misuses of the IQ.

Although IQs have been, are, and will continue to be misused, they can also serve well. Intelligence test results can aid practitioners in the decision-making processes concerning certain socially significant criteria. Binet's proposed use of mental tests was noble. When used for like purposes today, the IQ is still a useful device for aiding both individuals and institutions in cooperative endeavors to make life better for themselves and others. Appropriate uses for IQs are discussed later.

SKILLS NECESSARY FOR TEST ADMINISTRATION AND INTERPRETATION

To ensure the fair and accurate evaluation of an individual's intellectual functioning, the examiner must be experienced in general test administration as well as familiar with the unique characteristics of the test(s) being used in the evaluation process. Therefore, it is of the utmost importance that the examiner read, learn, and practice the administration, scoring, and interpretation of intelligence tests. A number of key issues in testing are presented in the following sections.

Instrument Selection

The examiner is responsible for determining what test is appropriate for a particular client and for what purpose the test results will be used. Attention

must be given to the **reliability** (a measure of the consistency of the scores) and the **validity** (the degree to which an instrument measures what it purports to measure). Without adequate reliability, it is impossible to determine if the scores obtained are an accurate measure of an individual's performance or if they are the result of random error. Unless an instrument is valid for the particular purpose for which it is being used, one can have little confidence in the decisions made. The chosen test should also have been given to persons like the client you are going to evaluate (i.e., gifted, learning disabled, or minority).

Standard Procedures and Norm-Referenced Testing

One of the advantages of using standardized intelligence tests to assess an individual's intellectual functioning emanates from its structured format and norm referencing. Following standard procedures for each individual taking the test assures the examiner that each examinee has been exposed to the same questions in the same manner. This enables the examiner to assess an individual's performance under fixed conditions and compare that particular individual's performance to others. When using a standardized test, it is necessary to adhere carefully to the administration and scoring directions presented in the test manuals. Any changes in the phrasing or presentation of test items, changes in the allowed time limits, or other deviations from approved procedure will reduce the validity of the test results and make test interpretation impossible.

Norms provide an indication of typical or average performance of a specific group. An individual's score is then evaluated in terms of his or her standing relative to the specific group to which he or she is being compared. This process is called **norm referencing**. It is important that the examiner become familiar with the norm groups that were used to standardize the test. The examiner must consider the appropriateness of the norming sample for the individual who is being evaluated. One factor to consider is the representativeness of the norm sample. Characteristics of interest include age, gender, grade level, geographic region, ethnicity, and socioeconomic status. Other factors are the number of subjects in the norm group and the year the norms were established.

Physical Conditions in Testing

To maximize the results of a particular test administration, it is important to be aware of certain aspects of the physical setting that may interfere with an individual's performance. Attempts should be made to minimize any potential distractions or interference. The room in which testing occurs should be quiet, adequately lit, and well ventilated. It should be located away from noise, visual distractions, or anything that may interfere with the examinee's concentration. The physical arrangement of the room is also important. Seats should be arranged so that the examiner and examinee are spaced a comfortable distance apart. The surface of the testing table should be smooth, and the table's height should be appropriate for the individual to work comfortably and easily manipulate test materials. The examiner should be seated so that he or she can fully

observe the individual's test-taking behavior and so that the individual cannot see the record form or manual. Similarly, the test kit should remain out of the examinee's view.

Establishing Rapport

One of the objectives in intelligence testing is to obtain a measure of an individual's performance that is representative of his or her abilities. To ensure this type of accuracy, it is necessary to establish and maintain rapport with the individual being tested. There are a number of techniques that are helpful in establishing a comfortable working relationship with the examinee. First, it is essential to ease into the administration task. The examiner should take time prior to testing to talk informally with the examinee or to work on an activity with a younger child. Examiners should always provide both physical and social environments that help clients to feel relaxed and comfortable. Second, the tests should be briefly introduced in language the examinee can understand. This will help the individual conceptualize the testing situation as well as his or her role in it. Third, once testing has begun, the examiner should maintain a steady pace while attending to any changes in the examinee's behavior. The individual should be observed for changes in mood, activity, cooperation, or motivation. If the examiner observes distinct changes in behavior, it may be necessary to take a break or provide more encouragement and direction. Fourth, it is important to praise and encourage the examinee throughout the testing situation.

Expressions of interest and encouragement in the individual will help maintain rapport and attention to the task. At the same time, it is essential that the examiner remain objective during the administration and not give the examinee an indication of the correctness of his or her responses. One way to avoid this is to learn to use the standardized wording in a natural and informal manner and to watch your verbal intonations so that the examinee doesn't hear clues to the expected answers.

Scoring

In scoring intelligence tests, it is important to follow the standard instructions provided by the test manuals. The examiner should check all answers with the manual to verify any doubtful responses, and recheck his or her work periodically during the scoring process. A typical scoring procedure entails calculating the **raw scores** for individual subtests and then converting these scores to **scaled scores**. Scaled scores are usually based on the individual's age or grade in school. Next, subtest scaled scores are usually summed to represent an **area or factor score**. These "area" scores may then be rescaled. Typical area scores found in many intelligence tests measure verbal and quantitative components. These area scaled scores are then totaled to indicate a **full scale or composite score**, which usually represents the examinee's general intellectual ability. Scaled scores are used to determine IQ equivalents, percentile ranks, or confidence intervals, all of which are used for test interpretation.

Most individual intelligence tests are similar in that they produce a general ability measure. This general ability measure is presumed to measure the person's current intellectual functioning. Unique theories about the construct of intelligence, however, have led to the construction of a number of tests that are surprisingly different in format and content. The following section provides information on four frequently used intelligence tests: the **Stanford-Binet—Fourth Edition** (SB:FE; Thorndike, Hagen, & Sattler, 1986), the **Kaufman Assessment Battery for Children** (K-ABC; Kaufman & Kaufman, 1983), the **Wechsler Intelligence Scale for Children—Third Edition** (WISC-III; Wechsler, 1991), and the **Wechsler Adult Intelligence Scale—Revised** (WAIS-R; Wechsler, 1981). We have chosen to highlight these tests because they represent frequently used instruments, but there are other instruments developed for persons of different ages and with special needs (e.g., blind, nonverbal).

Stanford-Binet—Fourth Edition

TECHNICAL CONSIDERATIONS OF THE SB:FE. The SB:FE (Thorndike et al., 1986) is an intellectual assessment instrument intended for children and adults ranging in age from 2 to 23 who have normal sensory functioning. The SB:FE is composed of 15 subtests that are divided into four areas: Verbal Reasoning (four subtests), Quantitative Reasoning (three subtests), Abstract/Visual Reasoning (four subtests), and Short-Term Memory (four subtests). Eight to 13 subtests are typically administered, depending on the age and entry level of the examinee. The SB:FE employs an **adaptive testing** approach by using the first subtest, Vocabulary, as a routing measure to determine (in combination with the examinee's chronological age) the appropriate entry level for succeeding subtests. As such, the administration time described by the authors varies between 1 and 1.5 hours.

The SB:FE has a number of desirable features. Most important, many researchers consider it a well-standardized test with excellent reliability and adequate validity when its scores are compared to those from other tests of intelligence. The adaptive testing component is thought to decrease frustration, as it exposes examinees to test items that are appropriate for their abilities. The SB:FE also provides an excellent range of items for the identification of giftedness at any age level. This test may become the instrument of choice for the assessment of giftedness.

THEORETICAL UNDERPINNINGS OF THE SB:FE. The SB:FE is based on a three-level cognitive abilities hierarchical model. The first level represents the composite or **general ability estimate** (often referred to as "g"), which is defined by the authors as consisting of the "cognitive assembly and control processes that an individual uses to organize adaptive strategies for solving novel problems" (Thorndike et al., 1986, p. 3).

The second level is divided into three factors of intellectual functioning (crystallized, fluid, and short-term memory) based predominantly on the theories of Cattell and Horn (Horn & Cattell, 1966) and the information processing

theory of cognition. The **crystallized-ability factor** reportedly measures the cognitive skills necessary for acquiring and applying verbal and quantitative concepts to problem solving. This type of information processing is typically influenced by schooling as well as general life experiences and has a high correlation with school achievement. The **fluid-analytic factor** measures cognitive skills involving figures and other nonverbal stimuli that are necessary for solving new problems. This type of skill requires the development of new cognitive strategies or the manipulation of existing strategies to solve novel problems. Finally, the **short-term memory component** measures complex aspects of memory in cognitive performance. As represented by this factor, short-term memory holds new information temporarily until it can be retained in long-term memory. It also holds information retrieved from long-term memory long enough to solve a problem or accomplish a task.

The third and final level in the hierarchy is composed of four areas directly assessed by the SB:FE: Verbal Reasoning, Quantitative Reasoning, Abstract/Visual Reasoning, and Short-Term Memory. The authors created the SB:FE to measure what they conceived to be four different aspects of intellectual functioning. Unfortunately, there has been limited support for usefulness of these four areas. When Reynolds, Kamphaus, and Rosenthal (1987) used factor analysis to analyze the original standardization data, they found most of the variance in the test accounted for by Verbal Reasoning.

Kaufman Assessment Battery for Children

TECHNICAL CONSIDERATIONS OF THE K-ABC. The K-ABC (Kaufman & Kaufman, 1983) is an instrument designed to measure the current intellectual functioning of children ages 2.5 to 12.5. The K-ABC is composed of 16 subtests summarized into three components: Sequential Processing (three subtests), Simultaneous Processing (seven subtests) and Achievement (six subtests). A Mental Processing Composite score is also obtained by collapsing the results from the Sequential and Simultaneous scales. The authors report administration time ranges from approximately 45 minutes for preschoolers to 75 minutes for school-age children.

The K-ABC has a number of positive features. It was developed using a nonverbal framework. The nonverbal framework was used to produce a fair assessment of minority group members, bilingual children, children with speech and language difficulties, and learning disabled children. In maintaining fair assessment practices, the K-ABC reportedly avoids measuring acquired knowledge (i.e., arithmetic or general information) in favor of more problem-solving tasks (Kaufman & Kaufman, 1983). The K-ABC receives high marks for its technical adequacy. Reliability estimates are adequate for the Mental Processing Component and Achievement scales. The authors also included "teaching items" to enable children unfamiliar with a task to learn it prior to measurement. Finally, the K-ABC provides sets of tasks or items that vary according to the child's different developmental levels.

THEORETICAL UNDERPINNINGS OF THE K-ABC. The K-ABC is a unique measure of intellectual ability in that it was created to assess the process rather than

the content of a task. The authors of the K-ABC used a strong theoretical foundation in the development of this instrument. As noted above, the K-ABC was constructed to assess two types of mental processing—Sequential and Simultaneous. The **Sequential processing component** is made up of tasks that must be solved by arranging the stimuli into a sequential or serial order. These types of tasks are often presented in the school environment when a youngster needs to memorize number facts, or spelling lists, or the associations between letters and the sounds they make. The **Simultaneous processing component** of the K-ABC typifies problems that are spatial, analogic, or organizational in nature. Problems requiring simultaneous processing are solved by processing many stimuli at once versus one at a time. Simultaneous processing theoretically enables children to learn the shapes of letters and the spatial configurations of words. It therefore greatly influences skills such as reading comprehension.

Although research supports the existence of these two mental processes, the authors of the K-ABC acknowledge that “probably the most intelligent behavior results as integration of sequential and simultaneous processing” (Kaufman & Kaufman, 1983, p. 31). As such, they provide a measure of “total” or general intelligence as represented by the Mental Processing Composite. Additionally, in providing an Achievement Composite score, the authors make an effort to differentiate factual knowledge and acquired skills from their measure of intellectual functioning. They think achievement should not be equated with intellectual functioning because it is extremely dependent on environmental variables.

Wechsler Intelligence Scale for Children—Third Edition

TECHNICAL CONSIDERATIONS OF THE WISC-III. The WISC-III (Wechsler, 1991) is a recently revised version of the Wechsler Intelligence Scale for Children—Revised published in 1974 (Wechsler, 1974). The WISC-III is an individually administered instrument used to assess the intellectual ability of children ages 6 through 16 years 11 months. Children’s performance on a series of 13 available subtests is organized into two component scores, Verbal and Performance, which may be combined to form a Full Scale (Composite) score. Administration time for the standard WISC-III battery of 10 subtests is reportedly between 50 and 70 minutes. Administration of three supplementary subtests requires an additional 10 to 15 minutes.

THEORETICAL UNDERPINNINGS OF THE WISC-III. The theoretical foundation of the WISC-III is based on the belief that intelligence is not a particular ability but an “aggregate and global entity” (Wechsler, 1991, p. 1), which represents people’s capacity to act purposefully, think rationally, and deal effectively with their environment (Wechsler, 1944). The subtests that represent **Verbal, Performance, and Full Scale IQ** were selected by the authors to measure differential mental abilities that are valued by our society and that are thought to relate to behavior that is generally thought of as intelligent. Reliability and validity, as reported by the authors, are acceptable. Because the test is so new, there is less information concerning its validity.

Research investigations have verified the existence of the two main factors

(Verbal and Performance). However, some studies have found evidence for the existence of two additional factors. These factors have been named **Freedom from Distractibility** and **Processing Speed**. At this point, research remains inconclusive regarding these two supplementary factors; therefore, it is recommended that practitioners refrain from interpreting them until their existence is more firmly established. The authors also report satisfactory levels of concurrent validity for the general ability, or Full Scale IQ, when compared with scores from other tests of intelligence.

Wechsler Adult Intelligence Scale—Revised

TECHNICAL CONSIDERATIONS OF THE WAIS-R. The WAIS-R (Wechsler, 1981) is a direct descendent of the Wechsler-Bellevue Intelligence Scale—Form I (Wechsler, 1939). The WAIS-R can be used to evaluate persons aged 16 to 74. The WAIS-R is an individually administered test composed of 11 subtests that are grouped to provide IQs in Verbal and Performance areas as well as a composite score (Full Scale IQ). Administration time for the WAIS-R is similar to that for the WISC-III. The WAIS-R is unique in that two sets of standard scores are provided for the subtests. One set of scores is based on the standardization group (1,880 Americans selected to represent the United States according to the 1970 census figures), and the other provides standard scores with respect to the nine different age groups represented in the standardization sample. As reported in Sattler (1992), “The age-corrected scaled scores should not be used to calculate IQs. Age-corrected subtest scaled scores should be used only to make subtest interpretations and comparisons” (p. 220).

THEORETICAL UNDERPINNINGS OF THE WAIS-R. The Wechsler-Bellevue’s revisions and spinoffs produced the Wechsler Adult Intelligence Scale (WAIS; Wechsler, 1955), the Wechsler Intelligence Scale for Children (WISC; Wechsler, 1949), the Wechsler Preschool and Primary Scale of Intelligence (WPPSI; Wechsler, 1967), and the WISC-R and WISC-III discussed above. All of these tests share the same core concepts concerning the measurement of intelligence.

Research with the WAIS-R indicates that the test may have two or three distinct factors. These factors have been named **Verbal Comprehension**, **Perceptual Organization**, and **Freedom from Distractibility**. The WAIS-R has been found to correlate satisfactorily with other measures of intelligence, achievement, and years of education. One potential problem with the WAIS-R should be noted. Clinicians who use this test to measure an individual’s cognitive change should be warned that while the test–retest correlations between the three IQs were all quite high, fully 80% of the standardization subjects showed large changes in Full Scale IQs on retest.

USES AND ABUSES OF INTELLIGENCE TESTS

Several uses of IQs that are currently in vogue in education will be taken up and discussed in turn. Some of these uses will be supported by the research

evidence. Others must be interpreted as current abuses. Education and school practice was chosen as the field of IQ application because many of the recent controversies that surround usage of intelligence tests have been generated in that field. Educational environs are where the great bulk of intelligence tests are given. Currently, teachers refer 3 to 5% of public school children for psychological evaluations. Of those children, 92% are tested and 73% are placed in special education programs. The uses and abuses described in this chapter are applicable whether the reader is interested in children and education or in adults.

To Measure Intelligence

If one asks psychologists working in public schools why they give intelligence tests to children, a frequent answer (at least in the author's experience) is that they administer intelligence tests to measure the child's intelligence. This, of course, begs for a definition of intelligence. As noted earlier, while there is no single accepted definition of intelligence, there is general agreement that intelligence tests measure abstract reasoning, the capacity to acquire knowledge, and problem-solving ability. There is a vast body of knowledge and empirical evidence that supports the use of global intelligence scores to measure these areas. As McDermott, Fantuzzo, and Glutting (1990) state:

We cannot ignore a century of evidence that places global ability among the most dominant and enduring factors, both causal and corollary, associated with scholastic and occupational success; environmental adaptation; physical propensity and morbidity; and scientific, cultural and political acumen. . . . Moreover, research has demonstrated that global IQ measures provide construct continuity across gender and cultural majority and minority groups and provide equitable accuracy and no substantive bias in forecasting relevant performance criteria for females and larger minority groups. (p. 291)

The global IQ (1) provides a measure that is stable for an individual, (2) is associated with scholastic and occupational success and so on, (3) measures the same thing across gender and cultures, and (4) allows us to predict relevant criteria (i.e., achievement scores) for males and females and for minority and majority members without being biased in our predictions.

To Predict Academic Achievement

The primary usage of intelligence tests in the public schools is to help determine whether children will be successful in school. Thus, the major use today is the same as that for which Binet developed the test. The major question that child and school psychologists are still confronted with is, "How well can we expect this child to do in school?" If IQs are employed in this fashion, a presumption is made that they are related to and can be used to predict academic achievement.

More formally, the appropriate application of global IQs under this usage might be stated: An IQ allows one to predict a youngster's academic achievement in a typical school environment if the child is left to his or her own devices

and all things remain equal. The term *typical school environment* would exclude those academic environs where emphasis was not placed on traditional educational curricular materials. The phrase *left to his or her own devices* would exclude children from the prediction model if they were given support services (i.e., special education). The phrase *all things remain equal* would exclude children where traumatic events, like the death of a parent, might be expected to affect test scores. The prediction definition of intelligence assumes we are predicting in a culturally loaded environment. It also assumes that the IQ is changeable. Intelligence, in any practically meaningful sense of the word, can be increased by education and exposure to the mainstream culture; it is not a fixed, inborn quantity. Sowell's (1981) earlier reported figures of group IQ changes and Yerkes's (1921) findings that the Army test scores were correlated with years of residence in America corroborate allegations that scores improve with exposure to the American middle-class culture. The final assumption, that these cultural standards and methods of performance are the most appropriate standards on which to measure and train individuals, remains open to debate. Use of intelligence tests in this manner assumes that they can demonstrate adequate predictive validity. Again, the research evidence is overwhelmingly supportive that global IQs can be used to predict academic achievement. Using global IQs for this purpose provides quite powerful predictions. Interested readers are referred to Hale (1983) for details on the statistical techniques used in predicting academic achievement scores for children once their global IQ is known.

To Make a Special Education Placement

Many psychologists use intelligence quotients to help make special education placement decisions. Some placement decisions may be aided by knowing the general intelligence of a child (e.g., **giftedness** is often defined by having an IQ above a certain score), but placement for a suspected handicapped child can never legally be made based on a single test or score. Labeling a child as mentally retarded just because his or her IQ is below some critical value is totally unjustifiable. Definitions of *mental retardation* require that children have subaverage intelligence and adaptive behavior. Obviously, the intelligence test will aid in evaluating whether the youngster has subaverage intelligence, but it was not designed to measure adaptive behavior.

Labeling children as **learning disabled** based solely on intelligence tests is also totally indefensible. To be learning disabled, children must be underachieving in some area. At a minimum, this means that achievement measures must be considered. Again, the intelligence test results may be used to support the fact that a child has average intelligence as required by most definitions of learning disabilities. They are also invaluable in predicting the achievement level for a student. Then, if the psychologist compares the actual achievement of the student with the student's predicted achievement, a determination as to whether this student is underachieving can be made.

LEARNING DISABILITIES. Public Law 94-142 (Federal Register, December 29, 1977, p. 65083, 121a.5) indicates that the term *specific learning disability*

should be applied only to children who show a severe discrepancy between their intellectual ability and their achievement levels. There is little disagreement with that idea. However, how one measures whether there is a “severe discrepancy” has generated much debate and many formulas. As noted above, Hale (1983) details how clinicians might use a regression definition for determining this severe discrepancy. Reynolds (1984) suggests that regression procedures are the only psychometrically defensible methods for determining a severe discrepancy. Regression formulas take into consideration what statisticians call “regression to the mean.” Regression to the mean must be taken into account when one score is used to predict another score and the two are not perfectly related. Such is the case with intelligence and achievement. Knowing someone’s IQ does not allow us to predict perfectly how well that person will achieve; it only helps. Thus, someone with a very high IQ would be expected to attain high achievement scores, but not as high as his or her IQ. Someone with a very low IQ would be expected to have low achievement scores but not so low as his or her IQ. Thus, these expected scores move (regress) back toward the mean (average).

Another popular way to determine a severe discrepancy is simply to compare the IQ with a standard score from an achievement test. A cutoff score of one standard deviation is usually set for a meaningful difference between these two scores. Thus, if a person’s IQ was two standard deviations above the mean, and his or her achievement score was one standard deviation above the mean, that person would have a severe discrepancy between intelligence and achievement and might be classified as learning disabled.

If the achievement and intelligence scores had means equal to 100 and standard deviations equal to 15, a person obtaining an IQ of 145 and an achievement score of 130 would have a severe discrepancy using the standard score comparison approach. If the regression approach was used instead, and a correlation of 0.6 between intelligence and achievement was calculated, the formulas presented in Hale (1983) would calculate that the expected achievement score would be 127 points. Thus, using the regression formula, the person would not manifest a severe discrepancy between intelligence and achievement and therefore could not be labeled as learning disabled. Indeed, the subject’s actual achievement score 130 is above that expected (127) given his or her intelligence score. Because both the intelligence and achievement scores are well above the 95th percentile, it would have been inappropriate to label this individual as learning disabled, indicating that he or she needs help to remediate a disability.

The common practice of looking at subtest scores on intellectual measures and finding profile characteristic of learning disabled children is also quite unfortunate. This practice of subtest analysis is so pervasive and pernicious that it is discussed separately.

To Conduct Subtest Analyses

Subtest analysis of intelligence tests has been historically confined to the Wechsler series of tests because the physical structure of the Wechslers simply lent themselves to subtest analysis. However, because the K-ABC was designed

for this type of analysis, and the Stanford-Binet—Fourth Edition's design now lends itself to this process, psychologists are often analyzing the subtest patterns of all these tests.

TWO CASE EXAMPLES. Line graphs (profiles) constructed using the scoring forms of intelligence tests like those shown in Figure 4-1 are often produced and interpreted by psychologists. Large differences between subtest scores and/or the overall scatter illustrated by the profiles are interpreted as problematic. Figure 4-1 shows two profiles produced using the subtest scores from undergraduate students. The profile drawn using a solid line shows the WAIS-R subtest scores obtained by a student with no academic difficulties who maintained an "A" average at a major eastern university while obtaining her bachelor's degree. The profile drawn using a dashed line is from a male who was experiencing great difficulty at the same university, and who was referred to the psychological clinic for a learning disability evaluation. Scatter between subtest scores does not always indicate a problem. The student without academic difficulties shows a great deal of scatter in her profile, while the academically challenged college student's scores produce a relatively flat profile.

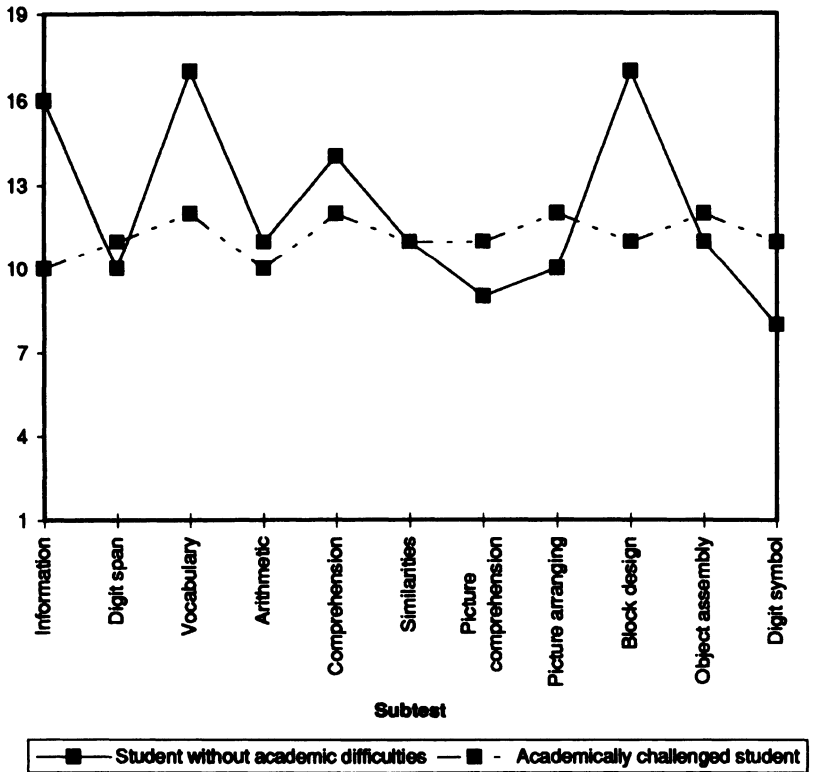


Figure 4-1. WAIS-R profiles.

A simple question reveals that even the form of these profiles is inappropriate. What is it that is being measured under the line drawn between subtest scores? Obviously nothing—there are no scores (nothing is measured between Information and Digit Span) between any of the subtest values. If profiles are to be manufactured, a simple bar chart like that shown in Figure 4-2 would be better. However, as discussed below, profile analysis is not recommended even though clinicians are encouraged to draw just such profiles on the front cover of the WAIS-R protocol.

EFFICACY OF SUBTEST ANALYSIS. The literature on subtest analysis has always been quite controversial. Subtest analysis of the various Wechsler tests has been cyclical. Following the release of new or revised tests, another series of subtest investigations would be published. With both the WISC and the WAIS, the conclusion was eventually reached that subtest analysis was a relatively useless enterprise. These conclusions, however, never generalized from one test and its set of researchers to the next test, even though the psychometric properties of the tests were similar. Even though Hirshoren and Kavale (1976) have shown that the relatively low reliability of subtests precludes accurate profile analyses, the importance of profile analysis is still being debated. Many texts presently being used by psychology training programs for teaching intelligence test interpretation (Kaufman, 1979, 1990; Kaufman & Kaufman, 1983; Sattler, 1988, 1992) indicate that subtest analysis may be useful. Pages of these texts are

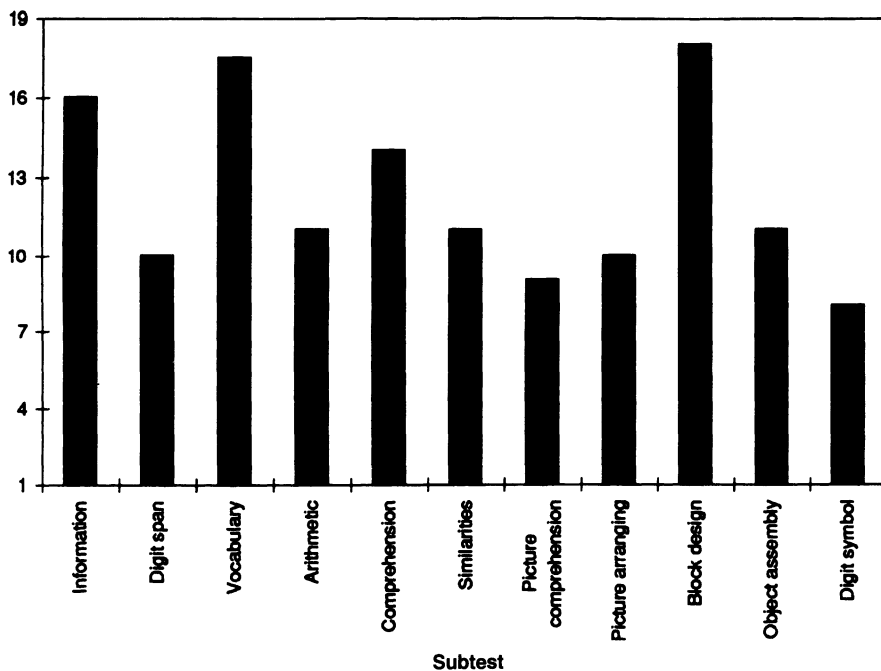


Figure 4-2. Bar chart WAIS-R profile.

devoted to analyzing the strengths and weaknesses in a child's cognitive abilities that might be revealed by relatively high and low subtest scores. Microcomputer programs are available for conducting these analyses, lending an air of scientific credibility to the process.

While the casual observer sees the research results in this area as inconsistent, a more intensive investigation will lead the observer to the realization that the literature is quite consistent. From a practical point of view, the literature can be broken down into three types of studies. First are those investigations that start with previously defined groups of children (e.g., reading disabled, conduct disorder) and ask if significant subtest differences can be found between these groups, or between a group and the standardization sample data. This is termed a **classical validity** study. The second type of study starts with the subtest scores and asks if knowledge of these subtest results can aid in the prediction or differentiation of a socially significant criterion. This criterion might be a child's academic achievement or handicapping condition. These studies are termed **clinical utility** studies. (For an in-depth discussion of the distinctions between classical validity and clinical utility, see Wiggins [1973]). Third are studies that attack subtest analysis primarily on a technical basis, examining the reliability and validity of the scores generated through the subtest analysis process.

With regard to the first two types of studies, the inconsistency that is thought to exist in this body of research exists because, although investigators have found statistically significant subtest profiles to be characteristic of certain handicapped groups, there has been a failure to demonstrate that these profiles are distinctive enough to allow practitioners to differentiate between handicapped and normal children. In other words, significant subtest patterns have been found using the classical validity research strategy, but the clinical research does not support the use of these results. In those studies starting with intact groups, significant subtest differences have been found between children classified as handicapped and those classified as normal. In those investigations that started with subtest results and attempted to classify children into diagnostic categories, or those studies where reclassification could take place, high degrees of diagnostic error were encountered. Kavale and Forness (1984), in a meta-analysis of the available literature, concluded that Wechsler patterns were in fact parodies. In a recent study Kline, Snyder, Guilmette, and Castellanos (1992) found that profile shapes were not useful when derived from either the K-ABC or the SB:FE, and only marginally useful when using the WISC-R to predict academic achievement.

In the studies that mainly rely on investigating the technical adequacy of the scores generated through subtest analysis, the results have not been inconclusive. Subtest analysis procedures generate scores that are neither reliable nor valid for any known purpose. Readers who are interested in a detailed analysis of the technical difficulties inherent in subtest analysis are referred to McDermott et al. (1990).

The subtest analysis literature suggests that knowledge of a child's subtest profile does not appreciably help the clinician in predicting either academic achievement levels or behavioral difficulties. It lacks utility for making special

education placement decisions, and produces scores for people that lack both reliability and validity. On the basis of these findings, the further use of subtest analysis appears unconscionable.

SUMMARY

In this chapter, we have provided a practical definition of intelligence, or at least listed the three most agreed on characteristics of intelligent behavior. We have shown that the intelligence test was first developed to differentiate children who would have difficulty in school. The history of intelligence tests was shown to be guided by the fact that in America, schools needed to be organized to cope with a chaotic society. Intelligence tests were the best available tests to help in that endeavor. We have detailed the skills clinicians need in order to give and interpret intelligence tests. We have also discussed the technical and theoretical considerations with respect to three of the most frequently given intelligence tests. Finally, we have supported the use of the global measures of intelligence provided by these tests. We believe that these global measures can be used to measure intelligence, predict academic achievement in children, and aid in special education placement decisions. We have not supported the use of area scores or subtest analysis using these instruments. We therefore would not support any endeavor that required the interpretation of any of the individual subtests, or difference scores produced using these subtest scores.

STUDY QUESTIONS

1. List and define the three primary behaviors constituting intelligence.
2. Historical influences have shaped the development of clinical psychology as a distinct profession. Describe key historical factors in the development of intellectual assessment measures in Europe and the United States.
3. Describe some of the skills necessary for test administration and interpretation. Discuss the key issues to consider prior to using an intelligence test.
4. The Stanford-Binet—Fourth Edition is composed of four areas. What are they, and what skills do they assess?
5. Discuss what is meant by an adaptive testing approach. What purpose does it serve?
6. Discuss the theory underlying the SB:FE. Specifically, describe the three-level cognitive abilities hierarchical mode.
7. What is the K-ABC? With what population is it used? Discuss its content, organization, and positive features.
8. Discuss simultaneous and sequential processing. How do they differ?
9. The WISC-III is divided into Verbal and Performance scales. Differentiate between the two. Also, discuss the supplementary WISC-III factors Freedom from Distractibility and Processing Speed.
10. Intelligence test are used primarily in which setting? Why?
11. Why are tests of intelligence used today?
12. Often intelligence test results are broken down into subtest scores for further analyses and interpretation. Is there any value in conducting subtest analyses?

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CHAPTER 5

Behavioral Assessment

WILLIAM H. O'BRIEN and STEPHEN N. HAYNES

INTRODUCTION

Ms. Delaware¹ arrived at the clinic promptly for the initial behavioral assessment interview. During the interview, her mood was generally positive and appropriate. Occasional periods of tearfulness, anxious laughter, and joking were observed. However, when Ms. Delaware was asked detailed questions about her reason for seeking treatment, she reported that, because of an overwhelming fear of dying, she was unable to walk alone in "open places" or drive alone for more than 1 or 2 miles outside of the small city where she resided.

Ms. Delaware reported that her fears began several years earlier at a time when she was experiencing particularly high levels of marital distress. She recalled that she was walking outside on an extremely cold and windy evening when she suddenly felt as though she was unable to breathe. She immediately began to think that she was going to die from suffocation. As this thought presented itself, she found herself becoming increasingly frightened. The increased fear was accompanied by a number of other physiological symptoms, including a rapid heart rate, throat and chest tension, shortness of breath, and increased sweating. As Ms. Delaware struggled to regain her breathing, she began hyperventilating and, as a result, felt lightheaded. This lightheadedness provoked a second thought that she would faint before she could summon help. Despite her accelerating levels of fear and physiological activation, Ms. Delaware was eventually able to force herself onward to a nearby restaurant. Once inside, her breathing normalized and her fear subsided. This sequence of events

¹Identifying information and certain details about the presenting problem have been altered in order to protect the confidentiality of this client.

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

repeated itself several weeks later when Ms. Delaware was driving. After these incidents occurred, she found herself feeling extremely afraid of walking or driving alone, and she consequently began avoiding these activities.

Ms. Delaware stated that she had received psychiatric care and extensive psychodynamic psychotherapy for this problem over the past several years. While these interventions were described as helpful in the sense that they helped her identify the “root of the problem,” neither had brought about a significant reduction in her extreme fear or her inability to walk or drive alone. Ms. Delaware reported that she was seeking a cognitive-behavioral intervention because she had heard that it was an effective form of treatment for people with problems similar to hers.

During the next three sessions, a comprehensive behavioral assessment was undertaken. Ms. Delaware was extensively interviewed about the thoughts, feelings, physical symptoms, and actions that characterized her fear response as well as the situations that brought it about. She was also asked to keep a daily log of her fear levels and the situations, thoughts, and feelings that preceded or accompanied episodes of extreme fear. Finally, Ms. Delaware underwent a **psychophysiological evaluation** that assessed her physical responses to imagined walking and driving situations, mild exercise, rapid breathing, and self-guided relaxation.

A model of Ms. Delaware’s behavioral problems is presented in Figure 5-1. This model, based on the assessment information and knowledge of the behavioral research literature, hypothesized that Ms. Delaware was genetically susceptible to extreme fear responses or **panic attacks**. This genetic susceptibility combined with elevated stress may have provoked the initial panic attacks (Barlow, 1988). Through the process of classical conditioning, the situations and activities that were closely associated with the initial panic attacks (i.e., driving or walking alone) became conditional stimuli for fear responses. Thus, on reexposure to these stimuli, Ms. Delaware experienced heightened levels of fear (defined in her case as increased physiological activation and anxious self-statements). To reduce the likelihood of experiencing additional conditional fear responses, she learned to avoid or leave situations where she would be required to walk or drive alone. These **avoidance and escape behaviors** were **negatively reinforced**, and thus were made more likely to be repeated, by the relief she felt when they were performed.

Although they were not part of the original presenting problem, four additional areas of concern were identified during the assessment. First, Ms. Delaware reported that some social interactions had become problematic because the normal anxiety sensations that she experienced in those situations tended to bring up thoughts that she would have a panic attack. These thoughts, in turn, provoked avoidance and escape behaviors. Second, she was making a significant number of **negative self-statements**, which lowered her sense of self-worth and self-efficacy. Third, because she was unable to drive, she could not pursue various work-related activities needed for career advancement (e.g., driving to important meetings). Fourth, she felt that she had become excessively reliant on her husband for carrying out simple daily activities that required walking or driving.

The behavioral assessment information was used to design a **cognitive-behavioral intervention**. This intervention targeted for change the factors that

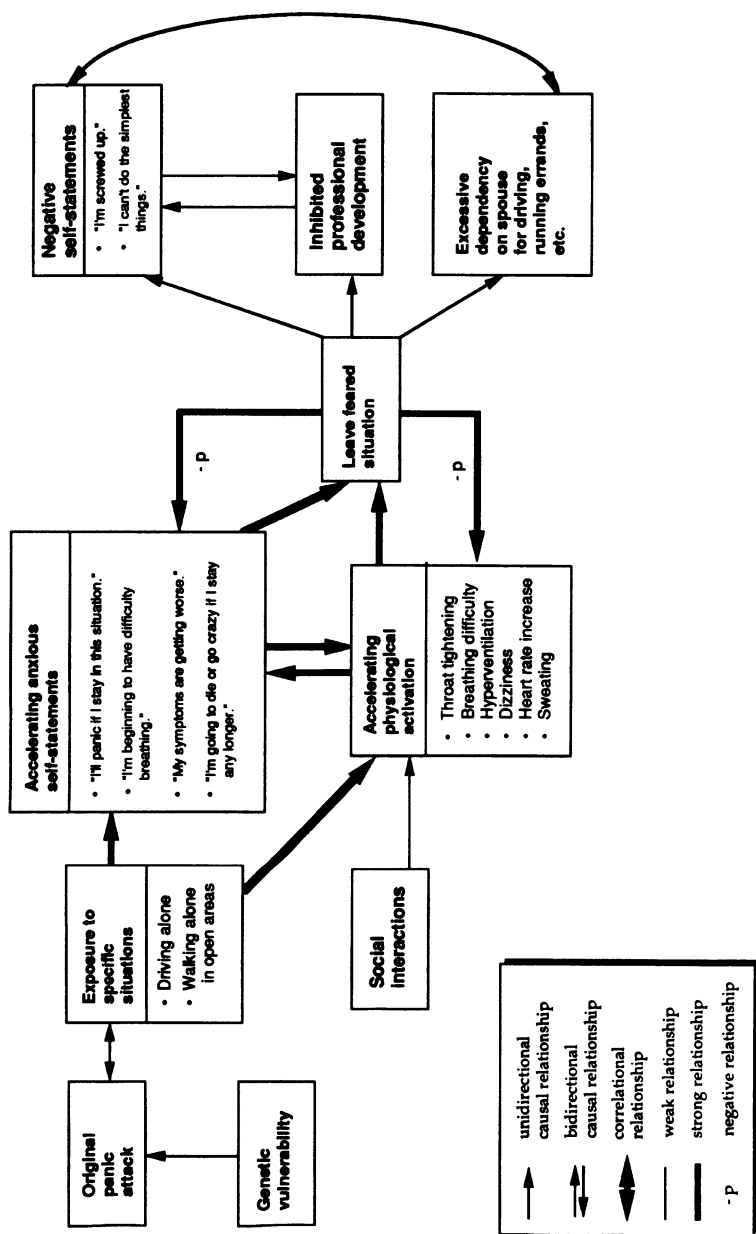


Figure 5-1. A hypothesized causal model of Ms. Delaware's behavior problems.

were believed to be exerting the greatest amount of control over Ms. Delaware's behavior problems (as illustrated by the wider vector lines in Figure 5-1). She was thus provided with (1) training in relaxation and breathing strategies that allowed her to gain improved control of her physiological activation patterns, (2) training in cognition modification skills designed to improve her ability to detect and correct problematic self-statements, and (3) graded exposure to fear-provoking stimuli, which included physiological activation, walking alone, and driving alone.

After 4 months of cognitive-behavioral therapy (15 sessions), Ms. Delaware was regularly driving outside of the city limits with moderate levels of anxiety. Her fear of walking alone had subsided as well. Two months later (four additional sessions), she was driving regularly with very minimal levels of anxiety. She had also completed a driving trip of over 220 miles, stated that she was beginning to feel "normal" again, and noted that her participation in social and professional activities had increased significantly. At a 6-month follow-up, she reported she was driving "without thinking about anxiety," had completed another trip of over 200 miles, and continued to participate in increased social and professional activities.

The identification and measurement of the many components of Ms. Delaware's problems and treatment design were made possible by the behavioral assessment. Behavioral assessment is both a **conceptual system** and a collection of **measurement methodologies**. As a conceptual system, behavioral assessment adheres to the fundamental tenets of learning theory and incorporates principles from other core areas of psychology such as psychobiology, cognitive psychology, and psychometrics. As a collection of measurement methods, behavioral assessment subsumes a broad array of instruments and procedures that are designed to obtain objective and quantifiable measures of human behavior and the factors that control it.

In this chapter, we will first provide a brief review of the conceptual foundations of behavioral assessment. Following this, the major goals of behavioral assessment and the most commonly used measurement methods are outlined. Finally, procedures used to evaluate and summarize behavioral assessment data are described. Wherever possible, clinical examples will be used to illustrate important points.

BEHAVIORAL ASSESSMENT: CONCEPTUAL FOUNDATIONS

Many of the unique characteristics of behavioral assessment can be made more obvious when they are contrasted against psychodynamic assessment approaches. Psychodynamic models assert that behavior problems are caused primarily by internal psychological processes that are often outside the realm of client awareness. Examples of such internal psychological processes include unconscious motivations (e.g., a person in an abusive relationship has an unconscious "need" for punishment), psychosexual fixations (e.g., failure to receive sufficient opportunities for oral gratification as an infant may result in problematic "compensation" behaviors such as smoking, alcohol abuse and/or overeating as an adult), and defense mechanisms (e.g., unconscious psychologi-

cal processes that “protect” the individual from experiencing excessive anxiety such as denial or repression) (Fenichel, 1945; Luborsky, 1984; Luborsky, Barber, & Crits-Christoph, 1990).

Because internal psychological processes are seen as the main cause of disordered behavior, **psychodynamic assessment** procedures emphasize the measurement of thoughts, beliefs, personality structure, and other “internal” phenomena. Environmental factors associated with behavior, however, are rarely assessed in any systematic manner.

Two major criticisms of the psychodynamic approach to assessment have been advanced in the behavioral literature. First, because unobservable and unconscious internal processes are often cited as the main cause of problematic behavior, circular and untestable explanations are frequently encountered. Consider, for example, Fenichel’s (1945) description of **reaction formation**, a defense mechanism in which repugnant unconscious impulses give rise to behaviors that are incompatible with the impulse: “A hysterical mother who unconsciously hates her child may develop an apparently extreme affection for the child” (p. 151). In this example, overly affectionate behavior is presumed to be caused by unconscious hatred, an unobservable and unmeasurable construct. Consequently, the only evidence available for verifying the presence of unconscious hatred is the mother’s affectionate behavior itself. Hence, the explanation is circular, untestable, and irrefutable.

As another example, the following case was encountered in an inpatient psychiatric unit. The patient, a young female, had been severely and repeatedly banging her head on the wall and other hard objects. This behavior was causing retinal damage and loss of vision. The patient had also been diagnosed with a medical disorder that would eventually result in blindness independent of the head-banging behavior. The interpretation offered for this behavior by psychodynamically oriented therapists was that the patient had an “unconscious wish” for blindness for two possible reasons: (1) A visual memory of a traumatic event was being symbolically removed through self-induced blindness, and/or (2) the client wished to reduce the uncertainty in her life (i.e., her knowledge that blindness would come at some unknown future date) by “taking control” of her medical condition and blinding herself.

Finally, in Ms. Delaware’s case, her previous psychodynamic therapy reportedly focused on helping her identify the “root” of her problem, which included a presumed lack of self-esteem and an unconscious fear of separation from loved ones. In addition, she was encouraged to examine her childhood carefully for prior occurrences of panic in order to “uncover” the repressed memories that were presumed to be driving the anxiety.

Both of these latter psychodynamic explanations located the causes of the behavior “inside” the patient, and as a result, the causal variables could not be measured by external observers. In addition, because the internal causes were unconscious, the use of self-report measures was ruled out. Thus, as in Fenichel’s (1945) example, the problematic behavior was attributed to an internal hypothetical process. However, presence of the internal processes was based entirely on the observation of the problematic behavior. Again, circular “pseudo-explanations” for the behavioral problems were being offered.

The second major criticism leveled at psychodynamic approaches to assessment has been the lack of research support for the main assumptions that

(1) **intrapyschic factors** are the most important determinants of behavior, and (2) assessment of intrapsychic factors leads to effective interventions (Kazdin, 1984; Nelson & Hayes, 1986). As noted by Haynes and Uchigakiuchi (1993), much of this lack of research support may stem from the use of vaguely defined internal psychological traits and states in research studies. Consider once more the clinical examples cited above. How could a researcher go about measuring “unconscious wishes” or “repressed memories”?

In contrast to the psychodynamic approach to assessment, several fundamental assumptions characterize a contemporary behavioral approach to assessment. A first assumption, **functionalism**, states that behavior is lawful (as opposed to random) and “purposeful” in the sense that it provides a means through which a person can adapt to the demands, or “pushes and pulls,” of the environment. Thus, in behavioral assessments, **target behaviors**² are often thought of as logical and functional responses to environmental events that precede (**antecedents**), co-occur, and/or follow (**consequences**) their occurrence (Delprato & Midgley, 1992; Skinner, 1974).

Consistent with the functionalist assumption, behavioral assessments often employ **hypothetico-deductive** methods, to identify environmental factors that control target behaviors. Using this method of scientific inquiry, the **behavior analyst**³ carefully gathers preliminary information about the client’s behavior in different situations and subsequently induces one or more hypotheses about its function. Next, assessment procedures are designed that will allow each hypothesis to be tested. Assessment data are then collected and evaluated so that the behavior analyst can deduce whether each hypothesis should be discarded or endorsed.

A second assumption, **contextualism**, asserts that the controlling effects of environmental factors on target behaviors are often mediated by individual⁴ characteristics (Evans, 1985; Hawkins, 1986; Russo & Budd, 1987). This assumption leads to the expectation that target behaviors should show significant variability across persons, situations, and time (Wahler & Fox, 1981). Thus, an adequate assessment must include specific information about the environment as well as individuals.

A contextualistic approach is clearly evident in Kanfer and Saslow’s (1969) well-known SORKC model of behavioral assessment. In describing this model, Kanfer and Saslow (1969) argued that behavior analysts should gather specific information about the stimuli (**S**) that occur before the onset of a target behavior (**R**), the biological characteristics and learning history of the person or organism (**O**) being assessed, the contingencies (**K**) that are in effect (e.g., variable or fixed ratio reinforcement schedules), and the consequences associated with a target behavior (**C**). One can easily use the **SORKC model** to characterize Ms. Dela-

²The term *target behavior* refers to one or more behaviors that are a focus of assessment. Examples include behavioral excesses (e.g., aggression, self-injurious behavior, auditory hallucinations, cardiovascular overreactivity), behavioral deficits (e.g., apathy, blunted emotional expression, poor reading skills), or behavioral goals (e.g., an ability to relax more effectively).

³*Behavior analyst* is a general term used to describe researchers and practitioners concerned with understanding and treating behavior problems.

⁴The term *individual characteristic* refers to measurable human responses such as thoughts, emotional states, physiological states, and overt-motor responses.

ware's behavior problems. Organistic variables (e.g., genetic susceptibility and prior learning history), interacting with specific Situational factors (driving/walking alone), were hypothesized to bring about specific Responses (e.g., avoidance/escape) that were followed by a negatively reinforcing Consequence (relief of anxiety) on a continuous contingency (*K*) schedule.

A third assumption of a behavioral approach states that behavior can be most effectively understood using **empirical methodologies**. This assumption is reflected in the strong emphasis placed on obtaining **unbiased quantitative measures** of precisely defined **observable target behaviors** (e.g., Barlow & Hersen, 1984; Cone, 1988; Goldfried & Kent, 1972; Haynes & Uchigakiuchi, 1993). It also underlies the emphasis placed on **accountability**. For example, Ms. Delaware's target behaviors were thoroughly defined and measured throughout the assessment and therapy. This permitted routine evaluations of her therapeutic progress to be conducted.

Behavioral "plasticity," a fourth assumption, asserts that most target behaviors can be modified through the careful application of learning principles (e.g., Delprato & Midgley, 1992; Eysenck, 1988; Kazdin, 1984). It can thus be argued that for every target behavior encountered, there may exist a unique combination of situational and individual controlling factors that could be used to produce a significant and positive change. This assumption provides the foundation for persistence and optimism in clinical work with difficult-to-treat problems. Indeed, behavior therapy has been shown to be effective for clients who have often been labeled as "untreatable" (e.g., persons with mental retardation, schizophrenia, autism, psychosis) from a psychodynamic perspective.

Fifth, a **multivariate** assumption proposes that target behaviors are composed of many components. It is further assumed that each target behavior is related to a variety of other behaviors (Delprato & McGlynn, 1988). These correlated behaviors may be either adaptive or problematic. Finally, it is assumed that most behaviors are controlled by more than one situational or individual factor (Haynes & O'Brien, 1990; Kanfer, 1985; Voeltz & Evans, 1982).

The multivariate assumption is apparent in a **systems approach** to assessment and the regular use of **multimethod** measurement strategies (Cone, 1988; Evans, 1985; Morris, 1988). In Ms. Delaware's case, the multivariate assumption is evident in the partitioning of her target behavior into self-statements, physiological symptoms, and actions. Further, these target behavior components were presumed to be directly and indirectly associated with each other as well as a number of other controlling factors. Finally, the use of several different measurement strategies was required so that information on these diverse target behavior components and situational factors could be obtained.

Sixth, a **bidirectional assumption** states that situational or individual factors that affect a particular behavior can, in turn, be affected by that same behavior (Bandura, 1981). For example, when exposed to feared stimuli, Ms. Delaware would typically generate "catastrophic" thoughts or self-statements about her initial physical symptoms (e.g., mild shortness of breath was interpreted as a symptom of impending suffocation), which brought about an intense fear response that included increased physiological activity (e.g., elevated heart rate, increased shortness of breath, throat and chest tension, increased sweating). The increased physiological activity, in turn, intensified the catastrophic

self-statements, and so on. This “snowballing” bidirectional relationship between the catastrophic self-statements and physiological activation would lead to a state of extreme panic if the cycle was not interrupted.

Seventh, a **dynamic** assumption proposes that the relationships among controlling factors and target behaviors often change over time (Haynes, 1992). Consequently, it is possible that the original causes of a behavior may be quite different from the factors that maintain the behavior once it is established. Smoking provides an excellent illustration of this point because the factors associated with the onset of the behavior, such as peer role modeling and social reinforcement, are quite different from the factors that typically maintain it, such as nicotine dependence (Feuerstein, Labbe, & Kuczmierczyk, 1986).

Finally, a **nonlinear assumption** suggests that a unit of change in a controlling variable does not always bring about a similar amount of change in the target behavior. For example, Burton (1988) has shown that the relationship between self-reported physical symptoms of anxiety and competitive swimming performance takes the form of an **inverted-U**. Specifically, each unit of increase in perceived anxiety that fell between low and moderate levels of intensity was associated with an increased level of performance. When perceived anxiety exceeded moderate levels of intensity, however, each additional increase in anxiety was associated with a decreased level of performance. Many other forms of nonlinear relationships between controlling variables and target behaviors have been reported in the behavioral assessment literature. These relationships have taken the form of hyperbolic curves, parabolic curves, exponential curves, causal triggers, functional plateaus, and incubation effects.

The conceptual foundations described thus far (see Table 5-1 for a summary) require that those who conduct behavioral assessments should be well acquainted with learning theory and the behavioral research literature. In addition, they must be able to measure both the **form** and **function** of target behaviors. To accomplish this latter requirement, behavior analysts must be familiar with a wide range of measurement devices and procedures for evaluating the results of assessment. In the sections that follow, the most commonly used assessment methods and techniques for interpreting assessment data will be reviewed. Prior to that, however, a brief discussion of the major goals of behavioral assessment is required.

GOALS AND APPLICATIONS OF BEHAVIORAL ASSESSMENT

Clients seeking treatment for psychological and behavioral problems are usually able to report that “something has gone wrong” and that they are feeling upset. These initial descriptions of the problem, although helpful in conveying a sense of distress, are much too global to be useful for designing or evaluating behavioral interventions.

Consider for example, a client who requested treatment in our clinic because he was “feeling on the verge of losing it.” Before we could be of any assistance, much more information was needed about what “losing it” meant to this client. The client could have been referring to losing his temper, losing his

ability to stay on top of his coursework, losing control of his thinking processes, losing his ability to manage his distress effectively, and so on. We also need to know what “on the verge” meant. Did he mean it in a temporal sense (i.e., that he was seconds, minutes, hours, or days away from “losing it”) or a quantitative sense (i.e., that he could not tolerate any additional stress or pressure or else he would “lose it”)? In either case, we needed to know what types of thoughts, feelings, and actions led him to label himself this way. Finally, much more information was needed about situational controlling factors (e.g., workload) and individual controlling factors (e.g., ability level, negative expectations) prior to initiating treatment.

The high probability that clients will present with vaguely defined problems, combined with the behavioral emphasis on using an empirical and functional approach, highlights the need for behavior analysts to pursue two major goals in any assessment. The first goal is to obtain valid and useful measures of target behaviors and controlling factors. To accomplish this, the behavior analyst must generate exact and quantifiable descriptions of these variables. These exact descriptions, in turn, can be used to generate a diagnosis, to estimate the severity of a problem, and to quantify changes that occur in the target behaviors and the factors that control them.

Completing the first goal makes realization of the second goal possible. This

Table 5-1. A Summary of the Conceptual Foundations of Behavioral Assessment

Functionalism

Behavior is lawful and “purposeful” in the sense that it provides a means through which a person can adapt to antecedent, concurrent, and consequent environmental conditions.

Contextualism

Behavior is continuously influenced by *both* situational and individual factors.

Empiricism

Behavior and its causes can be most effectively studied by using methods that highlight careful operationalization and quantitative measurement of observable phenomena.

Behavioral plasticity

Systematic modification of situational and individual factors can produce a significant change in virtually any behavior.

Multivariate causation

Behaviors and controlling factors can be measured along multiple dimensions, and a single behavior is often controlled by more than one factor.

Bidirectional causation

The relationships among behaviors and controlling factors are often reciprocal.

Dynamic causation

The relationships among behaviors and controlling factors frequently change across time.

Nonlinear causation

The relationships among behaviors and controlling factors are not always best represented by a straight line.

second goal is to identify and evaluate the relationships that exist between target behaviors and controlling factors. Information about such relationships is most helpful for testing hypotheses about the function of a behavior, designing interventions, and evaluating interventions. In the following section, issues related to the realization of the primary goals and applications of behavioral assessment are described.

Goal 1: Generating Operational Definitions of Target Behaviors and Controlling Factors

As noted earlier, the primary goal of any behavioral assessment is to generate precise and quantifiable descriptions, called **operational definitions**, of **target behaviors** and **controlling factors**. Target behaviors can be operationalized along an infinite number of dimensions. For behavioral assessment purposes, however, the dimensions of greatest relevance fall into the following areas: (1) **content**, which is often divided into cognitive-verbal, affective-physiological, and overt-motor response systems; (2) **magnitude or intensity of responding**; (3) **temporal characteristics** such as rate, duration, and rise time; and (4) **level of reduction** (Haynes, 1992; Hollandsworth, 1986; Schwartz, 1986). For example, Ms. Delaware's panic could be operationalized according to content (e.g., negative self-statements, physical symptoms, and overt-motor responses such as avoidance), magnitude (e.g., the maximum level of panic reached while driving), temporal characteristics (e.g., rate—how often she experienced panic attacks during a specified period of time; duration—how long panic episodes lasted; rise time—time that elapsed between panic onset and peak panic levels), and level of reduction (e.g., physiological symptoms could be operationalized using global ratings of anxiety or lower-level psychophysiological measures).

Controlling factor topography can be operationally defined using dimensions that are similar to those associated with target behaviors. In terms of *content*, setting factors can be roughly divided into situational and individual dimensions. **Situational controlling factors** are located "outside" of the individual. This set of controlling factors can be further divided into (1) **physical-inanimate** "milieu" factors (e.g., temperature, noise levels, time of day, humidity, physical structures in the built environment) and (2) **physical-animate factors** (e.g., people, pets, and other living organisms). **Individual controlling factors** can be thought of as "internal situations" that can exert an impact on target behaviors. Similar to target behaviors, individual controlling factors can be subdivided into cognitive-verbal, affective-physiological, and overt-motor systems (Delprato & McGlynn, 1988).

In summary, generating operational definitions of target behaviors and controlling factors is one of the major goals of behavioral assessment. These variables can be measured along a number of dimensions including content, magnitude, frequency, duration, rise time, and level of reduction. Figure 5-2 provides a graphic illustration of the dimensions of target behaviors and controlling factors that are often emphasized in behavioral assessments.

Goal 2: Identifying and Evaluating Relationships among Target Behaviors and Controlling Factors

Once target behaviors and controlling factors have been operationally defined, behavior analysts evaluate the relationships between these two sets of variables. This information allows the behavior analyst to learn more about the “function” of a behavior—why it occurs and how it is controlled. In turn, information about functional relationships can be used to design and evaluate clinical interventions.

The importance of obtaining information about functional relationships was highlighted in our assessment and treatment of a client with anorexia nervosa (a condition characterized by extreme dieting and weight loss). The client presented to our clinic in a very emaciated state. The most problematic behaviors were self-induced vomiting, laxative abuse, stimulant abuse, and minimal calorie consumption. Although many factors have been shown to affect anorectic behavior (e.g., Foreyt & McGavin, 1988; Schlundt, Johnson, & Jarrel, 1986), we hypothesized that an extreme fear of obesity and a distorted body

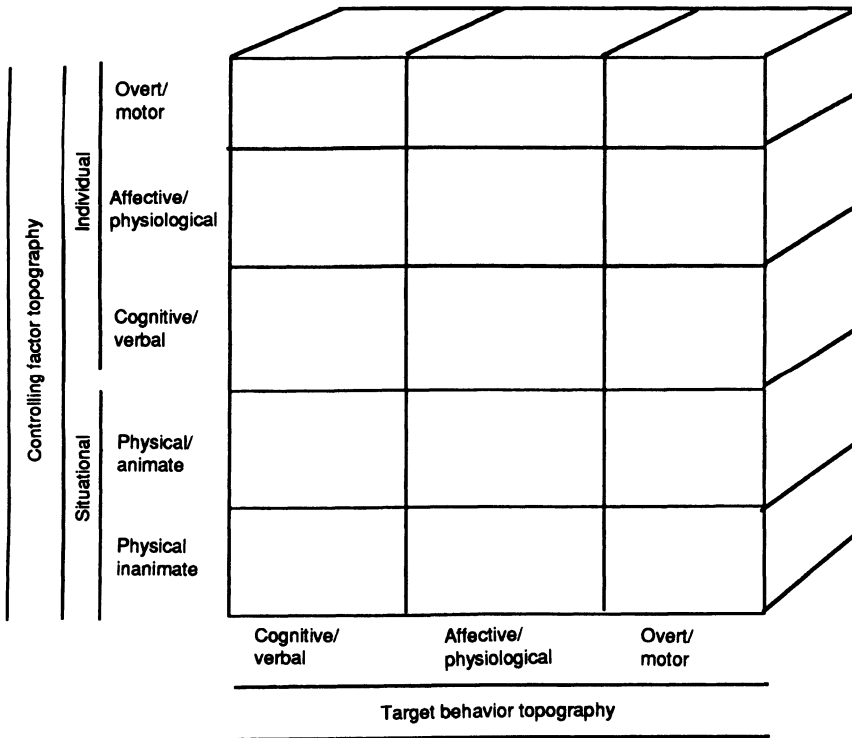


Figure 5-2. Dimensions of target behaviors and controlling factors that are often the focus of assessment.

image were exerting the greatest amount of control over the target behaviors. Consequently, the initial intervention combined **graded exposure** (e.g., the client was encouraged to eat meals and drink nutritional formulas so that she would experience the sensations of a full stomach) with **response prevention** (i.e., encouraging the client not to engage in purging behaviors) and anxiety management (i.e., relaxation training, self-statement modification) techniques. Conducted in an inpatient setting, this intervention produced an improvement in eating behavior. After returning home, however, the client quickly lapsed back into problematic behaviors.

A reassessment of the function of the target behaviors in the home context suggested that social reinforcement was exerting a great amount of influence on the patient's eating behaviors. Specifically, it appeared that problematic eating and purging was being inadvertently reinforced by the client's family and friends; as her eating behavior and weight improved, the level of social support and involvement declined. Alternatively, as her eating behavior and weight worsened, an increased level of social support was provided. With this social reinforcement hypothesis in mind, the intervention was modified so that a greater emphasis was placed on helping the client learn other, more adaptive, ways to obtain social support.

The term **functional analysis** has been used to describe the second behavioral assessment goal in which relationships among target behaviors and controlling factors are identified and evaluated. Despite the fact that the functional analysis is a central outcome of behavioral assessment, it has been imprecisely used to characterize a wide array of clinical activities. Consequently, a formal definition of functional analysis has been proposed that contends that its essential feature is "the identification of important, controllable, causal functional relationships applicable to a specified set of target behaviors for an individual client" (Haynes & O'Brien, 1990; O'Brien & Haynes, in press).

This definition of functional analysis carried with it a number of important characteristics. First, the functional analysis emphasizes the identification of **causal functional relationships**. Causal functional relationships can be differentiated from noncausal (e.g., strictly correlational) functional relationships when the following four conditions are met: (1) The hypothesized causal variable and the target behavior covary, (2) changes in the causal variable precede changes in the target behavior, (3) there is a logical explanation for the observed relationship, and (4) alternative explanations for the observed relationship can be ruled out (Blalock, 1964, 1971; Cook & Campbell, 1979; Einhorn, 1988; Haynes, 1992; Saris & Stronkhorst, 1984).

Consider, for example, the case of a client who sought treatment for erectile dysfunction. This client stated that he lost the ability to maintain an erection during sexual intercourse after he had undergone a vasectomy. He speculated that a physiological mechanism must be responsible for the problem, but he noted that numerous medical evaluations had failed to yield any significant findings. To evaluate the plausibility of this causal explanation, a behavioral interview was conducted in which the client was asked about the topography of the target behavior and potential controlling factors that preceded, co-occurred, and followed it. During the interview, the client reported that several other potentially important controlling factors co-occurred with the vasectomy, in-

cluding the birth of children, increased job demands, increased family stress levels, decreased frequency of sexual intercourse, and increased frequency of arguments before, during, and after sexual intercourse attempts. He also stated that erectile failure had occurred on several instances prior to the vasectomy and that nocturnal erections were commonly experienced after the vasectomy. Finally, he was able to maintain erections when masturbating.

This interview information suggested that the vasectomy, although correlated with target behavior onset, was not a causal factor. In applying the four conditions required for establishing a causal connection, it is apparent that (1) evidence for temporal precedence was lacking (target behavior onset occurred prior to the presumed causal factor), (2) the situational specificity of the target behavior response (i.e., that erectile dysfunction occurred during intercourse but not during masturbation and sleep) was contrary to the notion of consistent covariation (between the presence of the vasectomy and erectile dysfunction) and incompatible with a pure physiological explanation, and (3) plausible alternative causal explanations such as classical conditioning (e.g., anxiety and other affective states that are incompatible with sustained sexual arousal could have been paired with stimuli that precede and co-occur with sexual intercourse) and operant conditioning (e.g., arguments that consistently followed unsuccessful intercourse attempts exerted a punishing effect on sexual arousal) could not be ruled out.

For many clients, several factors may exert a causal influence on a particular target behavior. A functional analysis will prioritize multiple causal functional relationships and highlight those that are most *important* for intervention design. For example, hypertension has been causally associated with obesity, impaired kidney functioning, excessive sympathetic nervous system activity, physical inactivity, and excessive alcohol consumption (Kaplan, 1986). For any individual client, however, different subsets of these variables will be exerting an important causal impact on blood pressure levels.

Important causal functional relationships can sometimes be uncontrollable. Biological constraints (e.g., genetic inheritance, injuries), important historical events, and sociodemographic characteristics (e.g., age, gender) are three classes of causal factors that are uncontrollable. As noted earlier, functional analyses are often used to facilitate the design of interventions that typically attempt to modify important causal relationships between a target behavior and setting factors. Thus, in most cases, a functional analysis will emphasize *controllable* causal functional relationships.

A final major characteristic of the functional analysis is the emphasis on the evaluation of specific controlling factor-target behavior interactions for a specific client. This idiographic emphasis is congruent with the contextual nature of behavioral assessment. Thus, the inferences derived from each functional analysis are limited to one person and a small domain of behaviors and settings.

In summary (see Table 5-2), operationalizing the topography of target behaviors and controlling factors is the first goal of behavioral assessment. Taken alone, operationalized variables can then be used for diagnosis, to assess the severity of a problem behavior, and to quantify change. The generation of a functional analysis, a conceptual integration of the relationships among target behaviors and controlling factors, is a second goal of behavioral assessment.

Table 5-2. A Summary of the Major Goals of Behavioral Assessment

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1. *Generating operational definitions of target behaviors and controlling factors.* An operational definition is a careful description of the target behavior or controlling factor. An operationalized variable can be reliably observed and quantitatively measured.
 2. *Identifying and evaluating relationships among target behaviors and controlling factors.* To determine the function of behavior, an assessment of the relationships among target behaviors and controlling factors is required. This information is most helpful for intervention design. The *functional analysis*, defined as “the identification of important, controllable, causal functional relationships applicable to a specified set of target behaviors for an individual client” (Haynes & O'Brien, 1990), is a central outcome of behavioral assessment.
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This information is well suited for hypothesis testing, intervention design, and intervention evaluation.

PROCEDURES USED TO COLLECT ASSESSMENT DATA

Sampling and Recording Procedures

Living organisms are always behaving. The variation that is observed in this continuous flow of behavior can be attributed to the unremitting changes that occur in situational and individual controlling factors (Schoenfeld & Farmer, 1970). Because a behavior analyst cannot observe all behaviors, at all times, in all situations, **sampling procedures** must be designed in any behavioral assessment. Optimally, these sampling procedures should allow the behavior analyst to infer efficiently and validly how a person behaves in the unsampled natural environment (Paul, 1986a, 1986b). In developing a sampling procedure, the behavior analyst must carefully consider *how* and *where* assessment data will be collected. These two areas of consideration are described in the next sections.

Data Collection Strategies

Because it is not feasible to measure all behaviors, at all times, in all situations, any data recording procedure will be able to cull only a small part of the total universe of controlling factor-target behavior interactions. Consequently, some amount of information will invariably be lost. A major objective in the design of a data collection strategy, then, is to develop procedures that will “minimize costs and maximize representativeness, sensitivity, and reliability” of the obtained information (Hartmann, 1984, p. 114). The five most commonly used data recording procedures are described below.

Event recording refers to a procedure in which the simple occurrence of a target behavior or controlling factor-target behavior interaction is recorded during a specific period of time. An estimate of frequency or rate of occurrence can be calculated by adding the number of times the target behavior occurred during some relevant time interval (e.g., hours, days, or weeks). Event recording is

commonly used for behaviors that have discrete beginning and ending points. For example, a client seeking treatment for trichotillomania (repeated and chronic hairpulling) was instructed to place pulled hairs into an envelope so that target behavior frequency could be assessed. As another example, clients entering into a smoking cessation program were asked to record each occurrence of cigarette smoking during a 2-week baseline period so that an estimate of “typical” daily consumption levels could be obtained. Duration recording is used to obtain an estimate of the amount of time that elapses between the onset and termination of target behaviors or controlling factor-target behavior interactions. Duration recording is often used when the assessment and intervention emphasize the temporal aspects of a target behavior or controlling factor-target behavior interaction. For example, a client suffering from sleep-onset insomnia was instructed to self-monitor the approximate amount of time that elapsed between going to bed and falling asleep as well as the amount of time that elapsed between falling asleep and waking up each morning. Subsequent intervention efforts focused on reducing the sleep-onset durations and increasing the duration of sleep each night.

When using **interval recording** procedures, the behavior analyst divides time into intervals that may last from a few seconds to several hours. If the target behavior or controlling factor-target behavior interaction is observed, then the entire interval is recorded as an occurrence of the event. Interval recording procedures are most appropriate when the target behavior occurs at a very high rate of frequency or when there are no clear-cut beginning and end points. For example, interval recording was designed for a school-age child who was referred for treatment of chronic inattention. A volunteer observer was provided with coding forms that divided the classroom time into consecutive 15-second intervals. The child’s behavior was scored as being either “on-task” or “off-task” during each interval. In addition, the teacher’s behavior was recorded as being either “reinforcing, punishing, or neutral” during each 15-second interval. Using this recording procedure, it was possible to obtain estimates of the overall amount of time that the child was engaging in on-task or off-task behavior. It was also possible to evaluate the extent to which the teacher provided appropriate consequences for “on-task” and “off-task” behavior.

Real-time recording involves measuring “clock time” at the beginning and end of each target behavior occurrence and/or controlling factor-target behavior interaction. Real-time recording can yield data about the frequency and duration of target behavior occurrences and/or controlling factor-target behavior interactions. Similar to event and duration recording procedures, real-time recording is most useful when the target behavior has clear beginning and end points.

Momentary-time recording is analogous to taking “snapshots” of behavior across time and place (Paul, 1986a). Paul (1986b) developed one of the most sophisticated momentary-time recording observational systems available (the Time Sample Behavior Checklist). Using his system, measurements can be obtained on up to 20 clients in one location. To accomplish this, trained assistants observe, code, and record each client’s behavior during successive 2-second recording intervals. After completing a “round” of recording, the assistants repeat the observational sequence until a sufficient amount of data has been collected.

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Because behavior is significantly influenced by contextual factors, careful attention must be given to the locations in which assessment data are collected, and efforts should be made to sample from multiple settings (Foster, Bell-Dolan, & Burge, 1988; Paul, 1986a, 1986b; Touchette, MacDonald, & Langer, 1985). One dimension that can be used to gauge assessment locations is the degree to which they represent the client's natural environment. Assessments conducted in a client's home, work, or school lie at one end of this dimension, while highly controlled analog settings (e.g., a laboratory role-playing exercise) lie at the other extreme.

Assessments conducted in **natural settings** tend to have greater ecological validity, meaning that information about "real-life" controlling factor-target behavior interactions is more likely to be obtained. There are two major disadvantages with collecting assessment data in naturalistic settings. First, it tends to be expensive because observers or measurement devices must be placed in settings that are located outside of the clinic or research facility. Second, precise measurement devices (e.g., physiological monitors) often cannot be placed in natural settings.

Because of the difficulties associated with conducting assessments in natural settings, most behavioral assessments take place in **analog settings** that are designed to simulate the natural environment. Analog settings can range from highly contrived situations to close approximations of natural situations. An example of a highly contrived analog setting would be a typical psychophysiological laboratory that is windowless, soundproofed, shielded from ambient electricity, temperature controlled, and designed so that the subject is seated in a comfortable chair while recordings are obtained. In contrast, an example of a more naturalistic analog setting would be the carefully designed research barrooms used by Marlatt (1978) and Brown (1981) to assess alcohol drinking behavior.

Analog settings are usually structured so that specific controlling factor-target behavior interactions can be readily observed. For example, clients seeking treatment in our clinic for "problems with stress" are assessed in a psychophysiology laboratory. During this laboratory assessment, clients are exposed to a resting baseline condition and a demanding task condition (mental arithmetic). This laboratory design allows us to directly observed the effects of a laboratory stressor on cognitive, behavioral, and physiological responses (O'Brien et al., 1993). Role-playing exercises, exposing anxiety disordered clients to fear-provoking stimuli, and planned social interactions are examples of analog assessment situations that have been extensively used in the behavioral literature (Boudewyns & Hyer, 1990; Hahlweg et al., 1990; Mueser, Bellack, Morrison, & Wixted, 1990).

Efficiency and measurement precision are two of the primary advantages of analog assessment settings. In terms of efficiency, infrequently occurring controlling factor-target behavior interactions can be assessed if the proper analog conditions are designed. For example, marital disagreements or social interactions by extremely shy or anxious clients can be arranged in analog settings. In

terms of measurement precision, analog settings often permit the assessor to record the target behavior using nonportable devices (e.g., laboratory equipment) that have a great deal of sensitivity.

In summary, recording data in natural settings permits the assessor to obtain measures of controlling factor-target behavior interactions in “real-life” conditions. Because of this, ecological validity is maximized. However, limited measurement precision and cost are problematic barriers to widespread use of this recording location. When assessment in natural settings is impractical, behaviors can be recorded in analog settings. Analog settings often permit more exact measurement, can be designed to simulate natural environments, and can be used to assess infrequently occurring behaviors. The ecological validity of information obtained in analog settings can be problematic, however.

BEHAVIORAL ASSESSMENT METHODS

To obtain an estimate about the types of behavioral assessment methods that are most commonly used to evaluate client behavior, a review of randomly selected case studies published in five main behavioral journals (*Behavioral Assessment*, *Behavior Modification*, *Behavior Research and Therapy*, *Behavior Therapy*, and *Journal of Applied Behavior Analysis*) from 1990 through 1992 was conducted. One hundred thirty-two case studies were published during these years. Twenty-five percent ($n = 33$) were then randomly sampled from this population of studies and coded for the following variables: client characteristics, target behavior(s), and method of assessment (see Table 5-3).

The results of this review indicated that a wide range of target behaviors were operationalized and measured using behavioral assessment methodologies. In addition, the vast majority (97%) of studies operationalized more than one target behavior and used multiple methods of assessment. The most commonly reported behavioral assessment methods were behavioral observation conducted by trained research assistants, which has been labeled “nonparticipant observation” (73%); behavioral observation conducted by persons involved in the client’s care (e.g., parents, therapists, teachers, nursing staff), termed “participant observation” (36%); questionnaire administration (33%); product-of-behavior (e.g., indirect indices of target behavior occurrence such as weight as an index of eating, an index of bruises, and an index of self-abuse) and archival (e.g., medical and psychological treatment records) data collection (27%); interviewing (18%); and self-monitoring (12%).⁵ In the following section, each of these assessment methods is described.

⁵An assessment method was recorded as being used only if the authors provided an explicit statement to that effect. In many studies, the use of product-of-behavior/archival data evaluation (73%) and behavioral interviewing (70%) was strongly implied (but not explicitly stated) by the authors. The implied use of these methods was most obvious when the history of the presenting problem and sociodemographic characteristics were described. If “implied use” is added to our frequency estimates, then product-of-behavior/archival data evaluation (91%) and interviewing (85%) would be the most commonly used assessment methods.

Table 5-3. Descriptions of Case Studies Published in Selected Behavioral Journals between 1990 and 1992

Author(s)	Client description	Target behavior(s)	Method of assessment						
			NO ^a	PO	Q	POB	SM	BI	
Burgio & Hawkins (1991)	Three elderly nursing home residents	Delusional verbalizations, daytime sleeping, fine-motor skills, inappropriate requests for staff assistance, excessive somatic complaints, disruptive behaviors, inappropriate packing of belongings	x	x					
Chandler et al. (1992)	Seven children with language delays, inappropriate peer interaction, or "at risk" for developmental disabilities	Social interaction, teacher interactions with students	x	x					
Charlop et al. (1990)	Ten children with autism	Aggression, tantruming, echolalia, disruptive behavior, stereotypic behavior, noncompliance, off-task behavior, yelling, perseverative behaviors	x						
Cooper et al. (1990)	Eight children with conduct problems and their mothers	On-task behavior, disruptive behavior, off-task behavior, parenting behavior (praise, reprimands)	x	x	x				
Cowdery et al. (1990)	One child with a low-average IQ	Self-injurious behavior	x						
Critchfield & Vargas (1991)	Seven novice competitive swimmers	Swimming distance in a fixed period of time	x	x					x
Dube et al. (1991)	Two adults with mental retardation	Correct spelling							x
Durand & Carr (1991)	Three children with developmental disabilities and "challenging behavior"	Self-injurious behavior; physical aggression, screaming, therapist verbal behaviors (e.g., praise)	x		x				
Dyer et al. (1990)	Three children with developmental disabilities	Aggression, throwing objects, tantruming, self-injurious behavior, running away	x						
Edwards et al. (1991)	Eleven children with chronic abdominal pain	Depression, anxiety, "externalizing" behavior problems, frequency of bowel movements, constipation, stomach pain, school functioning, correct task performance		x	x	x	x	x	x
Foxx et al. (1991)	Six adolescents with conduct and emotional disorders	Social skills	x						
Green et al. (1991a)	Eighteen adults with retardation and physical disabilities	Approach behavior; eye contact, occupational therapy task performance		x	x				x
Green et al. (1991b)	Eight direct-care staff working in a residential setting	Basic caregiving behavior, general client interaction, providing training, indirect basic caregiving, non-work, acceptability of treatment program		x	x				
Haring & Kennedy (1990)	Two developmentally disabled adolescents	Body rocking, inappropriate vocalizations, spitting, hand flapping, head bobbing	x						

Harris et al. (1990)	Three adolescents with autism	Verbal offers of assistance	x	x	
Johnston et al. (1991)	Three adults with developmental disabilities	Vomiting and rumination		x	
Joseph & Cooper (1991)	Five children with poor math performance and attention in the classroom	Math skill			x
Kern-Dunlap et al. (1992)	Five adolescents with emotional and behavioral disorders	Peer interactions, degree of accuracy in self-evaluations of peer interactions	x	x	
Koegel et al. (1992)	Four children with autism	Verbal and behavioral responses to questions, disruptive behavior, accuracy of self-recording	x		x
Levey et al. (1991)	One adult male with insomnia	Sleep onset latency, number of nighttime wakings	x		x
Linscheid et al. (1990)	Five adolescents and young adults with developmental disabilities	Self-injurious behavior; inappropriate vocalization, appropriate vocalizations	x		
Love et al. (1990)	Two children with autism and "fear-related problems"	Approach steps completed, verbalization/vocalization of fear, and appearance of fear during exposure to feared stimulus situations	x		
Mace & Lalli (1991)	One adult with mental retardation	Bizarre speech, unusual gestures	x		
McAlpine et al. (1992)	Seven adults with mental retardation	Correct identification of emotions depicted in facial expressions and videotaped role plays	x		x
McClannahan et al. (1990)	Eleven children with autism	Personal appearance	x		
Musso et al. (1991)	Ten adult males with hypertension	Blood pressure			x
Odum et al. (1992)	Six preschool children with developmental disabilities	Social interaction, teacher prompts, teacher praise	x		
Paniagua (1992)	Five children with attention-deficit/hyperactivity disorder and conduct disorder	Inattention, overactivity, conduct problems, correspondence between verbal and overt-motor behaviors	x	x	x
Piazza & Fisher (1991)	Four children with mental retardation and insomnia	Sleep-onset time, nighttime waking, early waking, inappropriate sleep times			x
Repp et al. (1990)	Eight adolescents and young adults with mental retardation	Correct response to a visual discrimination task	x		
Test et al. (1990)	Two adolescents with developmental disabilities	Correct use of public telephone	x	x	x
Thase et al. (1991)	Sixteen psychiatric inpatients with depression	Depressive behaviors	x		x
Wacker et al. (1990)	Three children with developmental disabilities	Self-injurious behavior, noncompliance, stereotypic behaviors, aggression, communicative behaviors	x		

^aAbbreviations are as follows: NO = nonparticipant observation, PO = participant observation, Q = questionnaire administration, POB = product-of-behavior and archival data, SM = self-monitoring, and BI = behavioral interviewing.

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Behavioral interviewing differs from other forms of clinical interviewing (e.g., psychodynamic, client-centered) in terms of directiveness, focus, and interpretation of behavior. Behavioral interviews tend to be more directive than nonbehavioral interviews. For example, in a behavioral interview the therapist will encourage the client to describe his or her experiences using specific behavioral terms rather than vague colloquialisms (Rankin, 1990; Turkat, 1986). In terms of focus, behavioral interviews sample a very broad range of behaviors such as **semantic content** (or the meanings of the spoken words), **paralinguistic responses** (e.g., voice volume, rate of speech, intonation), **nonverbal overt-motor responses** (e.g., postural changes, eye contact), and **affective-physiological responses** (e.g., facial flushing). Finally, client responses may be interpreted two different ways. When using a "marker" approach, the behavior analyst interprets the client's responses as an index of controlling factor-target behavior interactions that are present in the client's natural environment. For example, if a client reports that her depression is caused by reduced social interaction and isolation, a behavior analyst may opt to interpret this verbal response as a valid marker of a set of factors that are controlling the target behavior in natural settings. Using a "target" interpretation, however, the behavior analyst may consider the client's verbal report (i.e., talking about depression) to be a component of the target behavior itself that is strongly influenced by factors that occur during the interview (e.g., social attention and reinforcement from the interviewer).

Behavioral interviewing is well suited for the early phases of assessment in which the initial selection and operationalization of target behaviors and controlling factors are accomplished. It is most helpful for this purpose because a broad range of information can be collected using a modest investment of assessment resources (Haynes, 1992; Jensen & Haynes, 1986; Kanfer & Phillips, 1970; Morganstern, 1988; Nelson & Hayes, 1986).

Despite its broad utility, little is known about the psychometric properties of behavioral interviewing (Jensen & Haynes, 1986; Nezu & Nezu, 1989). For example, two analog studies conducted by Hay, Hay, Angle, and Nelson (1979) and Felton and Nelson (1984) examined the extent to which behavior therapists, when presented with simulated interview data, agreed on target behavior operationalization, controlling factor identification, and treatment recommendations. Overall, low to moderate levels of agreement were observed across assessors. Thus, behavioral interviews do not appear to render similar judgments about target behavior topography and function. Further research is urgently needed to improve our understanding of the reliability and validity of behavioral interviews.

In summary, the behavioral interview is a frequently used behavioral assessment method that can be most helpful in collecting preliminary data on target behaviors and controlling factors. Few studies have systematically investigated the reliability and validity of behavioral interviews. Those that have, however, suggest that the psychometric properties of behavioral interviews are unsatisfactory. As a result, it is important that additional assessment devices be used to supplement interview data.

Behavioral observation is one of the most popular and extensively researched behavioral assessment methodologies (Suen & Ary, 1989). As an assessment method, behavioral observation is closely tied to the empirical assumption that the most useful data will be obtained through direct observation and quantification of target behaviors and controlling factor-target behavior interactions.

Two major forms of observation are typically conducted. One type, nonparticipant observation uses trained assistants to observe and code client behavior. The other, participant observation, typically uses caregivers (family members, nursing staff, therapy aids, etc.) and/or behavior therapists to collect assessment information. The major characteristics, applications, advantages, and limitations of each method are described in the following section.

NONPARTICIPANT OBSERVATION. **Nonparticipant observation** systems use trained observers to code behavior. Aside from this activity, nonparticipant observers do not have any other forms of significant client contact. Paid observers, undergraduate and graduate student research assistants, volunteers, and client peers have been effectively used in nonparticipant observational systems (e.g., Douglas & Mueser, 1990; Paul, 1986a).

Because nonparticipant observers are not responsible for providing therapeutic services or caregiving, they can often be used to record complex behaviors at a high level of reliability and validity (Paul, 1986a, 1986b). Nonparticipant observation frequently has been used to assess many overt-motor target behaviors such as social skills (Kern-Dunlap et al., 1992), self-injurious behavior (Durand & Crimmins, 1988), psychotic behavior (e.g., Glynn, Bowen, Rose, Marshall, & Liberman, 1990), emotional expression (Falloon, McGill, Boyd, & Pederson, 1987; Tarrier, 1989), aggression and tantruming (Charlop, Kurtz, & Casey, 1990), and behavior therapy skills among clinicians (Hahlweg et al., 1990).

To design a nonparticipant observation system, the behavior analyst must first carefully operationalize the target behaviors and relevant controlling factors so that they can be clearly differentiated from other variables. Second, the behavioral assessor must decide on a sampling and data recording strategy that will maximize the generalizability and ecological validity of the assessment information. Third, locations for conducting observations must be selected. If the behavioral assessor hypothesizes that the behavior is controlled by setting events that occur *only* in the client's natural environment (e.g., negative interactions with work supervisor), a naturalistic location for recording data must be used. If the target behavior is controlled by factors that can be simulated or approximated in the clinic or laboratory, however, an analog setting may be used.

Nonparticipant observation has two major limitations. First, because cognitions and affective-physiological states are not easily observed, this assessment method is usually restricted to the recording of overt-motor behavior. Second, nonparticipant observation tends to be an expensive procedure because observers must be extensively trained and be available for multiple hours of observation.

In addition to the aforementioned limitations, three main sources of error are associated with behavioral observation: (1) error stemming from insufficient specification of the target behaviors, controlling factors, and sampling procedures; (2) error resulting from the use of human judges who often modify measurement criteria, who become fatigued and inattentive, and who may collect biased data as a function of expectations; and (3) reactive effects—client behaviors often change when they become the focus of systematic observation (Foster et al., 1988; Hartmann & Wood, 1990; Paul, 1986a, 1986b). The first source of error can be reduced if the assessor carefully operationalizes the variables to be observed and generates easily understood written guidelines for collecting data (Hartmann, 1984). Error associated with observer inattention and biases can be minimized by conducting frequent accuracy checks, scheduling rest periods, and providing reinforcement for accurate recording. To reduce reactivity, the observers should try to be as unobtrusive as possible. Further, adaptation periods (i.e., a period in which the observer is present) should be scheduled prior to data collection.

To summarize, nonparticipant observation can be used to assess complex overt-motor behaviors. It is a costly methodology, however, because paid observers or volunteers must receive thorough training. For the most part, nonparticipant observation is most useful in academic research settings where precise measures of behavior are needed and the investigator has sufficient personnel resources (e.g., undergraduate and graduate assistants). In most clinical situations, however, nonparticipant observation is an unfeasible assessment methodology.

PARTICIPANT OBSERVATION. **Participant observers** are usually present in the client's natural environment prior to the implementation of the behavioral assessment. Examples of potential participant observers include family members, co-workers, supervisors, nursing staff, medical personnel, psychiatrists, paraprofessional staff, and behavior therapists.

The steps involved in the design of a participant observation system are similar to those used in the design of nonparticipant observation systems. In addition, because participant observers have responsibilities aside from collecting assessment data, it is often necessary to design a less complex and less demanding observation system. To reduce the complexity of an observational system, target behaviors and controlling factors can be operationalized at a more global level. This reduces the need for making fine distinctions. Reducing the number or length of observation periods can also be an effective way to lessen the demands of an observational system.

A major advantage of participant observation is the potential for enhanced ecological validity because, as an assessment methodology, it is often less reactive and observers can record behavior in a wide variety of natural settings (Foster et al., 1988; Foster & Cone, 1986; Hartmann, 1984). A second advantage is related to reduced personnel costs. Because participant observers are already present in the patient's daily environment, there is no need to recruit paid observers or volunteers. Further, in many instances, participant observers are motivated to help the client.

Several limitations also characterize participant observation systems. Like nonparticipant observation, it is largely restricted to the measurement of overt-

motor behavior. Second, participant observers may be more likely to make recording errors if caregiving tasks or other daily activities interfere with their observations. Third, some participant observers may be more biased because they (1) have had a prior history of interactions with the client, (2) may want to produce a change in behavior, and (3) may want to “prove a point” about the client’s behavior (e.g., demonstrate that the client’s behavior is controlled by some particular factor).

To compensate for the unique limitations associated with participant observation, convenience and ease of use should be highlighted in the design of the observational system. To accomplish this, it is helpful to pilot test the system before it is actually used for assessment purposes. To minimize recording errors and bias, the behavioral assessor should provide detailed training and conduct regular accuracy checks.

In summary, participant observation systems can be used to assess overt-motor behaviors by having persons already in the client’s natural environment record behavior. Two of the most important attributes of participant observation systems are (1) increased ecological validity and (2) reduced cost relative to nonparticipant observation systems. The disadvantages, however, include a greater probability of significant observation bias and error.

Self-Monitoring

Self-monitoring is a term used to describe an assessment method in which clients observe and record their own behavior. Because clients have access to individual variables, self-monitoring can be used to measure a much broader range of target behaviors and controlling factors than observational methods.

For example, based on Groden’s (1989) observational system, a self-monitoring system was developed for a brain-injured client who was experiencing problems with heterosocial interactions (see Figure 5-3). When engaged in a conversation with a female, or in close proximity to a female, the client would often abruptly make an inappropriate sexual comment or gesture. The client was quite upset about this behavior because it seemed uncontrollable, and it had interfered with his ability to maintain employment. An event sampling strategy was designed for this behavior. Whenever he interacted with a female, the client recorded information about situational and individual events that occurred prior to, during, and after the encounter. In this way, the client was able to learn how to identify and better manage his behavior in “high-risk” situations.

In designing a self-monitoring system, target behaviors must be clearly defined so that clients can conduct accurate measurements. The behavior analyst must also provide clients with careful instruction and reinforcement for collecting self-monitoring data. Although any sampling procedure could be used with self-monitoring, event and interval sampling are often preferred because they require less effort from the client and thereby increase the probability for compliance.

Self-monitoring offers many advantages. As noted earlier, clients can record cognitions, affective-physiological, and overt-motor behaviors using this methodology. Additionally, measures of clandestine and private behaviors (e.g., illicit drug use, sexual behaviors) are more easily obtained with self-monitoring (Hart-

<p>Please fill out one of these forms every time you have talked with, gestured to, or touched a female (staff, other patients, family, friends, and others).</p>	
<p>Patient: _____ Staff: _____</p>	
Day, Date, Time	
Target behavior (describe in detail)	Talking to, gesturing to, or touching a woman
Please record where this behavior happened.	
Record whom you were with.	
Record what you were doing just before the target behavior happened.	
Record what you were thinking and feeling just before the target behavior happened.	
Record any other information you think may be helpful.	
Overall, how were you feeling this day?	
Record what happened after the target behavior occurred.	

Figure 5-3. An example of a self-monitoring form used to obtain information about the occurrence of inappropriate heterosocial behaviors in a brain-injured patient (adapted from Groden, 1989).

mann, 1984). Finally, by having subjects carefully attend to controlling factor-target behavior interactions, an improved understanding of the problematic behavior often occurs and treatment progress can be accelerated (Haynes, 1978; Kazdin, 1984).

All of the aforementioned limitations associated with observer bias are applicable to self-monitoring. In addition, the accuracy of the assessment data may be further compromised because clients are required to observe and record controlling factor-target behavior interactions while they are simultaneously being experienced. Further, clients may attempt to “fake good” or “fake bad” in order to modify the behavior of the therapist or significant others. For example, the self-monitored diet record of a client who presented with a pattern of behaviors consistent with anorexia nervosa indicated that 1,500 to 2,000 calories were being consumed on a daily basis. The client continued, however, to lose weight at a rapid pace. After being questioned about the discrepancy between weight loss and self-reported calorie intake, the client reported that she had inflated her daily food totals in order to prevent her husband and the therapist from “hassling” her about eating. Finally, compliance with self-monitoring over lengthy periods of time is often quite poor (Bornstein, Hamilton, & Bornstein, 1986).

In summary, self-monitoring procedures can be used to assess many behaviors and controlling factor-target behavior interactions. Some reactive effects of self-monitoring include improved behavioral insight and adaptive behavior change. The major limitations, however, are related to limited accuracy and compliance.

Questionnaires

Many target behaviors can be assessed with questionnaires. Questionnaires offer several advantages to the behavior analyst. They are typically inexpensive and easily obtained, administered, and interpreted. In addition, a vast number of questionnaires are available for assessment purposes (see Hersen & Bellack, 1988, for a compilation of behavioral assessment inventories). Finally, questionnaires have broad clinical applicability. For example, they can be used for screening purposes; assisting with classification and diagnosis; quantifying the magnitude, frequency, and duration of target behaviors; and quantifying treatment process and outcome (Jensen & Haynes, 1986).

The most significant problem with questionnaires is that item wording and the manner in which summary scores are computed typically violate the fundamental behavioral assumption of contextualism. Many questionnaire items, for example, ask the client to provide a rating of agreement (e.g., “strongly agree, agree, disagree, strongly disagree”) with a general statement about a particular trait or behavior (e.g., “I often feel angry”). Other questionnaires may request that the client provide an estimate of the magnitude and/or frequency of target behavior or controlling factor occurrence during some prespecified time period (e.g., how many “hassles” or stressors were experienced in the past month). Further, in many questionnaires, items measuring distinct behaviors, thoughts, and affective states are summed together to form a global index of

functioning. Because these measurement strategies average across situations, time, and behaviors, it is impossible to derive crucial information about interactions between controlling factors and target behaviors. Therefore, many questionnaires are minimally helpful for intervention design.

In sum, questionnaires are convenient, inexpensive, and versatile. Unfortunately, many questionnaires fail to provide information about controlling factor-target behavior interactions. As a result, they are of limited value in identifying functional relationships and designing interventions.

Product-of-Behavior and Archival Data

Product-of-behavior measures can be thought of as “circumstantial evidence” that a target behavior has occurred (e.g., weight gain or loss as an index of eating, bruises as an index of self-injurious behavior, odometer mileage readings as an index of driving, grades as an index of studying, blood alcohol levels as an index of drinking, or cigarettes in a pack as an index of smoking). Archival data may include therapy notes, medical records, photographs, psychological and medical reports, military service records, school records, and employment records.

As long as a target behavior produces a quantifiable residue, or is reliably recorded, product-of-behavior and archival measures can be used in a behavioral assessment. Although these measurement methods can be very convenient, concerns about validity limit their applicability. For example, the nursing staff at a medical hospital were instructed to estimate the amount of food left on meal trays by a client being treated for anorexia nervosa. This information was carefully recorded in the medical record at the end of each shift. As treatment progressed, lesser amounts of food remained on the trays after each meal. The client, however, failed to gain weight. Observations of client behavior revealed that the food was being offered to visitors and occasionally hidden in the room to be discarded later. Thus, this product-of-behavior measure was not a valid index of improved eating behavior.

SUMMARY OF ASSESSMENT METHODS

Different procedures can be used to sample controlling factor-target behavior interactions. To use event, duration, and real-time sampling strategies properly, the target behavior should have discrete beginning and end points. Interval and momentary-time sampling strategies do not have such a requirement.

The locations where assessment data can be collected range from naturalistic settings to controlled analog settings. Analog settings, which can support precise measurement, have limited ecological validity. Alternatively, assessment data collected in naturalistic settings may be more ecologically valid, but less precise.

Many methods are available for collecting data on target behaviors and controlling factor-target behavior interactions. Behavioral interviewing, self-monitoring, and questionnaires can assess the cognitive, affective, physiologi-

cal, and overt-motor components of target behaviors. In contrast, nonparticipant observation, participant observation, and product-of-behavior data are most useful for measuring overt-motor behaviors. In addition to differences in capacity for measuring target behavior content, each assessment method has advantages and disadvantages in terms of convenience, cost, and validity.

In designing a behavioral assessment, the clinician must consider the strengths and limitations of various combinations of sampling schemes, sampling locations, and assessment methods. At a minimum, however, efforts should be made to use at least two assessment methods in combination with behavioral interviewing. A multiple measurement strategy such as this increases the likelihood that target behaviors and controlling factors will be more validly assessed because the limitations of each method do not completely overlap.

METHODS USED TO EVALUATE ASSESSMENT DATA

Once data have been collected on target behaviors and controlling factor-target behavior interactions, the behavior analyst must use some systematic method for evaluation and interpretation. Intuitive and statistical approaches can be used to accomplish this task. In the sections that follow, each of these methods is reviewed.

Intuitive Evaluation

Intuitive approaches to data evaluation involve forming subjective estimates of the size and importance of relationships between target behaviors and controlling factors. There are some strengths to an intuitive approach to data evaluation. First, intuitive approaches require only a modest amount of time and effort and do not require any specialized training in statistics. Second, intuitive approaches can be very useful for generating hypotheses about the target behaviors and the factors controlling them. Finally, intuitive approaches can be well suited for evaluating complex patterns of interrelationships among target behaviors and controlling factors (Meehl, 1986; Nezu & Nezu, 1989).

The major problem with intuitive evaluations of behavioral assessment data, however, is related to covariation misestimation (Arkes, 1981; Kleinmuntz, 1990; Matyas & Greenwood, 1990). Consider the hypothetical self-monitoring data described in Table 5-4. In this example, the client self-monitored the following hypothesized controlling factors and target symptoms once per day for 14 days: stress level (0–9 scale), number of arguments, hours of sleep, number of pain pills taken, number of headaches, severity of headaches (0–9 scale), and duration of headaches. Self-monitoring data such as these are not uncommonly collected in many behavioral assessments.

When correlations are computed for these data, one can readily determine which controlling factors are most closely associated with target behavior topography (see Table 5-5). These same data, however, were presented to eight doc-

Table 5-4. Hypothetical Self-Monitoring Data for a Client with Chronic Headache Pain

Day	Number of stressors	Number of arguments	Hours of sleep	Headache frequency	Headache severity	Headache duration (hours)	Number of pills
01	3	7	8	4	9	1	8
02	6	1	6	3	5	3	4
03	5	3	9	6	5	2	4
04	8	1	5	7	1	4	3
05	4	2	7	1	6	4	6
06	7	2	6	5	4	3	4
07	2	2	8	2	4	1	2
08	7	5	4	5	7	6	6
09	2	2	8	3	6	2	4
10	7	3	5	5	9	3	7
11	5	3	8	4	6	1	4
12	3	1	7	5	6	2	4
13	7	3	7	7	5	1	6
14	5	3	6	6	8	2	7

toral students in a clinical training program (average years in program = 3). Students were instructed to evaluate the data as they normally would in a clinical setting. Seven out of eight students reported they used an intuitive evaluation method (e.g., "eyeballing the data") The averaged correlation estimates from these students are shown in Table 5-6.

As is apparent in Table 5-6, intuitive estimations of the size of the relationship between the controlling factors and target behavior relationships were inaccurate. While the pattern of estimated correlation coefficients was similar to that observed in the actual correlation matrix, the students underestimated the size of the large functional relationships on every occasion. Interestingly, Arkes (1981) has noted that when clinicians are presented with data in which there is a weak or absent functional relationship, intuitively derived correlation coefficients tend to overestimate actual correlations. This alternative phenomenon of perceiving correlations among sets of unrelated variables is referred to as the **illusory correlation** (Chapman & Chapman, 1969). Taken together, however,

Table 5-5. Correlations among Hypothesized Controlling Factors and Target Behavior Topography for Hypothetical Self-Monitoring Data

	Headache topography		
	Frequency	Severity	Duration
Stress level	.63*	-.25	.51
Number of arguments	.08	.65*	-.06
Hours of sleep	-.30	.00	-.77**
Number of pain pills	.14	.81**	.08

* $p < .05$ ** $p < .01$

Table 5-6. Intuitively Estimated Correlations among Hypothesized Controlling Factors and Target Behavior Topography for Hypothetical Self-Monitoring Data

	Headache topography		
	Frequency	Severity	Duration
Stress level	.40	.14	.09
Number of arguments	.13	.35	.05
Hours of sleep	-.11	-.05	-.19
Number of pain pills	.11	.42	.07

these results suggest that intuitive evaluations of assessment data can often lead to inaccurate interpretations.

In addition to covariation misestimation, several other limitations associated with intuitive data analysis have been reported in the decision-making literature (cf., Chapman & Chapman, 1969; Einhorn, 1988; Elstein, 1988; Kanfer & Schefft, 1988; Kleinmuntz, 1990; Weist, Finney, & Ollendick, 1992). A finding of particular concern, however, is the relative independence of judgment accuracy and confidence. That is, the confidence one places in his or her intuitive judgments tends to increase with experience, while accuracy often remains unchanged (Arkes, 1981; Garb, 1989).

In summary, intuitive approaches to data evaluation are inexpensive and somewhat useful for identifying patterns of relationships in complicated data sets. The accuracy of intuitive correlation estimates, however, must be seriously questioned. It is thus recommended that behavior analysts use statistical procedures, whenever possible, to evaluate assessment data.

Statistical Evaluation

Many statistical procedures can be used to evaluate behavioral assessment data. These procedures differ significantly with respect to the amount of data required, ease of use, and clinical utility.

Conditional probability analyses can often be used to analyze controlling factor-target behavior relationships (Schlundt, 1985). For the purposes of behavioral assessment, conditional probabilities are simply mathematical statements that describe the likelihood that a target behavior will occur given that some controlling factor has occurred. Consider once more the hypothetical self-monitoring data in Table 5-4. To derive the conditional probability that headaches will occur (i.e., headache frequency) given that high stress levels have occurred, the behavior analyst could classify each day as being "high" in stress when the number of stressors exceeded four and "low" in stress when the number of stresses was four or less. The headache frequency measure could also be divided into high (headache frequency > 3) and low (headache frequency ≤ 3) days. A contingency table (see Table 5-7) could then be designed in which the behavior analyst would simply insert the number of days that fall into each cell.

**Table 5-7. Two-Way Contingency Table between
Stressor Frequency and Headache Frequency**

		Headache frequency		
		High	Low	
Stressor frequency	High	8	1	9
	Low	2	3	5
		10	4	14

Conditional probabilities

Probability of high headaches given high stress [$p(H:H)$] =
 $8/9 = .88$

Probability of high headaches given low stress [$p(H:L)$] =
 $2/5 = .40$

The initial step in conducting a conditional probability analysis of these data would be to determine the probability that the client would experience a high headache day regardless of stress level. This quantity is the “base rate” or **unconditional probability** that the client would experience a high headache day and equals $10/14$, or $.71$. By counting the number of days that fall into Cell 1, the conditional probability that a high headache day would occur on a high stress day can also be calculated. In this case, high headache activity occurred on 8 of the 9 days that high stress levels were reported. This corresponds to a ratio of $.89$. Similarly, to calculate the probability that a high headache day would occur on a low stress day, one simply needs to count the number of observations that fall into Cell 3 of the table. In this case, high headache levels were reported on 2 out of 5 low stress days. This corresponds to a conditional probability of $.40$. By comparing the conditional probability against the unconditional probability, one can readily see that knowledge about stress levels improves our ability to estimate the likelihood that a high headache day would occur.

A similar set of computations can be used to calculate the unconditional and conditional probability associated with low headache days (see Table 5-7). Further, one can conduct various statistical tests (e.g., a chi-square analysis) to determine (1) the strength of association between stress and headache levels and (2) the likelihood that this pattern of results could have occurred by chance if, in fact, no relationship exists between stress levels and headache activity (e.g., Schlundt, 1985; Suen & Ary, 1989). Thus, these simple probability analyses permit a quantitative evaluation of data that are difficult to interpret intuitively.

Conditional probability analyses have three main advantages. First, a large number of observations or data points are not required for generating probabilities (Schlundt, 1985). Second, the concepts are easy to grasp, and the computations are not complex. Finally, many computer programs can conduct statistical analyses of these sorts of data.

Time-series analysis requires that repeated measures of target behaviors or controlling factor-target behavior interactions be obtained across time. The strength of relationships among target behaviors and controlling factors is then calculated using fairly complex correlational techniques (Barlow & Hersen,

1984; Hartmann et al., 1980). When categorical data are used, however, other forms of time-series analysis (e.g., Markov modeling) can be used to compute measures of association (Gottman & Roy, 1990).

Although time-series methods can yield very accurate information about functional relationships, their clinical utility is seriously compromised because (1) a significant amount of data is required for proper analysis (Matyas & Greenwood, 1990), (2) only a few variables can be evaluated in any one analysis, and (3) the statistical concepts underlying the methodology are quite complex. In summary, statistical approaches to data evaluation can yield very accurate information about relationships among target behaviors and controlling factors. Conditional probability analysis is an easily understood and “user-friendly” method of calculating relationships among variables. It is thus a very useful behavioral assessment tool. Time-series analysis can provide excellent information about complex relationships among variables, but it is rather complicated and quite difficult to use in most clinical settings.

SUMMARY

A contemporary behavioral approach to assessment is quite sophisticated and reflects a number of important assumptions such as functionalism, contextualism, empiricism, behavioral plasticity, multivariate causality, bidirectional causation, dynamic causal interactions, and nonlinear association. Behavior analysts must therefore be familiar with a broad range of potential target behaviors, controlling factors, and methods for assessing these variables as well as the relationships among them.

Several methods are commonly used in behavioral assessment such as interviewing, observation, self-monitoring, self-report inventory administration, and product-of-behavior measurement. Each of these methods has certain advantages and limitations in assessing behavior. Because of this, it has been recommended that behavior analysts use a multimethod approach to assessment, which should include behavioral interviewing and at least two other measurement methods.

Once data are collected, intuitive and statistical procedures can be used to evaluate causal functional relationships. Intuitive approaches are most appropriate for hypothesis formation. As a method of correlation estimation, however, an intuitive approach is inappropriate.

Statistical analysis, unlike intuitive approaches, is most appropriate for estimating the strength of causal functional relationships. Conditional probability analyses are particularly useful because they require only modest amounts of data and are easily understood, and convenient to use.

STUDY QUESTIONS

1. Define behavioral assessment. On what theory is it based?
2. What are two major criticisms of the psychodynamic approach to assessment advanced in the behavioral literature? Do you agree with these criticisms? Why or why not?

3. According to psychodynamic theory, what are the most important determinants of behavior? What is the behavior theorists' argument against these determinants?
4. Discuss each of the fundamental assumptions of a behavioral approach to assessment. Define key terms associated with each assumption.
5. Describe the SORKC model of behavioral assessment. How could this model influence clinical intervention?
6. The first goal of behavioral assessment is to generate operational definitions of target behaviors and factors controlling target behaviors. To be successful in meeting this goal, what dimensions of the target behaviors need to be identified? What dimensions of controlling factors are important?
7. The second goal of behavioral assessment is to identify and evaluate relationships among target behaviors and controlling factors. How is meeting this goal related to the evaluation of clinical intervention?
8. What is the formal definition of *functional analysis* offered in this chapter? What are the important characteristics of this definition?
9. Why would one use sampling procedures to assess behavior?
10. What is event recording? Interval recording? Create a clinical case study, and describe how event recording and interval recording would be used as part of the behavioral assessment process.
11. Address the advantages and disadvantages of assessments conducted in natural settings versus analog settings.
12. According to the authors of this chapter, what are the most commonly reported behavioral assessment methods used?
13. What types of behavior are important in behavioral interviewing? Why are both verbal and nonverbal behavior important?
14. Describe the various behavioral observation methodologies. Discuss their respective strengths and drawbacks.

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CHAPTER 6

Personality Assessment

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INTRODUCTION

Administration and interpretation of psychological tests are hallmarks of the clinical psychologist. Whereas other mental health professionals, along with the clinical psychologist, develop an expertise in interviewing and treatment, psychological testing represents a clinical skill that is unique to the psychologist. In this chapter, we focus on use of psychological tests in the objective assessment of personality.

Personality assessment in clinical psychology involves use of psychological tests to obtain information regarding an individual's personality functioning. Often, the primary goal of the clinical psychologist conducting a personality assessment is to identify abnormal personality characteristics or behaviors and symptoms that may be related to various psychological or psychiatric disorders (Finn & Butcher, 1991). However, in conducting a comprehensive clinical assessment, the psychologist aims to describe the entire realm of the individual's personality, including so-called "normal" traits of personality that do not constitute symptoms of maladaptive behavior. Both types of assessment will be described in this chapter.

Objective tests of personality are ones in which administration and scoring of the test are standardized. This means that there is no room for deviation from standard procedures for their administration, or for the exercise of judgment in their scoring. They are considered objective, in that the stimuli presented to the test-taker and options for responding to these stimuli are highly structured and unchanged from one individual to another. Further, when standard scoring rules are used, the same set of responses will always yield the same scores.

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

Objective tests of personality are used to aid the clinician in learning about the individual's personality characteristics. As was just indicated, such characteristics may fall within the normal range, or they may represent extreme, abnormal characteristics or symptoms of psychopathology.

A second class of personality tests is often referred to as **projective techniques**. These tests require considerably greater flexibility in their administration, and they rely on a scorer's judgments of the responses that test subjects give. In this chapter, we focus only on objective tests of personality.

Before the use of objective techniques in clinical personality assessment is described, some fundamental principles of psychological testing will be introduced. Next, the various ways in which objective measures of personality are developed will be described. Finally, the use of some commonly employed tests in clinical personality assessment will be described and illustrated, and the recent introduction of computer technology in the area of objective personality assessment will be reviewed.

OVERVIEW OF PSYCHOLOGICAL TESTING

Development of psychological tests typically is carried out by individuals with specialized training in an area of psychology called **psychometrics**. Psychometricians are trained in the scientific basis of psychological measurement. In clinical psychology, psychometric principles are applied in the development of tests of intelligence, personality, and psychopathology (psychological dysfunction). Three of the more important concepts in psychometrics, ones that we will use frequently in our discussion of objective measures of personality, are **reliability**, **validity**, and **norms**.

Reliability

The reliability of a test refers to the consistency of its scores. Just as when we take an individual's temperature we would expect to get the same results with two consecutive measurements, so should we expect to get the same score with repeated measurement of a psychological characteristic. Psychometricians have developed several ways of estimating the reliability of psychological test scores, including **test-retest reliability**, **alternate form reliability**, **internal consistency**, and **interscorer reliability**. Table 6-1 presents a brief description of each of these indexes of reliability.

Which of these indexes is used to evaluate the reliability of a given test depends in part on the nature of the test. Test-retest reliability and internal consistency are most commonly reported for objective measures of personality. Alternate forms of personality assessment instruments are rare. Interscorer reliability is inapplicable to objective measures of personality, since, by definition, scores on such tests are derived in an objective manner. Projective measures of personality, such as the Rorschach Inkblot Test (Rorschach, 1921) or the Thematic Apperception Test (Murray, 1943), do rely heavily on the judgment of a scorer, and interscorer reliability therefore is of vital importance in their evaluation.

Validity of a test is the extent to which it measures what it purports to measure. A test developer may develop a perfectly reliable test that still could be entirely invalid. To give an extreme example, if we were to develop a test of personality that consisted of one question—"What is your shoe size?"—we might expect it to be quite reliable in that we would receive the same response from subjects who took our test on two consecutive days. However, it is not likely that this test would be a valid measure of how extraverted or outgoing an individual might be. Psychometricians have identified several types of validity that need to be considered when evaluating a psychological test. These include **face validity**, **content validity**, **criterion validity**, **construct validity**, and **incremental validity**. Table 6-2 presents a brief description of these various aspects of validity.

As is the case for indexes of reliability, which type of validity is used to evaluate a test depends on the nature and goals of the test in question. In objective personality assessment, face validity is considered to be of lesser importance than other forms of validity. However, an extreme absence of face validity may diminish considerably the motivation of the test-taker to cooperate with the testing process. Traditionally, content validity also was considered of secondary importance. However, recent developments in the area of objective personality assessment have rekindled interest in this aspect of validity. These will be described later in this chapter. Criterion validity has traditionally been a major index of a personality test's utility. The importance of construct validity in psychological testing was first explicated by Cronbach and Meehl (1955). More recently, Hogan and Nicholson (1988) have reiterated the significance of construct validity to personality testing. Finally, with the proliferation of personality tests, the importance of demonstrating a newly developed test's incremental validity cannot be overstated.

Table 6-1. Indexes of Reliability

Test-Retest

The same psychological test is administered twice to a sample of subjects, and a correlation is computed between their scores on the two administrations.

Alternate Forms

Two parallel forms or versions of the test are developed and administered to a sample of subjects. A correlation is computed between their scores on the two versions of the test.

Internal Consistency

One way to determine the internal consistency of a test is to split it into two halves, score each half separately for a sample of subjects, and then compute a correlation between their scores on the two halves of the test. More sophisticated techniques for estimating a test's internal consistency were developed by Kuder and Richardson (1937) and Cronbach (1951). These involve the calculation of the mean of all possible splittings of the test into halves.

Interscorer reliability

In cases where subjective judgments may be necessary to score a test, the same responses produced by a sample of subjects are scored by two or more scorers, and the correlation between these resultant scores is calculated.

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A test may possess ample reliability and validity and still be of little clinical utility without the development of adequate norms. Norms are established by administering a psychological test to a representative sample of individuals with whom the test is to be used. Scores of this representative sample, often referred to as a **standardization sample**, are used as a uniform frame of reference for the interpretation of scores on a test. The score obtained by an individual who subsequently completes the test is converted into a **standard score**, which conveys to the test interpreter the test-taker's standing on the test in reference to the standardization sample.

A standard score typically used in intelligence testing is the IQ, with a mean of 100 and standard deviation of 15. An individual who receives a standard score of 100 on an IQ test has performed the same as the average person in her or his reference group in the standardization sample. A standard score employed often in personality testing is the **T-score**, with a mean of 50 and a standard deviation of 10. An individual who receives a T-score of 70 on a personality test has scored two standard deviations above the mean for his or her group.

Table 6-2. Types of Validity

Face Validity

The extent to which a test *appears* to measure what it is designed to assess. Face validity is essentially in the eyes of the test-taker. A test particularly low in face validity may induce an uncooperative approach in the individual taking the test.

Content Validity

The extent to which the content of the test items adequately samples the content of the domain being tested. For example, to what extent does the content of items on a scale measuring depression relate to the symptoms of depression, and to what extent do these items cover the full range of depressive symptoms?

Criterion Validity

To what extent do scores on a test empirically predict a given extra-test criterion, that is, a criterion that is not part of the test given? For example, to what extent does the score on a scale of depression correlate with a clinician's independent rating of how depressed a subject might be? There are essentially two types of criterion validity: *concurrent validity*, in which the test and the criterion are obtained at the same time, and *predictive validity*, in which the test is administered first, and the criterion is measured at a future time.

Construct Validity

This is a more complex form of validity and designed to answer the question, "To what extent does the test measure accurately the psychological construct it was designed to measure?" The construct validity of a test hinges on all of the forms of validity just reviewed. Two important additional elements of construct validity are convergent and discriminant validity. *Convergent validity* refers to the extent to which scores on a test are found to correlate empirically with scores on measures of constructs that are related theoretically to the one being measured. *Discriminant validity* is the extent to which scores on a test are found not to correlate with measures of constructs to which theoretically they should be unrelated.

Incremental Validity

To what extent does a new test, designed to measure psychological characteristics already measured by an existing instrument, improve on the existing test in its psychometric performance?

HISTORICAL FOUNDATIONS OF OBJECTIVE PERSONALITY ASSESSMENT

Use of standardized tests of personality has been an integral component of the practice of clinical psychology almost from its inception. To understand properly how the field of objective personality assessment has evolved to the point at which we find it today, we first will need to explore some of its historical foundations.

In reviewing the historical development of personality assessment, Ben-Porath and Butcher (1991) distinguished between three general categories of techniques, based on the sources and means for the collection of personality data. **Behavioral observations** include those methods by which personality characteristics are assessed via systematic observations of an individual's behavior. **Somatic examinations** consist of methods by which personality characteristics are deduced based on an individual's physical features and appearance. **Verbal examinations** involve methods in which personality assessment is based on verbalizations (written or spoken) provided by the individual being assessed or by someone who knows her or him. Present-day techniques of objective personality assessment rely almost exclusively on verbal examinations. Thus, we will limit our historical review of personality assessment to this category of techniques.

Early Approaches to Personality Assessment

Verbal examinations were the least commonly practiced methods used in the very early days of personality assessment. This is not surprising, since until the 18th century, in most societies, there were relatively few people who had the ability to read and write. An exception to this rule, however, was to be found in China. DuBois (1970) notes that 3,000 years ago, an elaborate system of competitive examinations was used for selecting civil servants in China. Some of these tests were designed to test the personal characteristics of these early job candidates. Examinees were required to write for hours at a time and for a period of several days in succession. At the very least, those who were not highly motivated would surely have dropped out of this grueling process!

Modern Beginnings of Objective Personality Assessment

The modern precursors of objective personality assessment were developed in the late 19th century. The British scientist Sir Francis Galton was the first to suggest and try out questionnaires for measuring what he referred to as "mental traits." As reported by Forrest (1974), in 1884, Galton was invited to give a lecture at Cambridge University, which he devoted to the ways by which it might be possible to measure personality differences. This lecture subsequently was reprinted in the journal *Fortnightly Review*. Galton (1884) began his lecture by pointing out that methods for the assessment of personality characteristics could be developed even in the absence of a well-formulated theory of person-

ality. He went on to describe a series of ingenious approaches he had devised for measuring personality. Unfortunately, Galton soon turned his interest to other matters and did not pursue his own proposals.

The Dutch scientists Heymans and Wiersma (1906) offered the first published account of the development of a structured rating scale in the study of personality. They constructed a 90-item rating scale and asked 3,000 physicians to use this measure to rate people whom they knew well. Using these ratings, they conducted statistical analyses that were designed to identify behavioral tendencies that tended to co-occur. Heymans and Wiersma's approach and some of their items were expanded eventually by Hoch and Amsden (1913) and by Wells (1914). These laid the foundation for the development of Woodworth's (1920) **Personal Data Sheet**, the forerunner of all personality self-report inventories (Goldberg, 1971).

As is the case in many other areas in clinical psychology, Woodworth's (1920) work on the Personal Data Sheet was part of the United States' World War I effort. His aim was to develop a screening tool that could be administered to all potential inductees into the armed forces in order to identify those who might be susceptible to "shell shock," the term used at the time for what today would be termed posttraumatic stress disorder. According to Dubois (1970), Woodworth initially compiled hundreds of items describing what he believed to be a neurotic condition, and he put them onto a self-report yes/no questionnaire. In a series of empirical investigations, he deleted from his questionnaire the items that frequently were endorsed by "normal" individuals. The Personal Data Sheet eventually was trimmed down to 116 items, all keyed such that an answer "yes" indicated the presence of neurosis.

Although the Personal Data Sheet was never actually used for the purposes for which it was constructed—the war ended by the time it was ready for use—both its items and its empirically based methods of construction are the cornerstones for most current-day objective personality inventories. Some of the early objective measures of personality that were developed in the tradition of the Personal Data Sheet included Downey's (1923) Will-Temperament tests, Travis's (1925) Diagnostic Character Test, Heidbreder's (1926) measure of extraversion-introversion, Allport's (1928) test for Ascendence-Submission, Thurstone's (1930) Personality Schedule, Bernreuter's (1933) Personality Inventory, and Humm and Wadsworth's (1935) Temperament Scale. The latter two were the most widely used objective measures of personality in the first half of the 20th century.

In 1946, Ellis published a highly critical review of the use of self-report personality inventories. Ellis (1946) was particularly critical of these measures' susceptibility to intentional distortion on the part of the test-taker. As described by Dahlstrom (1992), Ellis's review had a chilling effect on the acceptance of personality inventories by clinical practitioners. According to Dahlstrom (1992), although at the time, the newly developed Minnesota Multiphasic Personality Inventory (MMPI; Hathaway & McKinley, 1943) actually addressed successfully most of Ellis's (1946) objections, this test was not yet known well enough to be able to counter the effects of his review. We turn next to the development of the MMPI.

Introduction of the MMPI in the 1940s represents one of the most important milestones in the development of objective methods of personality assessment. Research on the MMPI was initiated in the 1930s by Starke R. Hathaway, a psychologist, and J. Charnley McKinley, a psychiatrist, both on the staff of the University of Minnesota Hospital. Their goal was to develop a screening instrument to be administered to hospital patients in medical and psychiatric units for the purpose of identifying the presence of a psychological disorder or psychopathology. Hathaway (1965) noted that in developing the MMPI, an attempt was made to address and overcome various problems that had been identified in previous objective measures of personality. The following steps were taken to achieve this goal:

1. Items were written to be intelligible at relatively low reading levels.
2. Items were stated in the first person in an attempt to induce more self-reference in the test-taker.
3. Scoring was highly simplified, with all items receiving the same weight.
4. Items were not selected solely on the basis of face validity.
5. Items were worded such that some indicated psychopathology when answered "true," whereas others denoted psychopathology when answered "false."
6. A scale, *F*, was constructed to detect an unusual response set that might indicate reading difficulties, random responding, or intentional faking.
7. Data for the test's norms were collected from ordinary, adult subjects rather than exclusively from college students.
8. All of the items for the various scales were selected on the basis of empirical data analyses.

Hathaway and McKinley (1943) developed eight original clinical scales for the MMPI, each designed to identify the presence of a specific form of psychopathology. The labels for these scales were **Hypochondriasis**, **Depression**, **Hysteria**, **Psychopathic Deviance**, **Paranoia**, **Psychasthenia**, **Schizophrenia**, and **Hypomania**. From an initial pool of roughly 1,000 items, Hathaway and McKinley (1940) selected 504 items that they judged would be useful in the assessment of personality.

In constructing each of the clinical scales, Hathaway and McKinley (1943) administered the set of 504 MMPI items to eight groups of patients diagnosed with these conditions. In addition, these items were administered to samples of "normal" individuals who were visitors to the University of Minnesota Hospital or college freshmen at the University of Minnesota. Each scale was constructed separately by identifying which of the 504 MMPI items were answered by members of a given diagnostic group in a unique manner, different from both the normals and other relevant clinical groups. Subsequently, two additional clinical scales labeled **Masculinity-Femininity** and **Social Introversion** were added to the MMPI, which was then expanded to include 550 items.

In addition to the care taken in the development of its clinical scales, an

innovative feature of the MMPI was the development of three **validity scales** for the test. Validity scales were added to the MMPI to allow the test interpreter to identify individuals who approached the test in a manner that might distort their scores on the clinical scales. These scales, labeled *L*, *F*, and *K*, were designed respectively to identify tendencies to deny or minimize problems, to report highly unusual attitudes or behavior, or to approach the test in a defensive manner.

Norms for the MMPI were based on the responses of roughly 700 “normals,” mainly visitors and employees at the University of Minnesota hospital who volunteered to participate in a research project. Separate norms were developed for men and women, and T-scores (described previously) were chosen as the standard scores that would allow the test interpreter to place an individual taking the test in reference to the normative or standardization sample.

In spite of Hathaway and McKinley’s efforts, the MMPI did not prove to be highly successful in its initial goal of identifying directly the presence of different forms of psychopathology. Particularly problematic was the fact that individuals sometimes would produce elevated scores on multiple scales. However, as clinicians continued to use the test, it became evident that individuals who produced certain patterns of scores on the MMPI tended to display consistent personality characteristics. This observation sparked a plethora of research projects designed to identify empirical correlates of scores on MMPI clinical scales. An empirical correlate is a personality feature or characteristic that is found by empirical research to be present when an individual obtains an elevated score on a given scale. As the empirical literature on the test grew, so did its use by clinical psychologists. In a survey reported by Sundberg (1961), the MMPI was found to be the most widely used objective measure of personality and one of the most widely used tests overall.

CURRENT APPROACHES TO OBJECTIVE PERSONALITY TEST CONSTRUCTION

This section focuses on the description of various methods used today in the construction of objective measures of personality. Some of today’s practices are rooted in the experiences of the past. This is encouraging, since one of the goals of the scientific process in clinical psychology is to provide a cumulatively expanding empirical basis for the practice of this discipline.

A second important feature of the methods to be described is that some of them were developed by psychologists who are not clinicians. The related field of **personality psychology** has contributed considerably to the development of clinical personality assessment. The contributions of personality psychology have been both methodological, as will be described next, and substantive, as manifested by the clinical application of tests developed by personality psychologists. Before turning to a description of the specific methods used to construct objective tests of personality, some further words on the distinction between “normal” and “abnormal” personality are in order.

A distinction between “normal” and “abnormal” personality characteristics was made early in this chapter. Individual differences on normal personality traits characterize all people. For example, all people may be placed somewhere along a continuum on a personality trait labeled extraversion, which characterizes the degree to which an individual is socially outgoing. Abnormal characteristics are sometimes viewed as extreme levels of normal personality traits. For example, an individual extremely low on extraversion may be suffering from an avoidant personality disorder. Other abnormal characteristics may be more distinct from normal personality traits; that is, they are qualitatively rather than quantitatively different. For example, the tendency to experience auditory hallucinations may not have a normal-level counterpart.

Objective personality tests that are developed to be used in clinical assessment tend to focus on abnormal personality characteristics, although they often may yield information about normal personality functioning as well. These tests typically are developed by psychologists with training and practical experience in clinical psychology. Normal personality inventories focus primarily on normal personality traits, although here too attempts may be made to broaden their use so that they may be used to identify extreme, abnormal levels of personality traits. In objective clinical personality assessment, it is not uncommon for the clinician to administer both types of tests to a client. We will return to this issue later in this chapter when we discuss current practices in clinical personality assessment. We turn now to a description of some specific approaches to objective personality test construction.

Three Approaches to Personality Test Construction

Burish (1984) has identified and described three approaches to objective personality test construction, which he labeled external, inductive, and deductive. For descriptive purposes, we will modify these labels slightly in describing present practices in personality test development. Before doing so, however, it is important to point out that these methods are not mutually exclusive. Current test constructors can, and do, use various combinations of these approaches in the development of their tests.

EXTERNAL CRITERION APPROACH. We have already seen an example of the **external criterion** approach in the development of the MMPI. This approach is sometimes referred to as the method of **empirical keying**. Test developers who use this approach are interested in predicting the likelihood that an individual might belong to a certain class of people. Developers of the MMPI, for example, in constructing the Depression scale, were interested in constructing a scale that could indicate the likelihood that an individual had a depressive disorder. An assumption underlying this approach is that individuals can be divided into distinct groups or types.

A test developer using the external criterion approach is likely to collect a

number of samples of subjects. One sample, the target sample, consists of individuals who are known to belong to the class of people that the test developer wishes to identify with future applications of the test. Other samples will consist of groups of subjects who are known to differ from the target sample. In the case of clinical personality assessment, the target sample is likely to consist of individuals who share a certain clinical diagnosis or problem. A second sample will likely consist of people who are assumed to be free of any psychological difficulties. Other samples may consist of individuals who have psychological problems other than the one characterizing the target sample. Items are identified that are answered differently by the target sample than they are by members of all the other samples.

A recent example of scale construction using the external criterion method is the **Addiction Potential Scale (APS)**, developed by Weed, Butcher, McKenna, and Ben-Porath (1992) for the revised version of the MMPI, the MMPI-2. These investigators were interested in developing a scale for the MMPI-2 that would indicate the likelihood or potential that an individual has a problem with addiction. Their target sample consisted of a group of subjects who were in treatment for substance abuse. Two other samples were used: one, a nonclinical sample assumed to be relatively free of any disorder; a second, a sample of psychiatric inpatients undergoing treatment for problems other than substance abuse. Items were selected for the APS only if they were answered differently by the substance abuse sample than by members of both comparison samples.

This recent development of a personality scale by means of the external criterion method is relatively rare. Because of difficulties inherent in the interpretation of scores on such scales, this method is no longer used widely in the construction of objective tests of personality.

INTERNAL STRUCTURE APPROACH. Proponents of the **inductive** approach, according to Burish (1984), assume that there exists a basic, universal structure of personality, and they attempt, through the process of scale construction, to discover and measure such structure. Burish (1984) labels this method inductive because test developers using this method do not set out initially to develop measures of given personality traits. Rather, they leave it up to the data to identify the important traits to be measured. We have termed this approach **internal structure** because no data other than those collected with the test itself are necessary for scale construction. Researchers who use this approach typically seek to develop what we have referred to as measures of “normal” personality traits.

A recent example of objective personality test construction using the internal structure approach is Tellegen's (1982) Multidimensional Personality Questionnaire (MPQ). Tellegen (1982) developed this instrument by administering a large pool of items to numerous samples of subjects and analyzing their responses with a statistical technique called **factor analysis**. Factor analysis is a method that allows the researcher to identify sets of items that are related to each other, thus reducing a large set of items to a smaller number of dimensions that underlie them. We have already seen an early example of this approach in the work of Heymans and Weirisma (1906), described earlier in this chapter.

Through a lengthy process of scale development, using the technique of

factor analysis, Tellegen (1982) was able to identify 11 primary personality traits or factors. A list of these traits can be found in Table 6-3. The MPQ consists of 276 items that are used to score these 11 personality traits. Contrary to most developers of normal personality tests, Tellegen also paid close attention to the task of identifying subjects who approach his test in an unusual and perhaps invalid manner. Thus, in addition to 11 primary personality scales, the MPQ has a set of validity scales similar to those of the MMPI.

INTERNAL CONTENT APPROACH. Burish (1984) refers to the third approach to personality test construction as the **deductive** approach. In its simplest form, this method consists of an a priori rational or theoretically based decision on the part of the test developer regarding the traits that he or she wishes to measure, followed by a rational selection of the items for each scale based on their content. We have labeled this the **internal content** approach, since, as in the internal structure approach, no data other than those contained in the test are necessary to construct the scales. However, here items are chosen rationally on the basis of their content.

The internal content approach characterized many early efforts at personality scale construction (Allport, 1937). In subsequent years, this approach fell into disrepute, since test users were concerned that the inherently obvious nature of test items selected in this manner would render scales particularly susceptible to intentional faking or distortion. However, several recent studies

Table 6-3. Scales of the Multidimensional Personality Questionnaire

Scale	Description of high scorers
Well-Being	Has a cheerful, happy disposition; feels good about self; sees a bright future ahead; enjoys the things he or she is doing.
Social Potency	Is forceful and decisive; is persuasive and likes to influence others; enjoys leadership roles, being noticed, and being the center of attention.
Achievement	Works hard; welcomes difficult tasks; is ambitious; sets high standards; is a perfectionist.
Social Closeness	Is sociable; is warm and affectionate; turns to others for comfort and help.
Stress Reaction	Is tense and nervous; is prone to worry and feels anxious; is irritable and easily upset; has changing moods; can feel miserable without any reason.
Alienation	Believes that others wish to harm her or him; feels "used" by others; believes he or she has had a lot of bad luck.
Aggression	Is physically aggressive; enjoys upsetting others; enjoys scenes of violence; vindictive.
Control versus Impulsivity	Is reflective, cautious, and careful; is rational, sensible, level-headed; likes to plan activities in detail.
Harm Avoidance	Avoids dangerous activities and experiences; prefers safer activities and experiences even if they are tedious or aggravating.
Traditionalism	Endorses high moral standards and strict child-rearing practices; opposes rebelliousness; condemns selfish disregard of others.
Absorption	Is imaginative; can vividly reexperience the past; becomes deeply emersed in own thoughts; experiences states of altered awareness.

Adapted from Tellegen, A., & Waller, N. G. (in press). Exploring personality through test construction: Development of the Multidimensional Personality Questionnaire. In S. R. Briggs & J. M. Cheek (Eds.), *Personality measures: Development and evaluation*. Greenwich, CT: JAI Press. Used by permission.

have demonstrated that scales constructed by the more straightforward and simple internal content approach are likely to be as valid as those that are developed using more sophisticated internal structure and external criterion method of test construction (Burish, 1984; Hase & Goldberg, 1967). Additionally, the notion that by using methods such as external criterion keying we might be able to develop “subtle” measures of personality that might allow us to measure an individual’s traits without him or her knowing what we were interested in has been questioned (e.g., Timbrook & Graham, 1993; Weed, Ben-Porath, & Butcher, 1990). Thus, researchers increasingly have used the internal content approach to scale construction.

The **MMPI-2 Content Scales** were developed by the internal content method (Butcher, Graham, Williams, & Ben-Porath, 1990) for the revised version of the MMPI. These researchers sought to develop a set of scales that would capture the full range of content on the MMPI-2 and allow for direct, psychometrically reliable communication between the individual taking the MMPI-2 and the test’s interpreter. Butcher et al. (1990), following the previous work of Wiggins (1966) in this area, enhanced the internal content approach by following up on the initial content-based item selection with a series of statistical analyses designed to maximize the internal consistency of the MMPI-2 Content Scales. This technique yielded a set of 15 scales that represent a major innovation in the MMPI-2. Further details about these scales are provided later in this chapter.

CURRENT TESTS USED IN OBJECTIVE PERSONALITY ASSESSMENT

Having discussed some of the fundamental principles of psychological testing, the history of objective personality assessment, and current approaches to personality test construction, we now turn to an overview of some objective measures of personality that clinical psychologists presently use. In doing so, we will distinguish between measures of abnormal and normal personality functioning as described earlier in this chapter.

Measures of Abnormal Personality Functioning

Identification of abnormal behaviors, emotions, and cognitive experiences is one of the central tasks of the psychologist conducting a clinical personality assessment. A second important task is to gather information that may be helpful in rendering a formal diagnosis of the individual’s condition. In both tasks, clinical psychologists rely heavily on measures of abnormal personality functioning. The MMPI (Hathaway & McKinley, 1943) continues to be the most widely used objective test of personality (Craig & Horowitz, 1990; Lubin, Larsen, & Matarazzo, 1984; Sweeney, Clarkin, & Fitzgibbon, 1987). We begin this section with a review of current applications of the MMPI followed by a brief description of two additional current measures of abnormal personality functioning.

MMPI-2 AND MMPI-A. We have already discussed the development and initial uses of the MMPI. In spite of its continued popularity, as early as the 1960s researchers were urging that some important revisions be made in the MMPI (Butcher, 1969). As use of the MMPI expanded from the University of Minnesota Hospital to the entire country, as well as to many nations and cultures overseas, an issue of primary concern was the applicability of the norms for the original version of the test. **Norms** for the MMPI were based on a standardization sample consisting mainly of Caucasian Minnesotans who had an average of 8 years of education and who were employed primarily as farmers and laborers.

Other problems with the original MMPI involved archaic wording and anachronistic references in some of the test items, use of male-oriented language in other test items, and inclusion of questions pertaining to religious beliefs, sexual orientation, and excretory functions, which many found offensive. Additionally, researchers and clinicians were concerned that scales developed in the 1930s and 1940s would not capture the full range of psychological dysfunction seen in the 1960s and 1970s. For these and similar reasons, the publisher of the MMPI, the University of Minnesota Press, initiated a 10-year research project lasting from 1982 to 1992 and culminating in two new versions of the test: the MMPI-2 and the MMPI-A. The former, published in 1989, is the new adult version of the test; the latter, published in 1992, is a newly developed adolescent version of the MMPI.

MMPI-2. The current adult version of the test, the **MMPI-2** (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989), consists of 567 items for which the test-taker is asked to answer either “true” or “false.” A new normative sample of 2,600 individuals was collected throughout the United States, with proportional representation of ethnic and racial minorities (Butcher et al., 1989). In addition, problematic items were either rewritten or deleted from the test, and new items dealing with specific clinical issues, such as drug abuse, suicidal ideation, and treatment readiness, were added to the new booklet. The test can be administered using a booklet and an answer sheet, or on-line with the aid of a computer. The former method of administration took an hour and a half to complete; now using a computer, administration time typically is reduced to 45 to 75 minutes. The individual’s responses to the test items are scored on several different sets of scales, described in Table 6-4.

As seen in Table 6-4, the MMPI-2 has seven validity scales designed to help the clinician determine the extent to which the individual has provided accurate information in responding to the test items. These scales are particularly useful in detecting situations in which the individual is either unable or unwilling to provide an accurate picture of his or her present level of functioning. For example, an individual who, as the result of an acute psychotic state, is highly confused and disorganized will likely produce an elevated score on scales *F*, and *VRIN*, indicating a pattern of unusual and inconsistent responding. In such cases, it would be inappropriate to interpret scores on the remaining scales. On the other hand, an individual being screened for a high-risk position, such as a nuclear power plant operator, who wishes to present herself or himself

Table 6-4. Scales of the MMPI-2

Scale (abbreviation)	Implications of high scores
<i>Validity Scales</i>	
Cannot Say (CS)	The number of items left unanswered or answered both "True" and "False." A large number of items omitted may artificially deflate scores on all other MMPI-2 scales.
Lie (L)	The individual has denied minor flaws and shortcomings common to most human beings.
Infrequency (F)	The test-taker has reported a large number of unusual and uncommon problems and beliefs; may indicate exaggeration, random responding, or extreme distress.
Defensiveness (K)	The individual is defensive and less likely to acknowledge psychological problems.
Back F (Fb)	Same as F, except that items scored on this scale are located in the second half of the test booklet.
Variable Response Inconsistency (VRIN)	The individual has answered the test items in an inconsistent manner, suggesting random responding.
True Response Inconsistency (TRIN)	The individual has engaged in a response set of answering items either "True" or "False" in an inconsistent manner.
<i>Clinical Scales</i>	
1. Hypochondriasis (Hs)	The individual has reported a large number of somatic complaints and appears to be preoccupied with her or his physical health.
2. Depression (D)	The test-taker is depressed, has a negative self-view, is pessimistic and hopeless.
3. Hysteria (Hy)	Tendency to deny psychological problems and express difficulties through physical health complaints.
4. Psychopathic Deviate (Pd)	Engagement in antisocial behavior, disregard of social customs and norms, superficial experience and expression of emotions.
5. Masculinity-Femininity (Mf)	Tendency to deviate from stereotypical masculine (for men) or feminine (for women) interests and behaviors.
6. Paranoia (Pa)	Excessive interpersonal suspiciousness and sensitivity, persecutory ideation.
7. Psychasthenia (Pt)	Increased levels of anxiety, tendency toward obsessive thinking, difficulties making decisions.
8. Schizophrenia (Sc)	Unusual thinking and perceptual processes may reach the levels of delusions and hallucinations, interpersonal alienation.
9. Hypomania (Ma)	Excessive level of energy and emotional excitement, tendency to overreact and experience flight of ideas.
10. Social Introversion (Si)	Shyness and tendency to avoid social situations.
<i>Content Scales</i>	
Anxiety (ANX)	Psychological and somatic manifestations of a heightened level of anxiety.
Fears (FRS)	General tendency toward fearfulness and reporting of many specific fears.

(Continued)

Table 6-4. (Continued)

Scale (abbreviation)	Implications of high scores
Obsessiveness (OBS)	Obsessive-compulsive behaviors and cognitions, indecisiveness.
Depression (DEP)	Dysphoric mood, self-depreciation, lack of drive, and possible suicidal ideation.
Health Concerns (HEA)	General preoccupation with physical health, somatic complaints focusing on gastrointestinal and neurological functioning.
Bizarre Mentation (BIZ)	Psychotic symptomatology.
Anger (ANG)	Irritability and tendency toward explosive behavior.
Cynicism (CYN)	Interpersonal distrust and misanthropic beliefs.
Antisocial Practices (ASP)	Engagement and a variety of antisocial behaviors and possession of antisocial attitudes.
Type A Behavior (TPA)	The individual is competitive and irritable, may sometimes be viewed as interpersonally hostile.
Low Self-Esteem (LSE)	A negative and demeaning self-view, interpersonal submissiveness.
Social Discomfort (SOD)	Interpersonal shyness and social introversion.
Family Problems (FAM)	Tension and conflict in the individual's family life.
Work Interference (WRK)	Psychological problems that might interfere with adequate work performance.
Negative Treatment Indicators (TRT)	Beliefs, personality characteristics, and symptoms that may interfere with psychological treatment.

in an overly positive manner, will likely produce elevated scores on scales *L* and/or *K*.

The 10 clinical scales of the MMPI-2 remain essentially unchanged from their original composition. As mentioned earlier, Hathaway and McKinley's (1943) initial intent to develop scales that would yield direct diagnoses was unsuccessful. However, over the past 50 years a massive amount of empirical information has been compiled on the utility of the MMPI-2 clinical scales. To prevent confusion between the initial and current uses of these scales, it is customary to refer to them by their abbreviation or number, rather than their original label. For example, the original scale Hypochondriasis is now referred to as *Hs*, or scale 1. Table 6-4 provides a brief description of the characteristics associated with the MMPI-2 clinical scales.

The third primary set of scales scored on the MMPI-2 are the new Content Scales (Butcher et al., 1990). Development of these scales was described earlier in this chapter. Recent research with the MMPI-2 Content Scales suggests that they function well as supplements to the original clinical scales (e.g., Ben-Porath, Butcher, & Graham, 1991; Ben-Porath, McCully, & Almagor, 1993). Additional supplementary scales available for the MMPI-2 address areas such as posttraumatic stress disorder (Keane, Malloy, & Fairbank, 1984), substance

abuse (Weed et al., 1992), and marital difficulties (Hjemboe, Butcher, & Almagor, 1992).

With initial publication of the MMPI-2 in 1989, some concerns were raised about the comparability of the original and revised versions of this test. A recent study reported by Webb, Levitt, and Rojdev (1993) indicates that a vast majority of clinical psychologists interested in personality assessment are now comfortable enough with the MMPI-2 that they already use it in their practice or plan to do so in the near future. Interpretive guides, summarizing the findings of years of research and clinical experience with the MMPI and MMPI-2, are available to assist clinicians in using this test (e.g., Butcher & Williams, 1992; Graham, 1993; Greene, 1991). In addition, computer programs are available that aid clinicians in the interpretation of MMPI-2 profiles. These programs provide automated interpretations of an individual's test scores, based on the author's knowledge and experience with the MMPI-2. Use of such programs will be described and illustrated later in this chapter.

MMPI-A. In 1982, when the University of Minnesota Press decided to revise and update the MMPI, a second decision was made to explore the possibility of developing a separate adolescent version of the inventory. The original MMPI had a lengthy history of clinical and research use with adolescents guided by the work of Hathaway and Monachesi (1961) and Marks, Seeman, and Haller (1974). However, all of the difficulties hindering use of the MMPI with adults also were problematic with adolescents. In addition, many of the MMPI items were inappropriate or less appropriate for use with adolescents, and none of the test items dealt directly with adolescent issues.

Data for the potential development of a new adolescent version of the MMPI were collected in schools throughout the United States. Based on empirical analyses conducted with these data, the test publisher decided to develop a separate adolescent version of the test. The **MMPI-A** (Butcher et al., 1992) consists of 478 items. The smaller number of items on the MMPI-A than on the MMPI-2 was intended to facilitate use of the test with adolescents, who tend, on average, to have a shorter attention span than adults. Norms were based on the responses of 1,620 adolescent boys and girls who completed an experimental version of the MMPI-A. Items that were deemed inappropriate or less useful for assessing the personality and problems of adolescents were dropped from the MMPI-A and replaced with items dealing directly with adolescent issues, such as drug abuse, school problems, negative peer group influences, and low achievement motivation.

Scales of the MMPI-A resemble, for the most part, their counterparts on the MMPI-2. However, several new adolescent-specific content scales were developed for the MMPI-A (Williams, Butcher, Ben-Porath, & Graham, 1992). These include measures of Conduct Problems, Alienation, Low Aspirations, and School Problems. New substance abuse scales have also been developed for the MMPI-A (Weed, Butcher, & Williams, 1993). Initial indications are that clinicians find the MMPI-A a useful addition to tests available for the objective assessment of adolescents' personality. Data presented by the test's developers indicate that it possesses adequate levels of reliability and validity (Butcher et al., 1992).

MILLON CLINICAL MULTIAXIAL INVENTORY. Another recent addition to the measures of abnormal personality functioning is the **Millon Clinical Multiaxial Inventory** (MCMI; Millon, 1983) and its more recent revision, the **MCMI-II** (Millon, 1987). As stated by Millon (1987), "A major goal in constructing the MCMI and MCMI-II was to keep the total number of items comprising the instrument small enough to encourage use in all types of diagnostic and treatment settings, yet large enough to permit the assessment of a wide range of clinically relevant behaviors" (p. 3). Thus, the test is limited to 175 items, potentially objectionable items were screened out, and wording was geared toward an eighth-grade reading level.

A second distinguishing characteristic of the MCMI-II, put forth by Millon (1987), is that each of the 22 scales of the test was constructed on the basis of a specific theory of personality and psychopathology. The scales also are linked to various forms of psychopathology described in the *Diagnostic and Statistical Manual-III-R* (DSM-III-R; American Psychiatric Association, 1987). An adolescent version of the test, the **Millon Adolescent Personality Inventory** (Millon, Green, & Meagher, 1982), also has been published.

Millon (1987) warns that the MCMI-II is not intended as a general test of personality to be used in nonclinical settings. Thus, use of the MCMI-II is limited to individuals who are known to have psychological problems, but it cannot be used to screen for the presence of behavioral problems or psychopathology. Recent reviews of the MCMI-II written by Haladyna (1992) and Reynolds (1992) have praised the MCMI-II for its theoretical foundation, while at the same time raising questions concerning its psychometric performance. Reynolds (1992), in particular, regrets the highly complex and unconventional manner in which the test was standardized. Both reviewers call for additional research with this instrument to guide its use as an objective measure of personality.

PERSONALITY ASSESSMENT INVENTORY. Another recent addition to the objective tests of abnormal personality is the **Personality Assessment Inventory** (PAI; Morey, 1991). This test consists of 344 items that are scored on 22 scales: 4 validity scales, 11 clinical scales, 5 scales measuring treatment-related issues, and 2 scales measuring interpersonal functioning. The norms for this test are based on the responses of 1,000 community-dwelling adults, and the test manual presents data indicating that the PAI has adequate levels of internal consistency and test-retest reliability. Data included in the manual also indicate that the test has adequate criterion validity. A question that remains to be addressed is the PAI's incremental validity in reference to already existing and well-researched clinical measures such as the MMPI-2.

Measures of "Normal" Personality

Measures of normal personality functioning can be of considerable assistance to the clinician conducting a personality evaluation. Although rarely used as stand-alone measures, such tests can augment findings of clinically-oriented inventories by broadening the scope of the assessment to include more adaptive traits and the more adaptive ranges of personality functioning. Thus, an objec-

tive measure of normal personality may add significantly to findings of tests such as the MMPI-2.

We have already discussed one test of normal personality, Tellegen's (1982) Multidimensional Personality Questionnaire. This test stands out as one of the most thoroughly researched and comprehensive measures of normal personality insofar as its psychometric properties are concerned. Although not yet formally published, it is used widely in research studies of personality and can serve as a prototype for the internal structure method of test construction.

CALIFORNIA PSYCHOLOGICAL INVENTORY. The most widely used measure of normal personality is the **California Psychological Inventory** (CPI; Gough, 1987). Like the MMPI, with which it shares a substantial portion of its items, this test was constructed using the external criterion method. The CPI was developed by Gough for use specifically with normal adults and consists of 462 items that are keyed either "true" or "false." The test was revised in 1987 and now yields scores on 20 scales, including validity scales as well as scales measuring various aspects of personality functioning. Two new scales measuring empathy and independence were added in the 1987 revision.

Recent reviews of the updated CPI have been generally quite favorable. Bolton (1992) writes: "The 1987 CPI is an excellent normal personality device, more reliable than the manual advertises, with good normative data and outstanding interpretive information" (p. 139). Engelhard (1992), although generally favorable in his review of the updated CPI, is critical of the fact that norms for the updated CPI are based on responses provided by the original normative subjects in the 1950s.

The CPI is clearly the most widely researched of all current normal personality inventories, and the authors of any instrument proposed to replace it will need to demonstrate that the suggested alternative possesses incremental validity in relation to the CPI.

16 PERSONALITY FACTOR QUESTIONNAIRE. Raymond Cattell, developer of the 16 Personality Factor Questionnaire (16PF; Cattell & Eber, 1964) has been a prolific pioneer and contributor in the area of assessment and personality research. In his theoretical and factor analytical work in the area of personality, Cattell (1979) made extensive use of the internal structure method of personality scale construction in developing 16 scales that measure what he believes to be the basic dimensions of personality. The 16PF is used often by counseling psychologists, particularly in career counseling; however, it is not presently used widely in clinical evaluations. Anastasi (1988) is somewhat critical of the reliability of some of the 16PF's scales and of the adequacy of the norms used in deriving standard scores for this instrument. Nevertheless, the 16PF continues to stand out as one of the more widely researched measures of normal personality.

NEO PERSONALITY INVENTORY—REVISED. A recent addition to the objective tests of normal personality is the **NEO Personality Inventory—Revised** (NEO PI-R; Costa & McCrae, 1992a). This test is designed to measure five personality dimensions corresponding to what has been termed the **Five Factor Model** of personality. In recent years, an increasing number of personality psycholo-

gists argue that there exist only five basic dimensions or domains of personality (Wiggins & Pincus, 1992). The NEO PI-R is designed to measure these domains, labeled **Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness**.

The NEO PI-R consists of 243 items, including three items that are designed to ascertain the validity of an individual's responses. Responses are scored on five domains, each of which, in turn, is composed of six facets that also are scored for a total of 30 facet scales. Costa and McCrae (1992a) report impressive levels of reliability for the domain scales and many of the facet scales. They also cite numerous studies that have demonstrated considerable levels of criterion validity for the domain scales. Different norms are available for use with college students and community-dwelling adults. A particularly useful and unique aspect of the NEO PI-R is the availability of a version of the test that may be completed by a rater who knows the individual being evaluated in cases where the evaluator may wish or need to obtain such ratings. This feature could be quite valuable in cases where the individual being assessed is unable to complete the inventory.

Costa and McCrae (1992b) have proposed a variety of ways in which the NEO PI-R may be used in clinical evaluations. Ben-Porath and Waller (1992) have listed a number of criteria for evaluating the utility of measures such as the NEO PI-R in clinical evaluations. Of particular concern is the absence of means for a thorough evaluation of the validity of an individual's test protocol, such as are available in the MMPI-2 and MPQ. Others (e.g., Loevinger, 1993; Tellegen & Waller, 1987) have questioned whether five domains are indeed sufficient to capture the entire realm of normal personality functioning.

COMPUTER TECHNOLOGY AND OBJECTIVE PERSONALITY ASSESSMENT

A recent trend in the area of objective personality assessment has been the introduction of computer technology into clinical practice. Three general categories of application of computer technology in objective personality assessment are administration, scoring, and interpretation. We will briefly review current trends in this area.

Administration and Scoring

Computers provide a number of advantages in the administration and scoring of objective tests of personality. They can be used to administer a test on-line while the test-taker is seated in front of a terminal and uses a keyboard to respond to the test items. This mode of administration offers a number of advantages:

1. *Speedier test administration.* Test-takers need not go back and forth between a booklet and an answer sheet and mark their answers on the answer sheet.

2. *More accurate administration.* Test takers cannot lose their place on the answer sheet and are less likely to make errors in recording their responses.
3. *Immediate scoring.* The computer can score an individual's test as soon as he or she has completed responding to the test items, and the clinician can make immediate use of the results.
4. *More accurate scoring.* The computer makes no mistakes in scoring the scales and converting raw scores into standard scores.

A primary reason why computers still are not used widely in the administration and scoring of objective measures of personality is the prohibitive cost of such technology. Nevertheless, as the cost of computer technology continues to decrease, and software for test administration and scoring becomes more readily available, the use of computers for this purpose in clinical practice is likely to increase dramatically.

A more revolutionary application of computer technology in the administration and scoring of objective measures of personality is in the area of **computerized adaptive testing**. Here, rather than simply transcribing a paper-and-pencil measure instrument to a computer, the full range of flexibility afforded by computer technology is tapped. Essentially, computerized adaptive testing involves tailoring of the test administered to each individual so as to conduct each test in the most economical fashion. Using conventional test administration, each person takes the exact same test even if parts of it are not entirely relevant to a given evaluation. Using computers, we may tailor the test given to each individual by administering only those items that are needed to answer the clinician's questions regarding that individual. Although still in its infancy, recent research into the potential for computerized adaptive administration of clinical inventories, such as the MMPI-2, has been promising (Ben-Porath, Slutske, & Butcher, 1989; Roper, Ben-Porath, & Butcher, 1991).

Computer-Based Test Interpretation

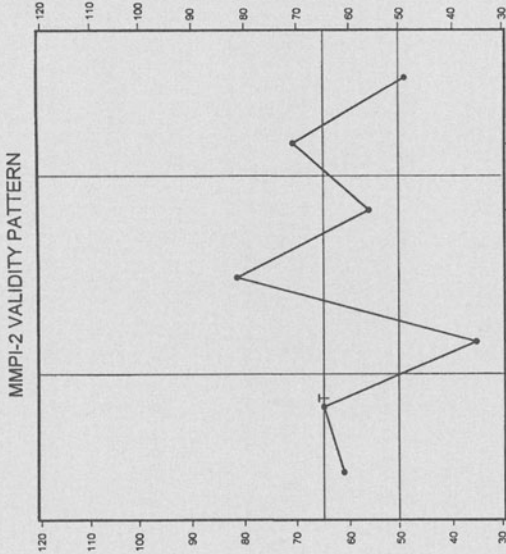
Computers have been used for some time in the interpretation of psychological test scores. Essentially, **computer-based test interpretation** (CBTI) involves feeding psychological tests results into a computer program that processes these results and generates an interpretation of the meaning of test scores. The MMPI, and now the MMPI-2 and MMPI-A, are the most commonly used personality tests for which CBTI systems are available.

The earliest MMPI-based CBTI was developed at the Mayo Clinic in Rochester, Minnesota (Pearson, Swenson, Rome, Mataya, & Brannick, 1965). After scoring the test, the computer generated a series of about six descriptive statements about each person. These statements reflected characteristics that had been identified in empirical research to be correlated with a given pattern of test scores.

In recent years, CBTI systems have become increasingly sophisticated and now offer comprehensive interpretive narratives covering a wide range of clinically relevant information. An example of a computer-generated interpretation for an MMPI-2 profile is seen in Figure 6-1. As seen in this interpretation, the

MMPI-2*
The Minnesota Report*
Adult Clinical System--Revised
Interpretive Report
James N. Butcher, PhD
ID Number 563707575

Male
Age 46
Divorced
14 Years of Education
Outpatient Mental Health Center
3/08/94



Raw Score:	8	11	0	15	18	7	24	
T Score:	61	65	35	82	56	71	49	
Response %:	100	100	100	100	100	98	100	
Cannot Say (Raw):	2						Percent True:	43
							Percent False:	57

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OF MINNESOTA. All rights reserved. Distributed exclusively by National Computer Systems, Inc.

*Minnesota Multiphasic Personality Inventory-2; "MMPI-2" and
"The Minnesota Report" are trademarks of the University of Minnesota.

Figure 6-1. Computer-generated interpretation for an MMPI-2 profile.

PROFILE VALIDITY

This MMPI-2 profile should be interpreted with caution. There is some possibility that the clinical report is an exaggerated picture of the client's present situation and problems. He is presenting an unusual number of psychological symptoms. This response set could result from poor reading ability, confusion, disorientation, stress, or a need to seek a great deal of attention for his problems.

His test-taking attitudes should be evaluated for the possibility that he has produced an invalid profile. He may be showing a lack of cooperation with the testing or he may be malingering by attempting to present a false claim of mental illness. Determining the sources of his confusion, whether conscious distortion or personality deterioration, is important because immediate attention may be required. Clinical patients with this validity profile are often confused and distractible and have memory problems. Evidence of delusions and thought disorder may be present. He may be exhibiting a high degree of distress and personality deterioration.

SYMPTOMATIC PATTERNS

This report was developed using the Hs and Sc scales as the prototype. Individuals with this MMPI-2 clinical profile tend to show a pattern of chronic psychological maladjustment. The client is likely to be a rather ineffective person who is experiencing a great deal of confusion and personality deterioration at this time. He is likely to be chronically disoriented, alienated, and withdrawn. He is reporting vague physical concerns that may have no organic basis and are possibly delusional.

In addition, the following description is suggested by the content of the client's item responses. He endorsed a number of extreme and bizarre thoughts, suggesting the presence of delusions and/or hallucinations. He apparently believes that he has special mystical powers or a special "mission" in life that others do not understand or accept. The client's response content suggests that he feels intensely fearful about a large number of objects and activities. This hypersensitivity and fearfulness appear to be generalized at this point and may be debilitating to him in social and work situations.

PROFILE FREQUENCY

Profile interpretation can be greatly facilitated by examining the relative frequency of clinical scale patterns in various settings. The client's high-point clinical scale score (Sc) is the least frequent MMPI-2 peak score in the MMPI-2 normative sample of men, occurring in only 4.7% of the cases. Only 2.6% of the sample have Sc as the peak score at or above a T score of 65, and less than 1% have well-defined Sc spikes. This elevated MMPI-2 profile configuration (1-8/8-1) is very rare in samples of normals, occurring in less than 1% of the MMPI-2 normative sample of men.

In the NCS outpatient sample, 5.6% of the males have this high-point clinical scale score (Sc). Moreover, 4.8% of the male outpatients have the Sc scale spike at or above a T score of 65, and 2.4% have

well-defined Sc scores in that range. This elevated MMPI-2 profile configuration (1-8/8-1) is rare in samples of male outpatients. It occurs in only 0.6% of the men in the NCS outpatient sample.

PROFILE STABILITY

The relative elevation of his clinical scale scores suggests that his profile is not as well defined as many other profiles. That is, his highest scale or scales are very close to his next scale score elevations. There could be some shifting of the most prominent scale elevations in the profile code if he is retested at a later date. The difference between the profile type used to develop the present report and the next highest scale in the profile code was 2 points. So, for example, if the client is tested at a later date, his profile might involve more behavioral elements related to elevations on Pa. If so, then on retesting, externalization of blame, mistrust, and questioning the motives of others might become more prominent.

INTERPERSONAL RELATIONS

He is mistrustful, tends to avoid interpersonal relationships, and is probably quite alienated from others. He has difficulty expressing emotions appropriately and may behave in unusual or extreme ways at times.

DIAGNOSTIC CONSIDERATIONS

This profile suggests the possibility of a borderline psychotic condition. The existence of somatic delusions and the possibility of Schizophrenia should be considered in developing a diagnosis. Individuals with this profile might be diagnosed as having a severe Somatoform Disorder in a Schizoid or Schizotypal personality. His unusual thinking and bizarre ideas need to be taken into consideration in any diagnostic formulation.

TREATMENT CONSIDERATIONS

Individuals with this MMPI-2 clinical profile are experiencing a severe psychological disorder that requires treatment. They are usually treated with antipsychotic medication.

Patients with this MMPI-2 clinical profile are typically difficult to approach psychotherapeutically. They persistently maintain that the basis of their problems is physical and are not very willing to accept a psychological interpretation of their difficulties. This individual probably has difficulty verbalizing his feelings and trusting other people; thus, he is not likely to be able to form a working psychotherapeutic relationship. His unusual thinking related to his bodily processes also makes it difficult for him to view his psychological problems in a flexible way.

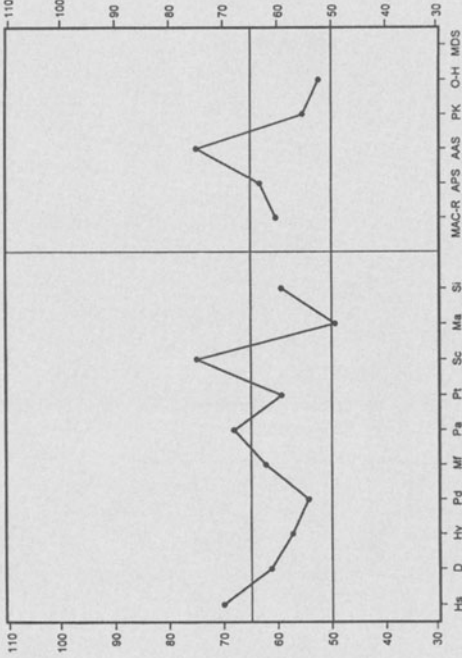
Behavioral management or psychosocial therapy might be attempted to decrease his somatic complaints and increase his interpersonal adjustment.

He has expressed a number of specific fears with which he is concerned at this time. Behavioral therapy to alleviate these fears might be considered.

His acknowledged problems with alcohol or drug use should be addressed in therapy.

NOTE: This MMPI-2 interpretation can serve as a useful source of hypotheses about clients. This report is based on objectively derived scale indices and scale interpretations that have been developed in diverse groups of patients. The personality descriptions, inferences, and recommendations contained herein need to be verified by other sources of clinical information because individual clients may not fully match the prototype. The information in this report should most appropriately be used by a trained, qualified test interpreter. The information contained in this report should be considered confidential.

MMPI-2 BASIC AND SUPPLEMENTARY SCALES PROFILE

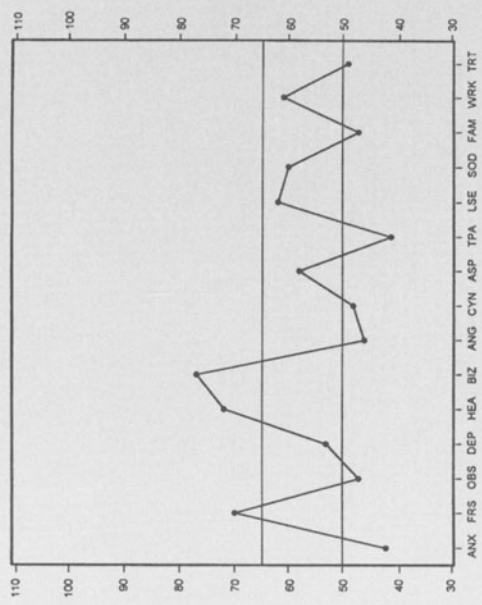


Raw Score: 12 23 24 18 32 15 13 23 16 34 *
 K Correction: 9 7 18 18 4
 T Score: 70 61 57 54 62 68 59 75 49 59 *
 Response %: 100 100 100 100 100 100 100 100 100 100 *

Weish Code (new): 816+52-7034/9; F+K/L#
 Weish Code (old): 8151 287340-9/ F+K/L#
 Profile Elevation: 61.60

*MDS scores are reported only for clients who indicate that they are married or separated.

MMPI-2 CONTENT SCALES PROFILE



Raw Score: 2 10 4 5 15 10 4 9 12 4 9 13 4 13 4
 T Score: 42 70 47 53 72 77 46 48 58 41 62 60 47 61 49
 Response %: 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100

SUPPLEMENTARY SCORE REPORT

	Raw Score	T Score	Resp %
Anxiety (A)	9	49	100
Depression (R)	23	67	100
Ego Strength (Es)	32	38	100
Dominance (Do)	17	51	100
Social Responsibility (Re)	17	42	100
Post-Traumatic Stress Disorder - Schlegler (PS)	13	53	100
Depression Subscales (Harris-Lingoes)			
Subjective Depression (D1)	10	58	100
Psychomotor Retardation (D2)	8	65	100
Physical Malfunctioning (D3)	4	59	100
Mental Dullness (D4)	7	72	100
Brooding (D5)	2	51	100
Hysteria Subscales (Harris-Lingoes)			
Denial of Social Anxiety (Hy1)	3	45	100
Need for Affection (Hy2)	8	55	100
Lassitude-Malaise (Hy3)	3	52	100
Somatic Complaints (Hy4)	4	57	100
Inhibition of Aggression (Hy5)	4	55	100
Psychopathic Deviate Subscales (Harris-Lingoes)			
Familial Discord (Pd1)	2	51	100
Authority Problems (Pd2)	1	35	100
Social Imperturbability (Pd3)	2	40	100
Social Alienation (Pd4)	5	57	100
Self-Alienation (Pd5)	5	58	100
Paranoia Subscales (Harris-Lingoes)			
Persecutory Ideas (Pa1)	4	64	100
Poignancy (Pa2)	2	48	100
Naivete (Pa3)	5	51	100
Schizophrenia Subscales (Harris-Lingoes)			
Social Alienation (Sc1)	2	47	100
Emotional Alienation (Sc2)	0	40	100
Lack of Ego Mastery, Cognitive (Sc3)	4	66	100
Lack of Ego Mastery, Conative (Sc4)	3	55	100
Lack of Ego Mastery, Defective Inhibition (Sc5)	3	61	100
Bizarre Sensory Experiences (Sc6)	10	90	100

Hypomania Subscales (Harris-Lingoes)

Amorality (Ma1)	2	50	100
Psychomotor Acceleration (Ma2)	4	44	100
Imperturbability (Ma3)	3	47	100
Ego Inflation (Ma4)	3	50	100

Social Introversion Subscales (Ben-Porath, Hostetler, Butcher, & Graham)

Shyness / Self-Consciousness (SI1)	5	51	100
Social Avoidance (SI2)	7	67	100
Alienation--Self and Others (SI3)	7	56	100

Uniform T scores are used for Hs, D, Hy, Pd, Pa, Pt, Sc, Ma, and the Content Scales, all other MMPf-2 scales use linear T scores.

EXPERIMENTAL CONTENT COMPONENT SCALES (Ben-Porath & Sherwood)

	Raw Score	T Score	Resp %
Fears Subscales			
Generalized Fearfulness (FRS1)	2	62	100
Multiple Fears (FRS2)	8	71	100
Depression Subscales			
Lack of Drive (DEP1)	2	51	100
Dysphoria (DEP2)	0	42	100
Self-Depreciation (DEP3)	2	55	100
Suicidal Ideation (DEP4)	1	62	100
Health Concerns Subscales			
Gastrointestinal Symptoms (HEA1)	3	83	100
Neurological Symptoms (HEA2)	7	87	100
General Health Concerns (HEA3)	1	48	100
Bizarre Mentation Subscales			
Psychotic Symptomatology (BIZ1)	5	102	100
Schizotypal Characteristics (BIZ2)	3	60	100
Anger Subscales			
Explosive Behavior (ANG1)	1	45	100
Irritability (ANG2)	1	41	100
Cynicism Subscales			
Misanthropic Beliefs (CYN1)	7	52	100
Interpersonal Suspiciousness (CYN2)	2	43	100
Antisocial Practices Subscales			
Antisocial Attitudes (ASP1)	11	63	100
Antisocial Behavior (ASP2)	1	45	100
Type A Subscales			
Impatience (TPA1)	0	34	100
Competitive Drive (TPA2)	3	45	100
Low Self-Esteem Subscales			
Self-Doubt (LSE1)	3	54	100
Submissiveness (LSE2)	4	69	100

Social Discomfort Subscales

Introversion (SOD1)	10	65	100
Shyness (SOD2)	3	52	100

Family Problems Subscales

Family Discord (FAMI)	2	45	100
Familial Alienation (FAM2)	2	58	100

Negative Treatment Indicators Subscales

Low Motivation (TRT1)	1	48	100
Inability to Disclose (TRT2)	1	45	100

CRITICAL ITEMS

The following critical items have been found to have possible significance in analyzing a client's problem situation. Although these items may serve as a source of hypotheses for further investigation, caution should be used in interpreting individual items because they may have been checked inadvertently.

The percentages of endorsement for each critical item by various reference groups are presented in brackets following the listing of the item. The first endorsement percentage in the brackets "N" is the percentage of the MMPI-2 normative sample of 1,138 men who endorsed the item in the scored direction. Depending on the setting selected for the report, the endorsement percentage for the normative sample will be followed by the endorsement percentage of various clinical or research samples. The designation "Op" refers to a sample of 10,510 male outpatients (National Computer Systems, 1993).

Acute Anxiety State (Koss-Butcher Critical Items)

Of the 17 possible items in this section, 1 was endorsed in the scored direction:

- 10. I am about as able to work as I ever was. (False)
[N = 15.3; Op = 31.4]

Depressed Suicidal Ideation (Koss-Butcher Critical Items)

Of the 22 possible items in this section, 3 were endorsed in the scored direction:

- 38. I have had periods of days, weeks, or months when I couldn't take care of things because I couldn't "get going." (True)
[N = 25.0; Op = 40.2]
- 233. I have difficulty in starting to do things (True)
[N = 35.2; Op = 39.3]
- 518. I have made lots of bad mistakes in my life. (True)
[N = 27.3; Op = 42.6]

Situational Stress Due to Alcoholism (Koss-Butcher Critical Items)

Of the 7 possible items in this section, 5 were endorsed in the scored direction:

- 264. I have used alcohol excessively. (True)
[N = 44.5; Op = 40.3]
- 487. I have enjoyed using marijuana. (True)
[N = 34.2; Op = 29.1]
- 489. I have a drug or alcohol problem. (True)
[N = 6.7; Op = 13.9]
- 502. I have some habits that are really harmful. (True)
[N = 27.8; Op = 29.8]

518. I have made lots of bad mistakes in my life. (True)
[N = 27.3; Op = 42.6]

Mental Confusion (Koss-Butcher Critical Items)

Of the 11 possible items in this section, 5 were endorsed in the scored direction:

24. Evil spirits possess me at times. (True)
[N = 3.9; Op = 4.5]

32. I have had very peculiar and strange experiences. (True)
[N = 23.8; Op = 30.7]

72. My soul sometimes leaves my body. (True)
[N = 4.3; Op = 5.1]

96. I see things or animals or people around me that others do not see. (True)
[N = 9.1; Op = 10.2]

316. I have strange and peculiar thoughts. (True)
[N = 14.9; Op = 22.8]

Persecutory Ideas (Koss-Butcher Critical Items)

Of the 16 possible items in this section, 2 were endorsed in the scored direction:

251. I have often felt that strangers were looking at me critically. (True)
[N = 23.8; Op = 28.8]

361. Someone has been trying to influence my mind. (True)
[N = 4.3; Op = 7.0]

Antisocial Attitude (Lachar-Wrobel Critical Items)

Of the 9 possible items in this section, 2 were endorsed in the scored direction:

254. Most people make friends because friends are likely to be useful to them. (True)
[N = 23.8; Op = 26.5]

266. I have never been in trouble with the law. (False)
[N = 40.9; Op = 52.9]

Family Conflicter (Lachar-Wrobel Critical Items)

Of the 4 possible items in this section, 1 was endorsed in the scored direction:

288. My parents and family find more fault with me than they should. (True)
[N = 10.6; Op = 17.5]

Somatic Symptoms (Lachar-Wrobel Critical Items)

Of the 23 possible items in this section, 10 were endorsed in the scored direction:

47. I am almost never bothered by pains over my heart or in my chest. (False)
[N = 18.5; Op = 26.3]

53. Parts of my body often have feelings like burning, tingling, crawling, or like "going to sleep." (True)
[N = 18.8; Op = 29.5]

111. I have a great deal of stomach trouble. (True)
[N = 6.1; Op = 13.3]

142. I have never had a fit or convulsion. (False)
[N = 7.2; Op = 14.6]

182. I have had attacks in which I could not control my movements or speech but in which I knew what was going on around me. (True)
[N = 3.2; Op = 8.1]

224. I have few or no pains. (False)
[N = 18.2; Op = 32.9]

229. I have had blank spells in which my activities were interrupted and I did not know what was going on around me. (True)
[N = 7.5; Op = 14.9]

247. I have numbness in one or more places on my skin. (True)
[N = 9.5; Op = 17.7]

255. I do not often notice my ears ringing or buzzing. (False)
[N = 21.7; Op = 26.2]

295. I have never been paralyzed or had any unusual weakness of any of my muscles. (False)
[N = 14.5; Op = 23.6]

Sexual Concern and Deviation (Lachar-Wrobel Critical Items)

Of the 6 possible items in this section, 3 were endorsed in the scored direction:

12. My sex life is satisfactory. (False)
[N = 26.7; Op = 42.0]

121. I have never indulged in any unusual sex practices. (False)
[N = 36.9; Op 27.7 = 1]

268. I wish I were not bothered by thoughts about sex. (True)
[N = 21.0; Op = 23.8]

OMITTED ITEMS

The following items were omitted by the client. It may be helpful to discuss these item omissions with this individual to determine the reason for noncompliance with the test instructions.

407. I deserve severe punishment for my sins.

511. Once a week or more I get high or drunk.

system reports the individual's scores on the various MMPI-2 scales described earlier as well as a narrative description of the empirical and clinically observed correlates of these scores. The warning at the bottom of page 5 of the report is particularly important, since it reminds the clinician using this report that it should be viewed as a source of hypotheses regarding the client and not as an authoritative statement of her or his present condition.

Use of CBTIs has not been without its critics, who warn of the dangers of overreliance on and unsophisticated use of such systems as they proliferate (e.g., Matarazzo, 1986). However, as stated by Fowler and Butcher (1986), with careful and professional use, these systems offer a significant enhancement to the practice of objective personality assessment.

SUMMARY

Objective personality assessment is a vital component of the practice of clinical psychology. This chapter began with a brief introduction to some psychometric aspects central to the use of psychological tests in clinical psychology. Next, the historical development of objective personality assessment was surveyed, and current approaches to the construction of such tests were described. Then, some of the tests currently used in clinical objective personality assessment were reviewed, with a particular emphasis on the MMPI-2 and MMPI-A, the most widely used objective measures of personality. The chapter ended with a brief overview of the use of computer technology in objective personality assessment, a development that likely will dominate the field in years to come.

A central theme underlying this chapter has been the important role of research in the practice of objective personality assessment. Efforts of researchers in this area are vital to the continued advancement of objective personality assessment. Clinical practitioners, in order to be able to take advantage of continued developments in this field, must keep abreast with the most recent research findings. To do so, they must receive graduate training that assists them in reading and understanding the research literature. This literature consists of a variety of scientific journals and books that publish research on clinical objective personality assessment. The interested student is urged to explore some of these sources, many of which will be found in the list of references that follows.

STUDY QUESTIONS

1. What are objective tests of personality? What do they measure, and what is their primary purpose?
2. According to this chapter, there are three important concepts in the area of psychometrics. What are these three concepts? Define each of them carefully.
3. Compare the reliability and validity of objective tests of personality to the reliability and validity of projective tests of personality. Which type of tests is most reliable and valid?
4. List the 10 clinical and 3 validity scales of the MMPI.

5. What are the three approaches to personality test construction described by Burish?
6. Discuss the MMPI-2. How does it differ from its original version?
7. What is the MMPI-A? What does it measure, and with what population is it used?
8. What are the distinguishing characteristics of the MCMI and MCMI-II?
9. Describe measures of “normal” personality. How do such measures differ from those measuring psychopathology? Identify several measures of normal personality.
10. Discuss the growing role of computers in personality assessment. What are the pros and cons of computer use?

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CHAPTER 7

Interviewing

ARTHUR N. WIENS and ANGELIQUE G. TINDALL

INTRODUCTION

The term *interview* was derived from the French *entrevoir*, to have a glimpse of, and *s'entrevoir*, to see each other. The formal definition of the term is a meeting of persons face to face, especially for the purpose of formal conference on a specific point. The term was first printed in English in 1514 by the Duke of Suffolk, seeking a meeting with the King of England. It was later used in America, in 1869, to describe "a meeting between a representative of the press and someone from whom he seeks to obtain statements for publication" (*Oxford English Dictionary*, 1971). Virtually all current definitions of the interview include reference to a face-to-face verbal exchange in which one person, the interviewer, attempts to elicit information or expressions of opinion or belief from another person, the interviewee.

Through recorded history, the interview has been used professionally by philosophers, physicians, priests, and attorneys. In this century, many new professionals have been added to this interviewer list. These include psychologists, psychiatrists, social workers, sociologists, anthropologists, nurses, economists, newspaper reporters, salespeople, welfare caseworkers, finance company interviewers, and so on. A listing of interview situations would be almost endless. The novice interviewer can learn about interviewing from many different sources and should by no means limit study to psychology textbooks or psychology instructors. Interviewing can be observed daily on national and local television, and one might profit from paying close attention to the skills of television interviewers as they try to elicit verbal responses from a variety of interviewees, some of whom are presumably motivated to be frank, open, and

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

expressive, while others are quite reticent. One such television interviewer has published her thoughts and experiences on how to talk with practically anybody about practically anything (Walters, 1970). Ted Koppel has been quoted as saying "I listen. Most people don't. Something interesting comes along—and whoosh!—it goes right past them" (Koppel, 1987).

Many professionals and lay persons have excellent talent and skill in interviewing. Some people assume that one either has this skill or does not, and that it cannot be explicitly learned. A related assumption that is often made is that interviewing skills cannot be taught, but can only be gradually acquired through personal professional experience and through observation and imitation of a more experienced interviewer. We would certainly not disagree that important interviewing skills are learned through observation and modeling. We would, however, call the reader's attention to society's increasing interest in interpersonal communication skills, and to the development of numerous formal courses on interviewing for both lay and professional individuals in almost all of our communities.

The assumption that interviewing skills cannot be taught has been shown to be untrue as one reviews the current interviewing research literature in which behavioral scientists report on their efforts to study specific aspects of the interview interaction (Wiens, 1983). With a specification of interview behaviors, it becomes possible to assess the interview effects of a variety of interviewer and interviewee characteristics and tactics. It is also reasonable to assume that the beginning interviewer can study and should know various aspects of the psychological forces at work in the interview. Such knowledge can then be a basis for acquiring and using the specific techniques of interviewing in an insightful manner.

Some characteristics of a skillful interviewer's behavior may seem like plain common sense, whereas others may appear more subtle and nonverbal. Eric G. Anderson (1981) describes an old Scottish doctor who, many years ago, was instructing his new assistant in the ways of his rural practice in Britain. "Pay attention tae the way yer patient comes in, laddies," he said. "You've got tae give them value for their money. If the man is wearing a clean shirt, it means he expects tae get his chest examined." During the past several decades, research in nonverbal communication has generated convincing evidence that facial expressions, body posture and movements, and styles of speaking can serve as valuable sources of information in the interview (Harper, Wiens, & Matarazzo, 1978). The development of sophisticated audio and video equipment permits recording of interviews for later, detailed analyses. New developments in computer technology are further facilitating such detailed analyses.

INTERVIEW VERSUS CONVERSATION

The Oxford American Dictionary defines a **conversation** as an "informal talk between people" and an **interview** as "a formal meeting or conversation with a person, held in order to assess his or her merits as a candidate, etc., or to obtain comments and information." This definition of an interview includes the word *conversation*, which illustrates the resemblances between these two activities. Both involve face-to-face verbal exchanges of information, ideas, attitudes,

or feelings and contain messages expressed through nonverbal and verbal means of communication. The crucial difference between an interview and a conversation is that an interview involves directed content to achieve a specific purpose, whereas a conversation requires no central theme (see Box 7-1). For example, an interview between a clinical psychologist and a patient focuses on obtaining an understanding of the problem, the situation, and the person seeking help.

Differences exist in the roles of the two participants in the interview relationship, which is a nonreciprocal relationship. The interviewer performs clearly defined services for the client and limits revelations about himself or herself to professional life. The interviewee, however, may reveal numerous personal life experiences. The interviewer maintains responsibility for directing the interaction toward the goal of the interview by asking questions. The interviewee facilitates achievement of the goal by answering questions. Thus, an interview involves selected role behaviors that are not defined for participants in a conversation.

In conversations, people usually respond in a spontaneous, unplanned manner. Interviewers, however, direct and plan actions to achieve the purpose of the interview. Finally, interviews generally occur at a definite time and place, continuing until the purpose of the interaction is attained or until it becomes clear that the purpose cannot be accomplished. Conversations, on the other hand, start and end at will.

Consider the following two examples. The first is an excerpt from a demonstration interview conducted by Carl Rogers, the innovator of client-centered psychotherapy, and his interviewee, Jan. His purpose was to determine the interviewee's problems by asking specific and nonthreatening questions to help her feel safe to express herself.

ROGERS: I don't know what you want to talk with me about, because we haven't done more than say hello to each other. But whatever you would like to bring up, I'd be very ready to hear. (Pause)

JAN: I have two problems. The first one is the fear of marriage and children. And the other one is the age process, aging. It's very difficult to look into the future, and I find it very frightening.

ROGERS: Those are two main problems for you. I don't know which you'd rather pick up first.

JAN: I think the immediate problem is the age problem. I would rather start on it. If you can help on that, I would be very grateful.

Box 7-1

Interview versus Conversation

Interview

Directed content to achieve a specific purpose
Defined roles between participants
Occurs at a definite time and place

Conversation

No central theme
Participants' roles not defined
Starts and ends at will

ROGERS: Can you tell me a little bit more about the fear that you have of aging? As you get older, what? (Rogers, 1986, p. 200)

Note his emphasis on the patient's perspective with the purpose of finding out the patient's problems and which problem to address first.

The second example is an excerpt from a *Time* magazine interview of Bill and Hillary Clinton, conducted by two journalists. The purpose of this portion of the interview was to get the Clintons' personal reactions to his election to the presidency.

Q: We can't stop wondering: the morning after the election, what were the first words you said when you both knew . . .

CLINTON: . . . that I've been elected President? I looked at her and just started laughing.

MRS. CLINTON: That's exactly right.

CLINTON: I woke up. She looked at me, and I looked at her, and we just started laughing like, Can you believe that this happened to us?

MRS. CLINTON: A friend of ours said it's like the dog that keeps chasing the car and all of a sudden catches it.

Q: Do you think about it every minute?

CLINTON: No.

Q: When do you not think about it?

CLINTON: Oh, when I read mystery books when I go to bed at night, and when I'm talking to Chelsea. I'm not obsessed about it. . . . (Muller & Stacks, 1993).

Both examples illustrate the characteristics of an interview involving planned actions to achieve a purpose and defined roles for the participants.

CLINICAL PSYCHOLOGY INTERVIEWS: GENERAL CONSIDERATIONS

Both participants share actively in the process of interviewing, and each is influenced by the other; the end product of the interview is a result of this interaction. This assumption of mutual interaction is also referred to as the relationship aspect of the interview. We view the nature of the relationship as a most critical consideration for the interview. The relationship established between the interviewer and interviewee determine whether the purposes of the interview can be achieved.

Effect of Interviewees on Interviewers

As interviewers, you will need to know yourself and the psychological impact that patients have on you. The validity of what we are talking about will be brought home to you through the clinical experiences you will have. But, you need to develop some conceptual framework for these experiences.

Rapport and a Positive versus Negative Relationship

All interviewers make some estimate of the degree to which the interviewee has cooperated and actively participated in the interview. The establishment of

good rapport between the interviewer and interviewee is important in interviewee participation and has the highest priority in an initial interview as well as in subsequent interviews, as for example in psychotherapy.

Clinical interviewers have long assumed that the relationship is the communication bridge between people. If the relationship is positive, each person is likely to be more receptive to the message being sent. A positive relationship might be characterized by feelings such as relaxation, comfort, trust, respect, harmony, warmth, or psychological safety. If the relationship is negative, there is less desire to share oneself and less readiness to believe what is being said. A negative relationship may be characterized by such feelings as hostility, defensiveness, unease, mistrust, disrespect, discordance, or psychological danger. A positive relationship frees the interviewee to reveal thoughts and feelings with a minimum of defensiveness and distortion, because of the implied promise of acceptance and understanding and freedom from punishing criticism, rejection, or reprisal. Motivation to participate in the interview may also be derived from the interviewee's opportunity to talk fully about topics of interest to himself or herself.

From the standpoint of the interviewer, a positive relationship has the effect of intensifying his or her influence, thus making suggestions more appealing and effective. A good relationship also makes the interviewer a more attractive model for the interviewee to imitate. Another effect of a good relationship is that the positive atmosphere acts as a counterconditioning context. In a relationship context that counters anxiety, discussion of problems and situations that normally evoke anxiety may lead to the evocation of less anxiety by these problems and situations in the future. This phenomenon is very similar to the counterconditioning seen in behaviorally oriented relaxation and desensitization procedures.

Interviewer Attitudes

Essential **interviewer attitudes** include acceptance, understanding, and sincerity (see Box 7-2).

The interviewer quality of *acceptance* involves a basic regard for the worth of human individuals and particularly for the interviewee sitting in the office. The accepting interviewer does not view the interviewee with cynicism or

Box 7-2
Interviewer Attitudes

Acceptance	Basic regard for the worth of individuals
Understanding	An attempt to see circumstances from the interviewee's point of view
Sincerity	The extent to which the interviewer communicates what he or she is like inside

contempt. In fact, we suggest that if the interviewer has not discovered something to like about the interviewee by the end of an initial interview, the session has not been successful in establishing a relationship. We remind the reader of the old saying that “people don’t care what you know until they know that you care.”

The ability to *understand* emotionally (or empathize) requires the effort to grasp clearly and completely the meaning the interviewee is trying to convey. The attempt to understand is a sharing process in which the interviewer tries to assume the client’s place and tries to see the circumstances as they appear to the interviewee.

The quality of *sincerity*, which has been called congruence, refers to interviewer consistency, or the harmony that must exist between what an interviewer says and does and what he or she really is or feels. You can *accept* or *understand* somebody, but you cannot *sincere* somebody. The interviewer can only *be sincere*, and although this quality is hard to define, it might be considered an interviewer characteristic to the extent to which the interviewer communicates a valid and reliable picture of what he or she is like inside.

A practical implication of this discussion is the implicit conclusion that no one interviewer can be all these things to all people. There is no evidence to support a belief that interviewers can function equally well with all types of interviewees. Over the course of graduate school, internship, and postdoctoral education and training, the clinical psychologist gradually becomes aware of interviewees with whom he or she can function successfully. It is important for the interviewer to know his or her own limitations and also the limitations of clinical psychology and the entire biopsychosocial model. To be truly aware of such limitations leads to an interviewer who is humble, not arrogant.

An example of interviewer attitudes of acceptance, understanding, and sincerity is demonstrated in the following Carl Rogers and Jan interview.

JAN: I’m not afraid of commitment. For instance, when it comes to my work, to friendship, to doing certain things. But to me marriage is very . . .

ROGERS: So you’re not a person who’s irresponsible or anything like that.

JAN: No, not at all.

ROGERS: You’re just committed to your work; you’re committed to friends. It’s just that the notion of being tied into marriage—that’s scary as hell.

JAN: (after a long silence) Do you want me to speak?

ROGERS: I wish I could help you get a handle on some of those things that are going around in your head. (Jan goes on to talk more about marriage commitment issues.)

(Rogers, 1986, p. 202)

In this example, Dr. Rogers expressed acceptance and understanding of Jan in his summary of her feelings about commitment to marriage versus other forms of commitment. When Jan seems to be at a loss of what direction to go in the interview, he responds to her question by expressing his real feeling, which allows her to explore the marriage issue further.

Communication Practices

In any clinical interview situation, as in any interpersonal situation, communication takes place between the participants. If one examines the many forms communication can take (both verbal and nonverbal), it becomes impos-

sible to conceive of a two-person interaction that does not involve communication. Some forms of communication are more effective than others, and perhaps some are not consciously intended at all. Communication includes more than the factual content of the patient's statements; most important, it includes feelings that are often hard to put into words.

There are great individual differences in communication styles, and there are changes within each interviewer from one patient to the next. Yet, there are some general communication practices that are consistently used by experienced interviewers (see Box 7-3).

ACKNOWLEDGMENT OF FEELINGS. For example, an interviewee may make a series of comments that involves both facts and feelings of some kind. When the interviewee pauses, the interviewer decides how to respond. The most often preferred interviewer response is a brief comment that can put together several of the feelings or attitudes that have been expressed. If the interviewer cannot make a brief summarizing comment, he or she should at least indicate understanding of one feeling by responding to it. If the interviewee's comments involve several people, it is most effective for the interviewer to respond to the interviewee's side of the relationship.

For example, a patient may talk about difficulties with an unreasonable person. The interviewer could reflect the interviewee's feelings with a statement such as, "He must have been a very unpleasant person," and expect to obtain more information about the presumably unpleasant person's attitudes and motives. Or the interviewer could comment, "You seem to dislike people of that sort intensely," and expect to gain a better understanding of how the interviewee reacts.

OPEN-ENDED QUESTIONS. Another technique for getting information from an interviewee is to use open-ended rather than close-ended questions. **Open-ended questions** do not allow for simple "yes" or "no" answers. Looking back on our example from the *Time* interview of the Clintons, we note that one interviewer asks, "Do you think about it [being elected President] every minute?" to which Clinton replies, "No." This is a close-ended question, which gets a one-word unelaborated response. An open-ended version of this question is "How much do you think about your election to the presidency?"

Box 7-3

Communication Practices

- Summarize the feelings or attitudes expressed by the interviewee.
- Use open-ended rather than close-ended questions to extract more information from the interviewee.
- Use language that is understandable and nonoffensive to the interviewee.
- Avoid talking about personal experiences during the interview.
- Allow the interviewee to use silence for reflection.

USE OF LANGUAGE. In some instances, the specific words the interviewer uses to achieve the interview purpose are particularly important. A basic communication consideration is the use of words for which both participants in the interview have a common definition. With some words, it is difficult to know whether this is the case without exploring the meaning both parties assign to the word. The following sequence (Mumford, 1985, p. 43) suggests a need to determine what the patient really understands:

“Does it hurt here?”
“No”
“And here?”
“No”
“Are you constipated?”
“No”
“Do you know what constipated means?”
“No”

Patients do not routinely admit that they do not know a word or do not understand a question. A cue to use is that when patients do not ask you any questions, it usually signifies that they do not understand enough to know what questions to ask.

In addition to the obvious consideration of a common definition, it is important for the interviewer to consider whether the choice of words is likely to engender an unintended emotional response on the part of the interviewee. Words such as *coward*, *stupid*, *effeminate* (with a man), or *masculine* (with a woman) are best not used unless the interviewee has introduced them. Tact is desirable in all interpersonal situations, including the interview.

FOCUS ON THE INTERVIEWEE. Sometimes the interviewer finds that some of his or her own personal anxieties, struggles, and aspirations are being stimulated, and that he or she feels an impulse to talk about himself or herself. This impulse is best resisted in favor of keeping the focus of the discussion on the interviewee, an important difference between an interview and a conversation. Furthermore, it is not good interviewing practice for the interviewer to recount personal experiences with the interviewee, even though the problem situations appear to be similar. The interviewee is likely to see differences between the two situations and question whether the interviewer's solution is helpful or appropriate.

RESPONSE TO SILENCE. Another skill of the interviewer is to learn to respond effectively to silence. The interviewee should be allowed the opportunity to reflect on what has been said. But if the silence is based on some aspect of duress or confrontation, the interviewer is best advised to break the silence and reestablish communication. It is highly unlikely that communication will be enhanced or a positive relationship furthered by an interviewer's insisting on waiting out the interviewee in a confrontational manner (not to be confused with giving the patient time to think through or struggle with self-expression). Many different words can be used to convey understanding and acceptance, and phraseology does not have to be elegant. Good interviewing does require careful listening for the words, feelings, and recurrent themes of the interviewee.

Many studies show that patients often are not given the opportunity to state fully the problem in their own words, indicating that effective listening is one of the most difficult skills for clinicians to master and practice consistently. Clinicians need to hear the patient out before asking the next question.

Response Latency

Our research, reviewed in *The Interview: Research on its Anatomy and Structure* (Matarazzo & Wiens, 1972), suggested a stratagem that can be used in this regard. Namely, an important component of the interviewer–interviewee interaction is a **reaction time latency**. We have often suggested to our clinical psychology interns and residents that they explicitly allow a 1-second interval after a patient’s comment before making a response of their own. This ensures that they will not interrupt the patient. It also provides reassurance that there will be time to formulate what they want to say (i.e., they do not have to formulate their comment while the patient is talking, because then they are listening to themselves and not to the patient).

Interviewer’s Self-Concept

Dominick Barbara (1971) suggested many years ago that we can perceive and listen to another person only in proportion to our own psychic health or well-being. When we do not have the direct energy to cope with our own neuroses, that energy will be available to our interviewees. The more irrational the interviewer’s self-concept, the more the interviewer will listen to the interviewee in terms of implications for him or her. When an interviewer listens with confused and disturbed thoughts or preoccupations, he or she will not function effectively.

Unproductive Listeners

It is possible to differentiate interviewers as those who **listen with their heads** and those who **listen with feelings**. Some interviewers listen mostly with their heads, deny feelings, and are interested mainly in a rational appraisal of what the interviewee says. Such an interviewer may not be interested in what impact his or her statements have on others, nor be capable of perceiving the effect that the interviewee’s statements have on him or her. Such an interviewer may listen to make sure that what is heard does not disturb his or her inner peace and systematic order. This type of interviewer will try to establish contact with others to the extent that others are suitable and receptive to his or her own needs.

The following is an example of an unproductive interviewer not responding to the patient’s statement about a possible anxiety disorder.

PATIENT: I have problems getting out of the house because I’m afraid of having a panic attack.

INTERVIEWER: Do you know what a panic attack is?

The interviewer needs to assess the nature of the patient's panic attack for the purpose of diagnosis. This type of question, however, focuses too much on the textbook meaning of a panic attack and detracts from the patient's experience of a panic attack.

Another unproductive interviewer is the person who listens almost entirely with feelings and too little with his or her head. Such a person may be anxious to the point that he or she cannot hear or evaluate what another person is saying. Such an interviewer will also jam and disorganize the communication network between interviewer and interviewee. This type of listener uses so much energy to avoid conflict-provoking situations that little energy is left for constructive use in the interview. Interviewee messages may be misinterpreted, because attention is focused on the presence or absence of alarm rather than on the total context and full meaning of the interviewee's statements.

An example of an interviewer listening unproductively with his or her feelings is the following initial interview with a guarded or defensive patient.

PATIENT: I don't really want to be here today. I don't think you can help me. How much experience do you have, anyway?

INTERVIEWER: I have a doctorate in Clinical Psychology, and I have plenty of experience. But, if you don't think I can help you, maybe I should refer you to someone else.

In the initial session, it is the patient's right to know the credentials of the interviewer. In this example, however, the interviewer responds to feelings that may arise from having one's credentials questioned. The response pushes the patient away and does not address the underlying feelings behind the patient's defensiveness and ambivalence.

Productive Listeners

To listen with purpose requires that we open our minds to other people's ideas, values, and behavior, while facing up to the fact that some of our own beliefs may be wrong (Barbara, 1971, p. 136). The necessary attitude to be a good listener must come from within (i.e., a genuine interest in others). To sound sincere, one must be and act sincere. There must be *empathy* between the interviewer and interviewee. Genuine listening means feeling for others and also trying to experience with them. Successful therapists have sometimes described experiencing the patient's headache after a therapy hour of empathically listening to a patient describe his or her headache and its circumstances.

Since the time of Sigmund Freud, clinicians have learned the importance of two basic principles of good listening. One is that the clinician-interviewer must stay *relatively relaxed*. The second is that the clinician-interviewer must *hear the patient out*. These principles outraged clinicians when Freud proposed them because they required doctors not to talk as much, to sit back, to be humble, to stop lecturing their patients, and to listen to and learn from them. The good listener tends to be relaxed, flexible, and unafraid to meet intellectual and emotional exchanges.

Good communication means understanding that the same words mean different things to different people, depending on their experience, thoughts, and perceptions. Both interviewer and interviewee must *define their terms* and

know what they are attempting to understand. Listening is an active process that helps the interviewee to engage in deeper self-exploration than would otherwise be possible.

How Good a Listener Are You?

Try to answer the following questions that describe various listening behaviors:

1. Do you give a person enough time to tell his or her story before you comment on it?
2. Do you take what the person says seriously, even if you think it's insignificant?
3. Do you give full attention to the other person? (That is, you do not do light paperwork or rearrange things on your desk while the other person is talking.)
4. Do you show that you are paying attention by an occasional nod, smile, or "uh-huh"?
5. Do you ask questions that are necessary and relevant?
6. Do you look at the person, make frequent eye contact, and avoid checking your watch?
7. Do you rarely interrupt when the other person is making a point? Do you avoid arguing over the point?
8. Do you avoid the other person's problem or complaint by changing the subject?
9. Are you sufficiently patient so that you don't take over when the person is groping for words?
10. Do you think before you speak? Do you avoid "instant" advice?

Aspects of Good Listening

There are aspects of good listening that the interviewer can deliberately practice and cultivate (see Box 7-4). As noted, good listening involves active

Box 7-4

Aspects of Good Listening

Prepare in advance and be knowledgeable about topics to be discussed.
Remain alert; concentrate on what the interviewee is saying.
Eliminate outside distractions during the interview.
Be patient, open-minded, and understanding.
Listen for factual and emotional content.

participation. To listen well, you must do more than let sound waves enter passively into your ear (Barbara, 1971, p. 165).

PREPARATION. The good interviewer prepares for the interview by informing himself or herself in advance about the patient to be interviewed and being knowledgeable in the topic areas that are to be discussed.

ALERTNESS. The active interviewer is physically alert, sits up, looks at the interviewee, asks questions, follows the main ideas, notes transitions, and summarizes. The interviewee realizes that the interviewer can think about four times faster than the interviewee can talk. It is imperative to think about what the interviewee is saying rather than drifting off into space and losing the thread.

Listening requires discipline, which one acquires slowly by practicing seriously. It is in contrast to what we do in most social groups and conversation.

CONCENTRATION. A third condition of good listening is to concentrate, which requires doing one thing at a time. This is in contrast to the pride that many people take in doing various activities simultaneously (e.g., watching television and reading, listening to the radio and writing). To many active persons, it may seem difficult to sit still, be quiet, and concentrate on something specific for any length of time. A good interviewer learns to concentrate.

PATIENCE. A good interviewer also learns to be patient. In an age of speed, many individuals listen only to those facts they can digest quickly, without concentration, and can remember easily. To linger on an idea or reflect over a situation or fact may go against the image of being a person of action. One is reminded of the lament of political candidates in campaigns that they are limited to sound bites and are never able to describe their plans in any detail.

ELIMINATION OF DISTRACTIONS. To learn to listen effectively, the interviewer must remove distractions, both internal (as discussed above) and external. This includes such obvious considerations as not taking telephone calls during interviews or being interrupted for any reason. The interviewee must have your undivided attention.

OPEN-MINDEDNESS. Good listening means being open-minded and giving the interviewee the chance to present all of his or her facts and ideas before jumping to premature conclusions or reacting emotionally. You must know your prejudices and keep them in check.

UNDERSTANDING. Finally, an essential factor in good listening is being able to grasp and understand the meaning of what is being heard (i.e., comprehension). This means hearing both the words and the underlying content of what is being said. Our use of the term *understanding* also assumes competence (i.e., a clinical psychologist who knows what he or she is doing). Sophisticated education and training in clinical psychology is the bedrock of competence on which all of our discussion in this chapter is based.

Listening is difficult to fake. Interviewers who are not completely tuned in usually get trapped when they ask a question that proves they really haven't heard much of what the other person has been saying. This, in turn, discourages the interviewee from either saying more or coming to this interviewer again with problems.

MEETING THE PATIENT

Preparation

Before the initial meeting with the patient, the interviewer must do preparatory work such as carefully studying the referral letter or other available patient data. Some patients directly express their annoyance at being asked questions that have already been answered for the record, and probably most patients feel lack of interest on the part of an interviewer who did not bother to review their chart. This does not obviate the necessity to hear the interviewee's story in his or her own words. The interviewer may explain: "I have read your chart, but I would like to hear your concerns in your own words." Interviewer preparation should also involve the study necessary to become informed about the probable symptoms or problem areas the patient may present, for example, bed wetting, alcoholism, or ulcers. If possible, the interviewer should try to imagine what the patient may be thinking or wishing to accomplish in the interview, and how to respond. Similarly, interviewers should have clearly in mind what they hope to accomplish, so that they can convey clear expectations to their patients. If psychological testing is to be recommended, there should be initial arrangements for time commitments, consulting, and so on. It is important to have a plan of procedure. Such a plan facilitates the interview and provides a frame of reference for the patient's comments and for observations of behavior in the office.

Listening to Factual and Emotional Content

Once the interviewer learns to listen to the patient and to avoid thinking about himself or herself, it is necessary to work on the next listening skill: hearing both the factual and emotional content of what the patient is saying.

Let us give you an example from a clinical situation that involves giving the Wechsler Intelligence Scale for Children. Before asking test questions, we often ask general questions to establish a comfortable relationship with a child and to elicit information that may be clinically significant. A common question is, "What does your daddy do?" If the child understands that the question refers to occupation, it generally signifies contact, alertness, and good identification. Rejection of the father's occupation in view of other alert responses may signify a poor father-child relationship. The question sometimes elicits significant responses, such as "hits us" or "eats with us" (suggesting that this may be the

only time father participates with the family!). If the child quickly says, "I don't know," in response to questions, it may be that the child would rather give up and appear to be ignorant than to try, give the wrong answer, and prove to be ignorant. This response may also identify a child who is criticized openly. If the child says something like, "I hope this doesn't take too long. I gotta go back for social studies," you know you have not yet established rapport (or that the child is uncomfortable about testing even if he or she likes the examiner).

Good Communication

Once the clinician listens to the patient, it is much easier to elucidate the patient's real concern. It is surprising how often the patient's real concern veers sharply from the chief complaint, and looking for the real concern will save time and money in meeting the patient's needs.

We often assume that a patient will begin his or her list of complaints with the most diagnostically significant ones. But, contrary to expectation, the order of symptoms bears no relation to their diagnostic importance. Patients with three symptoms are just as likely to describe their most serious symptoms last as first. When our focus is only on the first symptom, the real problem may be missed. It takes a certain amount of persistence and gentle probing to discover patients' "hidden agendas" and "anxieties unuttered and concealed," sometimes not only from the doctor but from themselves.

An example from our own clinical practice is Ms. S., a 19-year-old female, who came to the clinic for help with headaches of 3 weeks' duration. Psychological testing suggested significant worry, hostility, and emotional confusion. On a Pain Questionnaire, she indicated uncertainty as to whether psychological treatment would help. Review of her medical records showed that she had recently had an abortion but had been counseled by a social worker with reported good response. Our interview confirmed this, but further inquiry also revealed that she was experiencing an unresolved grief reaction to her lover, who had abandoned her when the pregnancy was discovered. Her well-intentioned friends, understandably outraged, vigorously pointed out that she was better off without this psychopath. Although she was living with her parents, they were Catholic and would never have tolerated her disclosure of the details of her affair. This left her no outlet for expression of her grief over the loss of the initial romanticized image she had formed of her lover. As a consequence, she was unable to return to work or to enjoy dating despite many opportunities. After giving in to her feelings during the interview, and later privately at home, she returned for follow-up in 2 weeks, newly employed, relatively free of headaches, and more able to enjoy the company of men.

CLINICAL INTERVIEW

Traditional psychoanalytic training placed considerable emphasis on the indirect techniques of interviewing and a free-flowing exchange between the clinician and the patient (i.e., a relatively **unstructured interview**). Generally,

such unstructured interviews allow the clinician freedom to reword questions, to introduce new questions, to modify question order, and to follow patients' spontaneous sequence of ideas. It is often assumed that such spontaneous discussion allows patients to follow more nearly their natural train of thought and may allow them to bring out interview material that is more predictive of what they would say or do in real-life situations. The flexibility of the unstructured interview allows clinicians to adapt their techniques to patients' particular situations. In some cases, the interviewer may omit topics that do not seem applicable, and in other cases, he or she may introduce related topics not originally planned (e.g., that may be unique to that patient's history). Many readers may have watched skilled clinician-interviewers elicit previously hidden facts, using attention to conflicts, dysphoric affects, defenses used by the patient, and symptom origins.

Studies of experienced clinicians show that they formulate questions in words that are familiar to patients and habitually used by them, and pursue topics when patients indicate a readiness and willingness to discuss them. The unstructured clinical interview gives the clinician more discretion in formulating the wording and sequence of questions, and accordingly it requires a higher level of experience, skill, and training than is required in following a more standardized interview format. This particularly requires an overall conceptual grasp of theoretical context and considerable prior knowledge of the subject matter of the interview.

Although clinicians of some theoretical backgrounds have espoused a spontaneous interview style, most experienced clinicians have adopted a **semi-standardized interviewing** style or format. If one listens to a clinician interviewing a series of patients, one soon discerns topic areas he or she routinely introduces, and questions he or she asks in almost the same way of every patient.

Furthermore, the topics to be covered in an initial clinical interview are relatively consistent from one clinician to the next. The general objective is to obtain a careful history that can be the foundation for the diagnosis and treatment of the patient's disorder (Kaplan & Sadock, 1988). More specific objectives of the clinical interview are to understand the individual patient's personality characteristics, including both strengths and weaknesses; to obtain insight into the nature of the patient's relationships with those closest to him or her, both past and present; and to obtain a reasonably comprehensive picture of the patient's development from the formative years until the present.

Preparing a Written Report

In preparing a written record of a clinical interview, most clinicians begin by presenting **identifying information**, such as the patient's name, age, marital status, sex, occupation, race or ethnicity, place of residence and circumstances of living, history of prior clinical contacts, and referral and information sources. The **chief complaint**, or the problem for which the patient seeks professional help, is usually reviewed next, and is stated in the patient's own words or in the words of the person supplying this information. The intensity and duration of the presenting problem is noted, specifically the length of time each symptom

has existed and whether there have been changes in quality and quantity from a previous time. It is also useful to include a description of the patient's appearance and behavior. In reviewing **present illness**, the clinician looks for the earliest and most disabling symptoms and for any precipitating factors leading to the chief complaint. Often the precipitating or stress factors associated with onset of symptoms may be subtle, requiring the clinician to draw on knowledge of behavior and psychopathology to help with inquiry regarding relevant life change events. The clinician should also report how the patient's symptoms have affected his or her life activities. It is important to review **past health history** for both physical and psychological problems—for example, to learn whether there are physical illnesses that might be affecting the patient's emotional state. Prior episodes of emotional and mental disturbances should be described. The clinician also needs to inquire about and report the use of prescribed medication, alcohol, and other drugs. Possible organic mental syndromes must be noted. **Personal history** may include information about the patient's parents and other family members, and any history of psychological or physical problems. The account of the patient's own childhood and developmental experiences may be quite detailed. Educational and occupational history is noted along with social, marital, military, legal, and other experiences. The personal history should provide a comprehensive portrait of the patient independent of his or her illness. The **mental status examination** is reviewed under the following headings: general appearance and behavior; mood, feelings, and affect; perception; speech and thought; sensorium and cognition; judgment; insight; and reliability. Finally, **recommendations** are presented about the kind of treatment the patient should receive for specific problems and target symptoms.

SUMMARY

We end this chapter by distilling aspects of our discussion into suggested interviewing guidelines:

1. Start the interview with open-ended questions. Let the patient tell his or her story in his or her own words, then fill in the gaps with close-ended questions.
2. Do not let yourself get carried away by worrying about what to ask next—listening to the patient is much more important. Follow up on issues the patient introduces, and clarify vague statements and discrepancies in a polite but firm manner. Sometimes very important information is conveyed in modest guise.
3. Keep your questions simple—one issue per question. For example, make two questions out of “How old are your children, and how long have you been married?”
4. Do not bombard the patient with questions as in a cross-examination; allow sufficient time (10 seconds) for answering questions. Novice interviewers are often uncomfortable with brief periods of silence. Silence, however, allows time for the patient to remember details and clarify thoughts and feelings. You are also entitled to take time out for thinking.

5. Learn to observe nonverbal cues while questioning. Trust emotional tone more than content when the patient is at variance (e.g., a student denies anxiety about a forthcoming exam, but looks anxious and talks with a quavering voice, drums his fingers, sweats, and cries). Point out the discrepancy, and tactfully explore its meaning to the patient. Also, attend to your own nonverbal behavior. Sit in a professional, nondefensive but nonintrusive manner (e.g., maintain eye contact without staring).
6. Use language appropriate to the patient's level of understanding, as inferred from the educational and occupational history or from the patient's vocabulary. Be sure you understand what the patient is saying and that the patient understands you. Summarize the information gained from the patient, and invite corrections. Also, let the patient repeat what you have said (e.g., "Please tell me your understanding of what we have decided to do about your problem").
7. Make sure your interview covers the following important question: "Why did the patient come in today and not at some earlier time?" This can lead to information about the most pressing concerns that spurred the patient to seek help.
8. There are two important tasks when ending the interview: (a) Encourage the patient to add information (e.g., "Before we stop, is there anything else you think I should know?"). (b) Encourage patient questions (e.g., "Is there anything you would like to ask me?").

It is quite acceptable not to have an answer. This happens frequently, even to seasoned clinicians. The proper procedure then is either to make a commitment to find an answer or to refer the patient to someone else who can help.

As you are ending the interview, ask yourself if you have a clear picture of all the biological, psychological, and social factors contributing to the patient's problem(s). When the interview is completed, you should have the necessary information to plan treatment, to provide explanations of behavior, to answer referral questions, and so on. If there are gaps in your knowledge, they should be apparent if the focus of the interview has been kept clearly in mind.

STUDY QUESTIONS

1. What is the origin of the term *interview*? What is a current definition of the term?
2. Do you believe interviewing skills can be learned? Why or why not? What is the evidence regarding the acquisition of interviewing skills?
3. How does an interview differ from a conversation? What characteristics and purposes are shared by both?
4. What is rapport, and why is it important in clinical interviewing? What attitudes does the interviewer need to convey to develop an optimally therapeutic relationship?
5. Discuss how acknowledging feelings, using open-ended questions, altering language, focusing on the interviewee, and allowing the interviewee to use silence for reflection influence the gathering of useful information.
6. Listening is essential during the interview process. How might an interviewer improve his or her listening skills?

7. How might the interviewer's self-concept interfere with the purpose of an interview?
8. What are some of the characteristics of an unproductive listener? A productive listener?
9. Identify those aspects of good listening the interviewer can practice and cultivate.
10. What preparatory work should be done prior to an initial meeting with a client?
11. Discuss the importance of listening to both factual and emotional content during an interview.
12. Which problems are clients likely to discuss first—the problems with the most or the least diagnostic significance?
13. Differentiate between an unstructured interviewing style and a semistandardized interviewing style.
14. Outline the essential components of the written report. Discuss the importance of each component in terms of diagnosis and treatment.

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PART III

Intervention

As one pursues training in clinical psychology, it is important to evaluate the theoretical and empirical bases for any given treatment modality, and to understand how theory translates into clinical practice. Guided by various educational, clinical training, and personal experiences, each professional ultimately chooses a theoretical framework within which to conduct his or her own clinical and research practices.

The chapters in Part III represent two major approaches to intervention. In Chapter 8, Eileen D. Gambrill outlines the theoretical foundation of behavioral intervention and identifies the shared postulates of the various behavioral models. She examines treatment techniques derived from social learning theory, operant and classical conditioning, and cognitive-behavioral therapy. The importance of a scientific approach to understanding behavior and evaluating treatment effectiveness is emphasized. Stephen F. Butler, Herbert Demmin, and Hans H. Strupp, in Chapter 9, introduce the reader to psychoanalytic theory, outlining its development from the classic psychoanalytic theory of Sigmund Freud to the more recent formulation of brief, dynamic psychotherapies. Following a comprehensive review of Freudian principles, the authors compare psychoanalytic psychotherapy with those therapies derived from object-relations theory, including a discussion of the meaning of transference and countertransference in each model of therapy. Finally, the unique qualities of contemporary dynamically based interventions are highlighted.

CHAPTER 8

Behavioral Methods

EILEEN D. GAMBRILL

INTRODUCTION

Behavioral methods entered the stage of clinical psychology in the late 1950s and early 1960s. Various names for this approach include **behavior therapy** and **behavior modification**. The essence of behavioral intervention is providing new learning experiences that will help to resolve problems. Behavioral methods have been applied to a wide variety of problems (see for example, the *International Handbook of Behavior Modification and Behavior Therapy* [Bellack, Hersen, & Kazdin, 1990]). (See Table 8-1.) They offer a richness of approaches to problems at many different levels. For example, there is an extensive literature on the use of behavioral methods in communities and organizations as well as with individuals, families, and groups.

The field of behavior therapy has grown enormously over the past 20 years and has become more diverse in relation to conceptual frameworks and methods (e.g., Kanfer & Goldstein, 1991). Such diversity of views is reflected in the different professional organizations that have been formed, such as the Association for Behavioral Analysis, the Society for Behavioral Medicine, and the Association for Advancement of Behavior Therapy. Many journals are devoted to a description of behavioral methods. Here, too, different journals reflect different emphases. These include the *Journal of Applied Behavior Analysis*, *Behavior Therapy*, *Behavioral Assessment*, *Behavior Modification*, the *Journal of Behavior Therapy and Experimental Psychiatry*, *Behaviour Research and Therapy*, and *Cognitive Therapy and Research*.

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

Although there are different “kinds” of behavioral intervention, all share certain characteristics. All emphasize the central importance of learning in understanding behavior. This emphasis differs in fundamental ways from intrapsychic, psychodynamic models (see later discussion). The term **social learning** is often used to reflect the importance of social factors in influencing behavior. All methods of behavioral practice share a commitment to a scientific approach to problem solving in which procedures are clearly defined; theories that are testable are preferred, and the accuracy of assumptions is tested. All these methods share an interest in behavior and concern for clearly describing procedures, draw on practice-related research, and evaluate progress. Efforts that do not have these characteristics would fall outside of behavioral practice.

Rejection of Special Causative Factors Related to “Problematic” Behavior

Within many theories of psychopathology, processes are presumed to exist that are not inferred when “normal” behavior is considered. In the behavioral model, no such sharp distinction is made concerning the controlling conditions of behavior labeled as *normal* and behavior labeled as *abnormal*. “Abnormal behavior” is not viewed as a symptom of underlying unconscious conflicts as it is in psychoanalytic approaches. All behavior is considered to be influenced by the interaction between the kinds of learning experiences we have and our genetic endowment. Varied social histories result in a wide range of behavior. In addition, there are unique “biological boundaries” on learning in different species and unique physiological influences on individuals.

If a behavior is bizarre or there are profound behavior deficits, it is not assumed that unique causative factors are involved. All actions are assumed to be influenced by the principles of behavior. Problematic reactions are viewed as problems in living, and helpful ways of approaching these are encouraged. Complaints are “normalized” whenever appropriate (i.e., viewed as reactions

Table 8-1. Examples of Areas of Application for Behavioral Methods

Anxiety	Child abuse and neglect
Obsessive-compulsive behaviors	Substance abuse
Social skills of psychiatric patients	Autism
Finding employment	Children's fear of surgery
Voter registration	Sleep disorders
Parenting skills	Crime and aggression
Educational performance of children	Improving the quality of residential settings
Depression	Schizophrenia
Risk behaviors such as lack of exercise	Marital distress
Nausea reactions of cancer patients	Pain
Seatbelt use	Conduct disorders

that are common in certain kinds of situations). Behavior that may seem quite bizarre typically serves adaptive functions; however, only when **contingencies of reinforcement** are clarified may these functions become apparent. Behavior always “makes sense” in this manner. Research in both applied and laboratory settings has repeatedly illustrated that it is possible to have reliable influence over behavior by systematically varying associated **antecedents** and **consequences**. Such research has yielded principles that describe relationships between behavior and the environment (Malott, Whaley, & Malott, 1993; Martin & Pear, 1988). Emphasis on the role of learning experiences in developing and maintaining behavior, as well as rejection of a “disease model” of mental illness, decreases the likelihood of imposing negative labels on clients. “Symptom substitution” has *not* been found to result from successful behavior therapy nor would it be expected (e.g., Sloane, Staples, Cristol, Yorkston, & Whipple, 1975).

Behavior Is of Great Interest

Behavior refers to what people do, not to what they say they do (Baer, Wolf, & Risley, 1968, 1987). Behavior (and the translation of problems into behaviors that if changed would remove complaints) is the central subject matter of applied behavior analysis (see Box 8-1). Problems and related circumstances typically involve behavior. Let us assume that you think one of your friends talks too much. He may interrupt you and not ask you questions. If we examined your behavior when talking to your friend, we may find that you **reinforce** talking. You may smile and look at him and ask him questions. And, you may not talk much yourself. A positive reinforcer is some event that when applied contingently increases the behavior in question (e.g., contingent smiling may increase your friend’s talking).

Preference for Observation and Exploration

Beliefs about why people act as they do and how behavior can be changed can be examined in a variety of ways. In behavioral practice there is a preference for exploring the accuracy of beliefs by critically testing assumptions. Hunches are checked by observing what behaviors (public or private) are related to problems and by varying specific events presumed to be related to these behaviors and reviewing the results. This interest reflects a commitment to a scientific approach to understanding behavior. Rather than just talking about behavior in an interview or speculating about its causes, clients or trained persons observe behaviors of concern in real-life settings when feasible. It is not that behavioral helpers think that people lie to them, but they are impressed by research that shows that we cannot necessarily identify the contingencies that influence our behavior. Unless we are trained to do so, we may not have the skills required to observe behavior carefully (whether overt such as talking, or private such as thoughts and feelings), noting the cues and consequences that influence our behavior and then the subsequent behavior of others.

Box 8-1**Loneliness in a Retirement Home**

Behavioral questioning revealed that one of the indicators of complaints about loneliness was receiving few letters. The next question was to identify whose behaviors contributed to such low rates. Examination of letters written by residents revealed that those who complained of receiving few letters reproached correspondents for not writing. Thus, the residents were actually punishing letter writing. The next step was to determine if this contingency was functional by altering letter-writing behavior on the part of the residents and finding out if there was an increase in letters received and a decrease in complaints of loneliness (Goldstein & Baer, 1976).

"That change was a very easy one, requiring only the slightest application of any behavioral technology—a nonreproachful letter that asked at least one question meriting an answer was modeled, and the next several letters written by the elderly complainers were read and commented on, approvingly or disapprovingly according to their content, before they were mailed. A few early ones needed rewriting; the complainers always agreed readily to do so. The analyst then prompted the complainers to write to relatives or old friends who rarely or never wrote to them. Within a very few tries, the complainers were now writing totally nonreproachful, nonaccusatory letters to everyone. Perhaps to fill the space formerly occupied by that reproachful kind of content, they now wrote about their daily lives, happenings of interest, and memo-

ries of their past experiences with their correspondents, which probably made it easy for their correspondents to reply responsively and may well have reinforced rather than punished the correspondents' letter writing. Furthermore the complainers were taught to include self-addressed, stamped envelopes in their letters, with comments explaining that they wanted to make a reply easy—their correspondents shouldn't have to "hunt up" their address.

These changes in the complainers' letter writing were made in a multiple-baseline design, across three complainers.* In perfect response to the staggered timing of that design, the three complainers began to receive prompt replies to their letters, almost tripling their average rate of receiving letters. Furthermore, presumably in part because of gratified communication among their pool of potential correspondents, and in part by their prompted writing to some long-silent people, they began to receive letters from new correspondents. This led them to begin writing to yet other potential correspondents, and to receive prompt answers, accomplishing still higher rates of letters received—and letters to answer. All this activity filled time in otherwise often empty days. That behavior change and its snowballing effects were accompanied by a thorough absence of complaints about loneliness." (Baer, 1982, pp. 285–286)

*In a multiple-baseline design across individuals, baseline data are gathered on all individuals (this describes the frequency of behavior prior to intervention), and intervention is introduced to one individual at a time.

There is an interest in the relationship between *current* behavior and related antecedents and consequences. An **antecedent** is what occurs right before behavior. A **consequence** is what immediately follows a behavior. There may be both short- and long-term consequences related to a behavior, such as smoking. Past learning experiences are assumed to be reflected in current behavior. Thus, a behavioral view encourages exploration of the role of environmental circumstances related to problems (see Box 8-1). Such a search has often resulted in successful outcomes with problems previously considered unchangeable. Let us return to our example of talking too much. This may occur because it is reinforced (i.e., it is followed by positive consequences) and because alternative behaviors (e.g., asking other people questions and listening to their replies) are not reinforced. This may seem a bit simplistic. You may wonder if other factors, such as low self-esteem on your part or aggressiveness on the part of your friend, might be involved. Rather than altering the **contingencies** related to talking too much (the relationship between behavior and what happens right before and after) should you find out *why* this happens—look into your past, examine your self-esteem, look into your friend's past, and so on? Explanations that attribute the causes of “talking too much” (which is still not defined in this example) to low self-esteem or an “aggressive personality” would be considered incomplete, since the causes of low self-esteem and “aggressive personality” have not been identified. In a cognitive-behavioral approach, **negative self-statements** associated with low self-esteem may be targeted for change as well as environmental experiences related to such statements (such as critical teachers and parents). Notice that such “targeting” goes well beyond simply saying that low self-esteem is responsible for the behavior.

Successful outcome does not require an analysis of past circumstances related to problems, although information about the past may be useful in helping clients to understand the origin or problems and associated factors, such as negative beliefs about the future. A behavioral perspective encourages the view that people are doing the best they can at any given moment under current contingencies. If clients are reluctant to participate in helping efforts, rather than blaming them for a lack of motivation, a behavioral psychologist would explore how contingencies can be arranged so that participation will be worthwhile. Contingency management involves rearranging consequences and antecedents to attain valued outcomes. The focus is on the present.

Use of Practice-Related Research to Guide Method Selection

Practice is based on empirical research both in applied and in laboratory settings that describes associations between behavior and related factors. In areas in which research is sparse, behavioral principles and related theory are used to guide practice decisions. If research demonstrates that observation of behavior in the natural environment offers valuable information that can complement and correct impressions given by self-reports, then these types of data

are used if feasible and ethical. If the literature shows that one kind of intervention is more effective than another, then within ethical and practical limits, this would be used.

Individualized Assessment and Intervention

Factors related to problems can be identified through a careful assessment. This is the case whether the client is an individual, family, group, organization, or community. An individualized assessment requires attention to cultural differences that may influence problems and possible solutions. Each individual has a unique learning history as well as unique genetic and physiological differences. Consider a client who complains of panic attacks. Nothing informative could be said about factors related to such attacks until data were collected about the exact nature of these "attacks," the situations in which they do and do not occur, and life circumstances that may be related such as reactions from significant others. It is not assumed that the form of behavior (e.g., running down the street) reflects its function (why this occurs). This characteristic makes it less likely that individual biases on the part of helpers will be imposed on clients.

Various assessment methods are used, including self-report in the interview, role playing in which behaviors of concern are enacted and reviewed, observation in real-life settings (as feasible and ethical), physiological measures, and self-monitoring (clients keep track of some behavior, thought, feeling, or outcome in real life). For example, a student who is depressed may rate her mood three times a day (morning, afternoon, and evening) using a scale ranging from 1 (very depressed) to 10 (very happy). Because one method may not be accurate (e.g., self-report), multiple methods are often used. Assessment requires clear identification of behaviors needed to attain a valued outcome, as well as a description of an individual's "entering repertoire" (skills he or she already possesses).

Labeling is deemphasized in many behavioral approaches. Practitioners working within many practice models, including the behavioral one, have concerns about the value of psychiatric labels. Psychiatric labels are often difficult to define explicitly, are used inconsistently, and often do not offer guidelines about how to resolve problems. Although some progress has been made in increasing their clarity and usefulness, significant problems remain (Kirk & Kutichins, 1992). A reluctance to label clients or to spend a great deal of time speculating about causes of problems before exploring real-life contingencies highlights the recognition given to individual differences. Incentives are selected based on what is effective for each person, since people differ in their **reinforcer profiles** (i.e., what may be reinforcing to one individual may not be for another). Unique learning histories create unique meanings for events (cueing and reinforcing influences) for each individual. Attention to individual differences is the reason for the close link between assessment and intervention. Intervention methods are selected based on an individualized assessment. These are uniquely tailored to the particular circumstance of each situation.

The primary focus is on attaining outcomes that are clinically or socially significant. Do outcomes attained make a positive difference in the lives of clients? Do they result in positive gains in the future? The opinions of clients and significant others are sought to assess the social validity of effects attained. Attention to social as well as personal outcomes is a hallmark of **applied behavior analysis**, which emphasizes the social validity of procedures used as well as effects (i.e., significant others as well as clients must be satisfied with results achieved if outcomes are judged a success). Clients are encouraged to involve significant others and to pursue changes that all parties value.

Clear Description of Problems and Outcomes

One of the key hallmarks of applied behavior analysis is the translation of personal and social problems “into observable behaviors that, if changed, would constitute a solution to the problems” (Baer, 1982, p. 281). The aim is to translate problems such as loneliness, depression, anxiety, and marital discord “into a set of behaviors which, once changed, satisfies the complaint” (p. 287). Consider the example of loneliness on the part of residents of a retirement home (see Box 8-1). Clear description of desired outcomes precludes pursuit of hidden objectives that may not be in a client’s best interests. Because objectives are clearly stated, clients are in a better position to raise questions if actions are recommended or areas are explored that seem to bear no relation to original complaints. Problems differ in the complexity and variety of outcomes that must be achieved to resolve them. Some require only a small number of changes. Others may require changes in many different behaviors in a variety of settings.

Close Relationship between Assessment and Intervention

One of the advantages of behavioral practice is the close relationship between assessment and intervention. Assessment directly informs selection of intervention methods. In some approaches this is not true. That is, one could carry out a lengthy assessment yet have little idea about what to do to help clients; no intervention knowledge would be offered. Behavioral investigators have taken the lead in designing and evaluating assessment formats that yield intervention guidelines (see e.g. Paul, 1986).

Emphasis on Education and Skill Building

Behavioral practice involves a constructional approach. There is an emphasis on helping clients to acquire knowledge and skills needed to remove complaints and create more positive environments (see Box 8-1). Clinicians

draw on client assets and significant others, as well as community resources that will facilitate change. If effective, behavioral methods increase clients' skills in influencing their environments (part of which is provided by other people), but it does not teach them to manipulate their environments in an insidious or unfair way. For example, in **social skills training**, clients acquire more effective interpersonal skills that benefit them and others in the environment. Components of social skills training include model presentation, instructions, behavioral rehearsal, coaching, feedback, and recycling through this process, as needed until required skill levels are achieved. Groups are often used in social skills training programs (e.g., Liberman, DeRisi, & Mueser, 1989; Rose & Edleson, 1987).

Clear Description of Procedures

There is an emphasis on clear description of assessment and intervention methods. This fulfills one of the conditions for informed consent and increases the likelihood that clients will carry out agreed-on tasks. If methods used are clearly described, colleagues will be able to duplicate successful methods and supervisors will be able to offer more refined feedback. Clear description makes it possible to accumulate data about effective methods.

Careful Tracking of Progress

There is a concern for collecting ongoing quantitative data about the effects of intervention. Frequency, magnitude, or duration of behaviors, thoughts, or feelings before intervention is compared with frequency, magnitude, or duration after change efforts. Evaluation is integrally related to making clinical decisions. Data about progress provide feedback for both clients and helpers as to what is working and to what degree. These provide a valuable self-corrective function. The behavioral literature shows the wide variety of problems that can be clearly defined and evaluated using multiple indicators of progress. This applies to all levels of intervention, including the individual, family, organization, or community. Examples include depression, child abuse and neglect, marital discord, communication problems, littering, and seatbelt use. Many outcomes, such as maintenance of full-time employment, can be readily defined.

Planning for Generalization and Maintenance

Achieving temporary change is not very satisfying to either clients or helpers. Behavioral practice involves planning for **generalization** and durability of change in real-life settings during both assessment (e.g., involving significant others) and intervention (fading out any artificial procedures). For example, if family members are partially responsible for maintaining the troubling behavior of a relative, their involvement in assessment and intervention is more likely to result in the maintenance of positive outcomes. Behavioral practice also in-

volves planning for generalization of effects to other situations and/or behaviors.

Concern with Ethical Issues

Many characteristics of behavioral practice are directly related to ethical practice: selecting procedures based on the empirical literature as well as acceptability to clients, building on client assets, increasing clients' options through increasing their skills and knowledge, clearly identifying desired outcomes, carefully tracking progress, clearly describing procedures, and pursuing outcomes that help clients to improve the quality of their lives. Consideration of ethical concerns requires a review of outcomes pursued in terms of unfair pressures on clients and significant others as well as avoidance of negative labels that reflect the consensus of professionals based on changing moral values and that are not helpful in selecting procedures.

Behavior analysts have been in the forefront of developing procedures to ensure that clients receive high-quality services (e.g., Christian, Hannah, & Glahn, 1984; Favell & McGimsey, 1993; Fawcett, 1991). They have taken a leading role in designing intervention methods that use only positive intervention methods, even with very difficult behaviors, and in decreasing use of aversive procedures, such as verbal abuse, prolonged social isolation, social degradation, or any method that inflicts unnecessary stress or physical discomfort (e.g., Meyer & Evans, 1989). One of the aims of The Association for Persons with Severe Handicaps (TASH) is to end use of aversive procedures. They are joined in this effort by leading behavioral researchers. B. F. Skinner has advocated wide distribution of knowledge about principles of behavior so that we can recognize ways in which our behavior is influenced by the environment; therefore, we will be in a more informed position to resist unwanted influence. It is believed that the best way to guard against or alter unwanted influences is to accurately identify sources of such influence. It could be argued that only if one understands the causes of behavior as shown by effectively altering behavior can one be free—that acceptance of causes that do not allow effective change compromises freedom.

VARIETIES OF BEHAVIORAL PRACTICE

Different kinds of behavioral practice include applied behavior analysis and **cognitive-behavioral methods** (see Table 8-2). The importance of learning is emphasized in all behavioral approaches including cognitive-behavioral ones. The main difference between these approaches lies in the role attributed to *thoughts*. In addition, these approaches differ in the methods used to assess effectiveness. In applied behavior analysis there is a focus on intensive study of individuals over time. In cognitive-behavior therapy there is a focus on examining differences between groups exposed to different methods. The behavioral model, especially behavior analysis, can be viewed as a consultation model, in which clinicians often help a mediator, such as a parent, teacher, or a staff person, to alter the behavior of someone else (like a child or student). This

consultant model emphasizes the importance of knowledge and skills in helping clients and the value of forming a collaborative working relationship (Bergan & Kratochwill, 1990). Let us now take a closer look at the varieties of behavioral practice.

Applied Behavior Analysis

Behavior analysis involves the systematic investigation of variables that influence behavior. Applied behavior analysts have developed and evaluated programs of benefit to a wide range of clients, including students at all levels of education, youth labeled delinquent, psychiatric patients, people with developmental disabilities, individuals experiencing chronic pain, the unemployed, the elderly, and parents and children (e.g., Pinkston & Linsk, 1984). They have been in the forefront of applying behavioral principles to community problems, such as litter, fuel oil consumption, electricity consumption, recycling, and car-pooling.

It is assumed that most behaviors are learned through interaction with the environment (i.e., behavior is selected by its consequences). Causes of behavior are sought in the relationships between behavior and environmental changes, not in the feelings and thoughts that are considered to be collateral effects or byproducts of these contingencies (Skinner, 1988). Applied behavior analysis involves the application of findings from the experimental analysis of behavior to problems of importance to individuals or to society (see Tables 8-2 and 8-3).

Applied behavior analysis is the science in which procedures derived from the principles of behavior are systematically applied to improve socially significant behavior to a meaningful degree and to demonstrate experimentally that the procedures employed were responsible for the improvement in behavior. (Cooper, Heron, & Heward, 1987, p. 14)

Behavior analysis emphasizes the importance of a **functional analysis** of behavior in which environmental factors related to behaviors of interest are identified through rearranging contingencies (altering what happens before and after behavior) (see Box 8-1). Although behavioral principles are clearly spelled

Table 8-2. Characteristics of Applied Behavior Analysis

<i>Applied:</i> Real-life problems of concern to individuals or society are addressed.
<i>Behavioral:</i> Behaviors of individuals and variables that influence these are focused on, including both overt behaviors and private behaviors (thoughts and feelings). Behavior is viewed in the context in which it occurs.
<i>Analytic:</i> The relationship between certain environmental changes and their effects on behavior must be demonstrated. Replication is needed to explore the consistency of effects.
<i>Technological:</i> Procedures used are clearly described.
<i>Conceptually systematic:</i> Descriptions of methods used and results attained are related to basic principles of behavior.
<i>Effective:</i> Behaviors focused on must improve to a practical degree. Clinical and social significance is the concern, not statistical significance. Consumer satisfaction with procedures and outcomes is evaluated as well as degree of observable changes.
<i>Generality:</i> Duration of change as well as changes in behavior in other situations is a concern.

out (e.g., Cooper, Heron, & Heward, 1987; Malott, Whaley, & Malott, 1993; Sulzer-Azaroff & Mayer, 1991), their application to real-life problems is often quite complex and requires conceptual understanding as well as technical knowledge. A contingency analysis requires an understanding of behavioral principles as well as a variety of assessment skills such as observation of interaction patterns.

The term *applied* refers to the extent to which a behavior is socially important. *Behavior* refers to what people do. It is assumed that it is just as important to carefully measure behavior in real-life settings, such as classrooms, organizations, and groups, as it is in laboratory settings. Behaviors focused on must have immediate importance to the involved individuals: They must be those in need of change, not verbal descriptions of the behavior. The social validity of outcomes is emphasized; that is, effective use of behavioral methods must improve behavior focused on in a *socially significant way*. “In application, the theoretical importance of a variable is usually not at issue. Its practical importance, specifically its power in altering behavior enough to be socially important, is the essential criterion” (Baer et al., 1968, p. 96). Thus, significant others, such as teachers, parents, or residential staff, are included in assessing the value of changes that occur. The social validity of procedures is also emphasized; that is, procedures used must be acceptable to clients and significant others. Real rather than conceptual influence is of interest. The latter refers to writing theoretical descriptions. Some argue that such descriptions are valuable only when behavior cannot be altered. The effects of altering a given variable are tracked on an ongoing basis.

Analysis requires “a believable demonstration of the events that can be responsible for the occurrence or nonoccurrence of that behavior” (Baer et al., 1968, p. 94)—a demonstration of experimental control by altering presumed causes (see Box 8-1). “The analytic challenges for anyone who deserves to be called an ‘applied behavior analyst’ are (1) to restate the complained-of problem

Table 8-3. Glossary of Terms

Applied behavior analysis	The technology based on the experimental analysis of behavior (the science of behavior).
Behavioral principles	Lawful relationships that have been found between certain changes in the environment and patterns of behavior.
Cognitive-behavioral methods	Intervention methods that include a focus on altering thoughts related to outcomes of concern.
Conceptual descriptions	Accounts that do not provide intervention knowledge. These are often offered when functional descriptions are not available.
Contingency	An association between a behavior and environmental antecedents and consequences.
Functional descriptions	Accounts of behavior and related environmental events that yield intervention knowledge.
Radical behaviorism	The philosophy and theory related to behavior analysis.
Social learning theory	A view of behavior in which cognitive mediators such as anticipations and expectations are given a central role.
Technology	Methods for accomplishing certain goals.

in behavioral terms; (2) to change the behaviors indicated by that restatement; and then (3) to see whether changing them has decreased the complaining response" (Baer, 1982, p. 284). Private as well as public events are assumed to be subject to environmental influence.

The behavior analytic view emphasizes prediction and influence as the criteria for the truth of statements; understanding is viewed as at hand when assumptions result in successful prediction and influence. This reflects the value placed on scientific methods in yielding information about the accuracy of claims. Thus, analysis of behavior has been achieved when one can exercise influence over it. Replication is required to determine whether relationships found hold up in further tests. This addresses the question, Can results be consistently demonstrated? Another characteristic of this framework is a concern with generalizations and maintenance. Does a behavior change last over time? Does it occur in other environments or involve other behaviors not focused on? The characteristics of applied behavior analysis offer important safeguards for clients—goals focused on must be of direct concern to clients, and success must be measured in terms of real-life gains.

RADICAL BEHAVIORISM. **Radical behaviorism** is the philosophy related to applied behavior analysis, as well as a theoretical account of behavior some believe to be thoughtful and comprehensive. The roles of natural contingencies, contingencies of survival, contingencies of reinforcement, and contingencies of social evolution are emphasized. (For a fascinating account of the role of evolutionary influences, see Gilbert [1989].) The belief in a "science of behavior" is a basic premise of radical behaviorism (i.e., the belief that behavior is knowable and that knowledge can be discovered through empirical inquiry). It is not claimed that a radical behavioral perspective is the only scientific psychology. It is argued, however, that a scientific approach is most likely to yield knowledge about behavior and how it can be altered compared to other approaches.

WHAT IS RADICAL ABOUT RADICAL BEHAVIORISM? There are perhaps more misunderstandings about radical behaviorism and more objections to it than any other perspective in psychology (e.g., Todd & Morris, 1983; Wyatt, 1990). These misunderstandings often result in ignoring this framework, which has been applied with success in a wide range of settings (including organizations and communities) and with many problems (from increasing exercising to increasing voter registration). Radical behaviorism does not embrace associationism, operationism, positivism, or environmental determinism. It is not assumed that contingencies cause any behavior. "To so assign causal power is what is meant by *radical environmentalism* and radical behaviorism does *not* advocate radical environmentalism. Behavior is not endlessly malleable. Rather, internal and external factors need to be regarded as coordinated participants in a total system" (Moore, 1990, p. 33).

The term *radical behaviorism* received this name because it represented a radical break with earlier forms of behaviorism. What is radical about radical behaviorism is not only that private events, such as thoughts and feelings, are *not* dismissed, but that they are viewed as behaviors that themselves require an explanation (traced to their environmental, evolutionary, and/or physiological

origins). Private events are assumed to have the same functions as public (observable) events. They may function as eliciting events for emotional reactions, cues for overt behaviors, behaviors in their own right, and/or negative or positive consequences. "The objection to [focusing on] the inner workings of the mind [to seek explanations for behavior] is not that they are not open to inspection but that they have stood in the way of the inspection of more important things" (Skinner, 1974, p. 165). The advantage of viewing thoughts and feelings as behaviors is that they cannot readily be inaccurately presumed to be the cause of behavior. They themselves are behaviors in need of explanation.

PROCEDURES. Central to applied behavior analysis is to rearrange contingencies. This will require information about what these contingencies are. Such information may be gathered in a variety of ways, including reports in the interview and observation in real-life situations. Information collected is used to develop ideas about how contingencies can be rearranged. Reinforcement is a key principle in behavior analysis. This reflects the importance attributed to the consequences of behavior. Let us consider an early example of the use of positive reinforcement with a 5-year-old student (Martha) who often refused to play with her peers and was teased by them (Hart, Reynolds, Baer, Brawley, & Harris, 1968). The rate of cooperative play with her peers was very low during baseline (prior to intervention). She was, however, responsive to attention and comments on the part of her teachers. Teacher approval and attention were identified as potential reinforcers. Effects of this consequence were examined under different conditions: (1) when the teachers interacted with Martha in their usual manner baseline; (2) when they offered "noncontingent" reinforcement in which they spent time with Martha and approved of her behavior at random times independent of what she was doing; and (3) when contingent reinforcement was used (the teachers approved and spent time with Martha when she played cooperatively with her peers, but did not do so when she was engaged in noncooperative solitary activities). During the noncontingent reinforcement condition, cooperative play did not differ from baseline. During contingent reinforcement, however, it increased to higher levels.

Twenty-five years of additional research has yielded hundreds of studies indicating that behavior can be altered by rearranging contingencies, such as in the case of Martha.

Negative reinforcement is also used to influence behavior. Disruptive behavior is often maintained by escaping from unwanted tasks, such as working on assignments. In such instances children or adults can learn more effective ways to escape from such tasks (e.g. by asking for a "time-out.")

Extinction, differential reinforcement, and shaping are also key principles. **Extinction** involves no longer presenting consequences that maintained a behavior. **Differential reinforcement** involves reinforcing certain behaviors and not reinforcing others (see the above example of Martha). **Shaping** is used to develop new behaviors. This procedure takes advantage of the natural variations in behavior, reinforcing approximations to desired behaviors and ignoring other behaviors. **Modeling** is also used to establish new behaviors (clients observe someone perform behaviors of interest). For an entertaining and accurate account of shaping as well as other behavioral principles read *Don't Shoot*

the Dog by Karen Pryor (1984). Behaviorally oriented investigators have argued strenuously against reliance on punishment to alter behaviors because of its many negative effects (e.g., Sidman, 1989; Skinner, 1974).

Behavior can also be altered by rearranging what happens before it. This is known as **stimulus control** (Watson & Tharp, 1989). For example, if you engage in many different activities at your desk, you may have difficulty getting to work because your desk is associated with activities incompatible with studying such as daydreaming, writing letters, or talking on the telephone. You could “purify the stimulus control” by only studying at your desk. Self-instructions are often used to increase adaptive behavior. For example, adolescents with developmental disabilities can acquire rules to use in social situations that enhance positive outcomes (Park & Gaylord-Ross, 1989). Rule-based learning is an active area of inquiry in the behavioral literature (Hayes, 1989).

Cognitive-Behavioral Methods

Cognitive-behavioral methods focus on altering thoughts as well as behaviors presumed to be related to troublesome reactions (e.g., Hawton, Salkovskis, Kirk, & Clark, 1991). Programs have been developed for helping people to address a wide range of problems, including anxiety, depression, anger, and pain. **Cognitive-behavioral therapy** “. . . is defined as those sets of therapeutic procedures that: (1) embody theoretical conceptualizations of change that place primary importance on cognitive process, and (2) procedurally target at least some therapeutic maneuvers specially at altering aspects of cognition” (Ingram & Scott, 1992, p. 55). An analysis of both cognitive and environmental variables related to problems is conducted. Various conceptions of thought processes include conditioning (e.g., thoughts reflect learning experiences and function as cues and consequences), information processing (e.g., focus is on encoding, decoding what is perceived), and constructive narrative (we construct our own realities and representations of the world). Each conception may suggest a somewhat (or very) different focus. Approaches differ in the extent to which there is a search for underlying themes related to negative self-statements. For example, an underlying belief that “I am not a good person” may be related to a variety of negative self-statements. Here, too, careful evaluation of progress is considered important, as is the testing of assumptions.

Thoughts are addressed, both as events to be influenced (such as the frequency of negative self-statements) and as the cues and consequences that influence them. Cognitive variables are assumed to be important mediating mechanisms. Many methods and techniques are aimed directly at altering cognitions, such as **schemata** (internal models of self or the world presumed to be involved in perceiving, coding, and recalling information) and expectations. Problems such as anxiety, anger, low self-esteem, and depression are assumed to be related to what people say to themselves. For example, anticipation of responses, such as fainting while giving a public talk, may create anxiety. Cognitive distortions that create problems include all-or-nothing thinking (“I’m either good or bad”), thinking in terms of “musts” and “shoulds” (“I must pass this test”), and catastrophizing (e.g., “It will be terrible if . . .”). The dysfunctional role of unrealistic expectations, such as “I must never make mistakes” or “Every-

one must like me," is emphasized in rational-emotive therapy (Ellis, 1993). Clients may learn to reinterpret bodily sensations, such as rapid heartbeat, as one step toward decreasing "panic reactions." Cognitive-behavioral approaches to depression view this complaint as resulting from a triad: a negative view of the self, of current life circumstances, and of the future (Beck & Emery, 1985).

Numerous methods are used in cognitive-behavioral practice, some of which have been developed by investigators who were not a part of mainstream behavior therapy, such as Albert Ellis and Aaron Beck. Methods range from those that rely on argument and persuasion to those that draw more systematically on learning principles. In coping skills approaches, there is a focus on helping clients to enhance skills for adapting to stressful situations. An example would be the **stress inoculation** program developed by Meichenbaum (1977). **Cognitive restructuring** methods focus on altering some part of cognitive structure or processes, with the goal of enhancing accurate appraisal of information. An example would be Beck's cognitive approach to the treatment of depression and other problems (Beck & Weishaar, 1989). Clients learn to identify negative beliefs and self-statements related to their problems, to reevaluate negative thoughts, and to replace these with functional thoughts and actions. Unrealistic expectations are challenged, their role in creating and maintaining problems is identified, and more accurate views are developed (Beck & Emery, 1985). **Problem-solving approaches** focus on helping children and adults to develop more effective problem-solving behaviors. Examples include interpersonal problem-solving programs for youth and the problem-solving approach to altering depression (LeCroy, 1994; Nezu, Nezu, & Perri, 1989). Many procedures developed early in the history of behavior therapy, such as **systematic desensitization**, involved changing unobservable events (e.g., thoughts and images). However, changes in conditioning are emphasized. In systematic desensitization, clients imagine themselves in proximity to feared events in the context of an incompatible response, such as relaxation (Wolpe, 1958).

Behavioral methods, such as exposure to feared situations, may accompany cognitive methods as relevant, thus the name *cognitive-behavioral therapy*. In cognitive-behavioral programs designed to decrease social anxiety, participants learn to identify thoughts that make them anxious, such as "I will faint" or "I will look like a fool," and to focus on functional tasks and participation. In addition, exposure to feared situations is a critical component of such programs (Scholing & Emmelkamp, 1990). Other commonly used behavioral methods include activity scheduling, graded task assignments, behavioral rehearsal, and relaxation training.

SOCIAL LEARNING THEORY. **Social learning theory** (SLT) provides the underlying theory for cognitive-behavioral methods (Bandura, 1986). Thoughts are given a key role. It is assumed that we present an important part of our environment via our expectations, goals, and standards. Social learning theory involves an information-processing view in which verbal and classical conditioning, social influence, and incentive effects are addressed in cognitive terms. The importance of **vicarious learning** experiences (i.e., watching others) is emphasized. Thoughts are considered to play an important role in the complex processes that affect attention and in the degree to which different kinds of interventions are effective in altering "self-efficacy." These, in turn, are assumed to

influence behavior. It is assumed that our appraisal of our competence influences what we do and how we feel. **Performance efficacy** refers to expectations that a behavior can be carried out. **Outcome efficacy** refers to expectations that it will be effective *if* it is carried out. The extent to which different kinds of interventions alter self-efficacy is believed to determine their effectiveness. Efficacy expectations develop through learning experience. Thus, both social learning theory and radical behaviorism stress the role of learning.

Neobehaviorism

Neobehaviorism is a term popular with some investigators who focus on the treatment of stress and anxiety disorders. Emotional reactions are altered through **respondent conditioning** (altering the relationship between stimulus events). For example, anxiety is viewed as a conditioned response acquired via unique learning histories. Change in such reactions can be made by arranging new conditioning experiences (Wolpe, 1958, 1990). Here, too, conditioning principles are emphasized; however, there is a greater emphasis on respondent conditioning compared to applied behavior analysis in which operant conditioning and its effects are emphasized.

ROLE OF SOCIAL INFLUENCE VARIABLES

The social influence process inherent in a therapeutic relationship is recognized within a behavioral approach, which encourages helpers to attend to possible biasing influences in selecting objectives and methods. Counselor behavior during the interview influences the client's responses even in very non-directive helping approaches (Snyder & Thomsen, 1988; Truax, 1966; Wills, 1982). Clients become familiar with the helper's views and may begin to rely on these to explain their own experiences. Candid recognition of the role of social influence variables in working with clients decreases the likelihood that they will be used in underhanded or "unconscious" ways. Relationship factors are not, however, considered to be the sole or main effective component in removing complaints. Rather, they are viewed as a facilitating influence. An understanding of and competence in providing conditions associated with success are important skills of behavioral helpers. Enhancing positive expectations, clarifying mutual roles, providing empathy and warmth, and offering supportive feedback all increase the likelihood of establishing a collaborative working relationship that is a hallmark of behavioral approaches. One advantage of the behavioral methods is that they can be used in situations in which there is initially no possibility for establishing a relationship, such as with autistic children.

SUMMARY

Behavioral methods have been successfully implemented with a wide spectrum of problems. This framework offers a conceptually rich and (often) empiri-

cally grounded base on which to design programs on many different levels of practice, including individual, family, community, and organization. Behavioral practice has become diverse in terms of what is labeled behavioral. The recent change in the description of *Behavior Therapy*, the flagship journal of the Association for Advancement of Behavior Therapy, reflects the increased interest in cognitive variables. This is now described as “an international journal devoted to application of behavioral and cognitive sciences to clinical problems.” Problems of social importance continue to be cited as the main concern of the *Journal of Applied Behavior Analysis*. A commitment to a scientific approach to testing assumptions will provide a useful criteria against which to judge the accuracy of claims. Are complaints removed? Do individuals, families, organizations, or communities attain valued outcomes? Are conceptual accounts compatible with what is known about behavior?

STUDY QUESTIONS

1. What characteristics are shared by all models of behavioral intervention?
2. How do antecedents and consequences influence behavior? What are contingencies of reinforcement?
3. Why is it useful to use more than one method of behavioral assessment in any given situation?
4. What is applied behavior analysis? What are the primary aims of applied behavior analysis?
5. Describe social skills training. In what clinical populations or settings would this training be most beneficial?
6. Provide an example of treatment generalization. Why is generalization important?
7. What are some of the ethical issues confronted in the practice of behavior therapy?
8. Describe the cognitive-behavioral approach to assessment and intervention.
9. What are the major emphases of the behavior analytic view of assessment and intervention?
10. What is the basic premise of radical behaviorism? What makes this view “radical”? What are some of the procedural differences between cognitive-behavioral intervention and applied behavior analysis?
11. Define and give examples for the following terms: positive reinforcement, negative reinforcement, extinction, differential reinforcement, shaping, modeling, stimulus control.
12. Describe and provide examples of cognitive restructuring, problem solving, and systematic desensitization.
13. Discuss social learning theory. Who is the major social learning theorist? What is vicarious learning?
14. What is respondent conditioning?

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CHAPTER 9

Psychodynamic Psychotherapy

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The inception of psychoanalytic theory and practice was in December of 1880. Prior to that time, no true form of psychotherapy as we think of it today was in existence, and there was much confusion about the nature of the so-called mental disorders. Did all the bizarre symptoms that were observed have organic bases? How could a person's psychology or psychological problems lead to symptoms? There were indications at the time that some symptoms, even physical symptoms like paralysis, were not the result of physical disability. The famous French physician Charcot was busy demonstrating that dramatic, if short-lived, cures of physical disabilities such as blindness and paralysis could be obtained through hypnosis. Were these people really sick? If so, what had gone wrong with them, and what could be done to help them? The practice of what we now recognize as psychotherapy (all forms of psychotherapy) began with the treatment of one particularly disturbed and particularly talented young woman who began treatment in December of 1880 with Josef Breuer, a respected Viennese physician.

That patient, known by the pseudonym Anna O., was 21 years old; she was an educated, intelligent, and attractive woman from a prominent family. Despite her considerable aptitudes, the social restrictions of the time on women of her class left Anna bored, sexually naive, and given to spending her days daydreaming. Also, Anna was very attached to her father, who spoiled her. But, in the last couple of months of her father's fatal illness, Anna, who was to nurse him, became too ill herself to continue taking care of him.

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

Anna began to experience headaches, spells of excitement, double and distorted vision, loss of sensation, and partial paralysis. In time, her symptoms grew more bizarre. She would appear to be in a kind of trance, while her excited spells became rapid shifts of mood. She began to hallucinate black snakes, skulls, and skeletons. At times, she spoke like a young child, and at other times, she was unable to speak (or read or write) in her native language of German, speaking only in English, French, or Italian. She developed two different personalities, one of them quite willful. When her father died, these symptoms worsened to the point of stupor.

Faced with this puzzling patient, Dr. Breuer visited her daily. During these visits, Anna would begin talking to her doctor, telling stories about herself. As she talked, Anna began to remember important memories and reexperience feelings she had been unable to recall or express before. This process of remembering and reexperiencing feelings, called **catharsis**, was followed by symptom relief. Anna called this “the talking cure.” Breuer noted that when he hypnotized Anna, he could get her to trace each of her symptoms to a particular event or occasion that had given rise to it. Her symptoms appeared to be the result of suppressed feelings and impulses. Following this discovery, Breuer was able to eliminate Anna’s symptoms and return her to a state of health.

There are several versions of what happened next. One story is that Mrs. Breuer began to protest Dr. Breuer’s spending so much time with his pretty, young patient. For this reason, or perhaps just because his patient was improved, Breuer withdrew his services. When he did, a strange thing happened. Shortly after ending with Anna, Breuer was called to her house one evening in 1883. There he found his patient confused, nearly delirious, and writhing with abdominal cramps. When he inquired as to the problem, she replied that she was in labor and giving birth to a baby. Then she added, “Now comes Dr. Breuer’s child.” A shaken Breuer hypnotized Anna, calmed her, and left, dropping the case. Reportedly, he and his wife soon took an extended vacation. Certainly, Dr. Breuer abandoned all interest in his new treatment!

Josef Breuer, with the help of his gifted patient, had made several important observations. Yet, at a crucial moment of discovery, he stopped asking questions and fled. Breuer’s young colleague, Sigmund Freud, was not diverted from asking the next question: “Why should this young woman react to her doctor in such a strange manner?” In one sense, Freud’s genius was precisely his willingness to push on to new discoveries that eventually led to a revolution that persists today—a revolution that changed forever the way we think about human behavior, motivation, psychopathology, and psychotherapy.

PSYCHOANALYTIC THEORY

Freud’s Impulse Theory

To understand Freud’s **impulse theory**, it is important to understand Freud’s original interest in relating psychological events to physiological processes. In the latter part of the 19th century, when Freud studied medicine and neurology, Western thinking was rapidly assimilating the powerful ideas of

Charles Darwin (1859, 1871). As a medical student, Freud was heavily influenced by teachers who insisted that all behavioral activity of the organism could be reduced to physical–chemical forces. The biological bent evident in Freud’s early medical career was never fully abandoned. Indeed, a cornerstone concept of psychoanalytic theory ties Freud’s thinking to biological processes, namely the concept of instinct or drive.

Freud conceived of the mind as an apparatus that can be activated by sensory stimuli from the environment and the body. Those stimuli arising from the body he called **drives**, because such stimuli drive or impel the mind to activity (i.e., represented psychologically as wishes). Thus, the mind is a mental or psychic apparatus that is responsible for the discharge, regulation, and control of instinctual energy arising from the body. He believed that the drives impel the mind to work in accordance with the **pleasure principle** or **pleasure–unpleasure principle**. According to Freud, the mind seeks to achieve pleasure, particularly the pleasure of gratifying the instinctual urges arising from the body, and to avoid unpleasure, particularly the unpleasure of instinctual frustration, and anxiety (Brenner, 1982).

Freud believed, then, that drives stem from bodily sources and that such drives have their effect on the mind by impelling it to seek pleasure through drive gratification and to avoid the unpleasure of drive frustration. In addition, he identified two separate drives or motivating forces that are active from the beginning of mental life in infancy. These two drives are **libido** and **aggression**. Libido is one’s physically, instinctually based experience of sensual pleasure (i.e., pleasure associated with eating, thirst, elimination of waste, and sex). The source of libido stems from what Freud called the **erogenous zones**. These are areas of the body that can serve a sexually stimulating function—the genitals, anus, and mouth. There are also secondary erogenous zones, such as the skin, eyes, ears, and olfactory senses, which are responsible for sensations that can also be sexually stimulating.

For Freud, the second major motivating force or drive was aggression. Aggression was an outgrowth of the **death instinct** or **thanatos**, an instinct beyond the pleasure principle that aims to return the organism to a condition totally without energy—death. He believed that an organism moves toward a highly specific, natural death and defends itself against all threats of death that are not appropriate to it. Thus, the death instinct can actually serve to prolong life in that if a person is confronted with an external stimulus that is life threatening, he or she can react with aggression as a way to defend himself or herself against it. More specifically, the aggressive drive represents a person’s wishes to kill, hurt, destroy, get revenge, and so on. Aggression is a manifestation in mental life of the instinctual death drive that Freud believed was inherent in every cell of the body (Brenner, 1982).

Freud and Conflict

Freud had assumed that human behavior was based on two conflicting tendencies: the pleasure principle and the reality principle. The pleasure principle motivates a person toward immediate, impulsive, wish-fulfilling gratifica-

tion. The reality principle motivates a person toward being able to tolerate delays of that gratification. Freud believed that these two principles are not really in opposition to one another, since both aim at the discharge of an amount of excitation or tension that arises within a person and that results in the experience of pleasure. The reality principle is only a delaying process of attaining the same aim, which is pleasure. All behavior, according to Freud, is in the service of the experience of pleasure (i.e., in the service of tension reduction) (Brenner, 1982).

Freud believed that from the very beginning, an infant is motivated by drives (libido and aggression) that are instinctually and bodily based, and that the infant's major aim is to experience the pleasure of gratifying such drives and to avoid the unpleasure of their frustration. However, he believed that as an infant or child attempts to gratify such drives, he or she will encounter a series of dangers from the environment (usually from the parents) as a direct reaction to such attempts. He believed that the infant or child experiences anxiety in response to such dangers. The tension between the child's desire to gratify the drive and the danger of punishment over this attempt creates **conflicts** within the child.

To describe how a person's mind could be in conflict with itself, Freud imagined that one "part" of the mind could be in conflict with another "part." He named these different parts of the mind the id, the ego, and the superego. He defined the **id** as consisting of biologically based, unconscious drives. In reality, we cannot always eat, have a bowel movement, or have sex the moment we get the urge. As the infant develops, the part of the mind that learns to plan and arrange for satisfaction of drives or urges is called the **ego**. If a person is hungry in class, his or her ego processes the plan to get a burger later. If you have to go to the bathroom or want to have sex with the person sitting next to you, you may plan to arrange these things later, but you do not do it in class. Society insists that these urges must be controlled. It is the ego's job to achieve satisfaction by delaying one's gratification and by dealing with reality in ways that allow that gratification to take place. Thus, a child's ego serves as a guide through reality. It helps the child learn to adapt and change.

What motivates us to postpone pleasure and even deny it completely (i.e., it might be pleasurable to murder someone who frustrates us)? Freud said that we internalize society's values. We enjoy the praise of our parents when we learn to hold our bowels, but if we give in to the urge and mess our pants, we feel shame associated with our parents' disapproval and disgust. The part of the mind that internalizes these rewards and punishments is called the superego. The **super-ego** represents our parents' and society's expectations, prohibitions, and so forth.

In response to the anxiety prompted by dangers rising out of the environment in reaction to a child's attempts to gratify specific drives, the child's ego develops **defenses** to avoid feeling anxious. In this view, all defenses are attempts to compromise between the demands of the id and the restrictions of society. For psychoanalysts, the mental phenomena that are observable or inferable (i.e., a patient's wishes, speech, conscious thought, fantasies, symptoms, plans, activities, dreams, etc.) are all **compromise formations** among the unacceptable drive (id), a defense against satisfying that drive (ego) and remorse or self-punishment (superego) (Brenner, 1982).

Psychoanalytic theory posits that childhood drives that remain ungratified because they arouse too much anxiety and conflict do not simply disappear. Rather, a person's behavior continues to reflect disguised attempts to gratify the provoking drive. Moreover, the person remains unaware or unconscious of this conflict. Because the person is unaware of the conflict, his or her behavior is often a mystery and distressing. This distressing behavior may take the form of neurotic symptoms. **Neurosis** can be defined as problematic behaviors that stem from the compromise formations arising out of conflicts over childhood drives (Brenner, 1982).

CASE EXAMPLE. One of the authors worked in therapy with a woman in her mid-thirties (we'll call her Maggie) who came to an outpatient clinic seeking help for depression. However, her main concern related to feeling very disturbed by her recent treatment of her dog, Buffy. Buffy was a small, poodlelike dog toward whom she felt extremely close. Much to her dismay, she had recently found herself treating Buffy viciously. She described moments of kicking Buffy, throwing her against the wall, pulling her hair out, whipping her around the room by her tail, frightening her, and generally treating her terribly. She also emphasized that Buffy never did anything to warrant any kind of punishment; she was a sweet, helpless little dog. Maggie felt totally confused by this unusual behavior and was overwhelmed by feelings of guilt, self-loathing, and sadness for treating Buffy so abusively.

Over the weeks that followed, Maggie continued to agonize over the terrible suffering she inflicted on Buffy, treatment that she seemed totally unable to control. However, during one therapy session, Maggie revealed that she had been married to a man who was extremely emotionally and physically abusive. During this marriage, her anger, which had been too dangerous to express, escalated more and more, until she finally had her revenge by leaving him very abruptly and without any word. She moved to a distant location, changed her life completely, and never looked back.

On further exploration of her prior marriage, and much to the therapist's surprise, Maggie rather matter-of-factly stumbled past a statement about her two young children from the marriage that she had left behind! As the therapist pressed her for details about her children, he also reminded her of her overwhelming feelings of pain and guilt in reaction to her abuse toward Buffy. Within the next 30 minutes, a cascade of pain and guilt poured out, as Maggie experienced an intensely emotional insight. Maggie realized that through her abusive treatment toward Buffy she was somehow punishing herself for abandoning her children. She was avoiding feelings about her children, while experiencing guilt, agonizing pain, and self-hatred in response to hurting Buffy. She needed to leave her abusive husband in a shocking and vengeful way. In order to do this, she could not be consciously aware of the pain and guilt of abandoning her children. Nevertheless, her pain and guilt were present, albeit unconsciously, and seemed to be expressed and re-created in a disguised form through her uncontrollable abuse toward Buffy, which left her hating herself.

In psychoanalytic terms, the difficulty between Maggie and Buffy might be conceived of as her ego's resolution to finding a compromise for her id's need for a vengeful separation from her husband and her superego's moral condemnation of abandoning her children. This compromise was reflected by Maggie's ability

to carry out her vengeful separation without having to consciously experience the full weight of her guilt and pain for having abandoned her children. However, her superego had its way to some degree by realizing Maggie's feelings of guilt and pain through an experience (abuse toward Buffy) that was different enough or disguised enough from the reality of abandoning her children so as to keep this reality hidden.

With the insight of relating her awareness of having left her children to her feelings of pain and guilt over abusing Buffy, Maggie experienced a number of significant changes. First, her abusive treatment toward Buffy immediately stopped. Second, she continued to express and talk about extremely intense feelings of pain and guilt over her lost children. As a result, she was ultimately able to decide to reunite with her children and successfully did so.

Psychoanalytic Method

Early on, Freud and Breuer hypnotized patients to trace the meaning of symptoms. As Freud gained experience with patients, his reliance on hypnosis waned, and he became concerned about the suggestibility inherent in hypnosis. Instead, he turned to **free association** which requires the patient to say as freely as possible whatever comes to mind and to avoid any conscious attempt to edit what he or she says. The analyst directs his or her attention as much as possible to the task of understanding the nature and origins of the patient's difficulties and of communicating that understanding to the patient. The analyst observes the sequence of the patient's conscious mental life (i.e., issues, fears, fantasies, dreams, memories, etc.), as reported under conditions that reduce to a minimum the influence of extraneous stimuli (Brenner, 1982).

What makes analysis possible and accounts for the usefulness of the psychoanalytic method is the fact that when a patient speaks, the wishes and prohibitions being defended against constantly find expression in what the patient is thinking and talking about. By free associating, the patient gives a more or less recognizable expression of the wishes that arouse anxiety and defense. While these wishes are defended against in various ways, they constantly influence every patient's thoughts enough so that they can be inferred with some certainty by the analyst. The analytic task is to help the patient understand the nature and origin of his or her conflicts well enough so that the symptoms decrease in intensity and/or frequency or even disappear. The analyst is guided by knowledge of such conflicts in general, and by devotion to the task of learning as much as possible about the patient's conflicts. As the analyst learns more about the patient's conflicts, he or she conveys this knowledge to the patient with the expectation that making the conflicts conscious will improve or eliminate the symptoms (Brenner, 1982).

The analyst brings unconscious thoughts, feelings, and behaviors into conscious awareness through **interpretation**. The interpretation is what the analyst tells the patient about his or her conflicts in order to help the patient increase knowledge of himself or herself (Brenner, 1982).

A relatively commonplace example of the kind of interpretation that an analyst might offer during a typical therapy hour is provided by Greenson

(1967). A young man, Mr. S., begins his therapy hour by stating, "Well, I had a rather successful marital experience last night with my wife. It was very satisfactory for both parties concerned." He continues in a very restrained way about how he enjoys "making love" with his wife and shifts the topic to other, innocuous matters. Greenson intervenes by saying, "You mentioned earlier that you enjoyed a 'marital experience' last night. Please explain to me what you mean by a 'marital experience.'" The patient hesitates, blushes, and then haltingly states, "I guess you want me to be more specific . . .," and pauses. Greenson offers an observation: "You seem bashful when it comes to talking about sexual matters." This statement is intended to draw the patient's awareness to his behavior. Mr. S. responds by describing his difficulties in discussing sex.

Later, Greenson asks, "What occurs to you when you imagine talking about sex?" Mr. S. states that sex was considered a dirty and forbidden subject at home, adding that he was scolded by his father for asking about how babies are born and told that this was not a fit subject for a "decent boy." Although he later overcame his shyness about sex with his peers at school, he continued to react with embarrassment when sexual matters came up with authority figures. Greenson says, "As soon as you alluded to sex, I became a prudish father figure who you feared would reprimand you for it." This interpretation points out to the patient how his past experience distorts the present situation. Once Mr. S. fully realizes that the current situation is *not* the old, dangerous one with his father, his response to current authority figures can be based on a more realistic assessment of the current situation.

The analyst's interpretation does not necessarily result in change. Rather, the patient must come to terms with the uncomfortable, distressing implication of the interpreted conflicts. In fact, the pressures that led the patient to be unconscious of the conflict in the first place may cause the patient to **resist** the explanation offered in the interpretation. The process of **working through** refers to focusing on the resistances that prevent an insight from leading to change.

Object Relations Theory

An important theoretical question emerges at this point. Freud's description of these basic instincts implies the presence of an **object** toward which the instincts are to be directed. The idea of object embodies the notion of the human being in interaction with other human beings. Clearly, sexual gratification and aggression typically are manifested in interactions with people. The theoretical question relates to whether the primary psychological forces in personality development are other people/objects, or whether such primacy belongs to the libidinal impulse. In Freud's view, the object's importance is only as a target for the libidinal drive. From this perspective, an object can be anything, human or animal, animate or inanimate. It can be a "**part-object**," such as a breast or penis—in short, anything that can be used to discharge energy. As such, the object is only important in terms of its potential for discharging energy. In Freudian terms, interpersonal and social needs are secondary concerns of the personality, necessary only in that drive gratification is impossible without commerce with other human beings.

Although much of Freud's theory describes the early psychosexual development of the child, these formulations were constructed almost entirely out of the childhood reminiscences of his adult patients. Freud never directly treated a child. Among the first psychoanalytic observations of children were those made by Melanie Klein (1952), who applied psychoanalytic techniques in her therapies with children. Klein's observations, made in an effort to clarify the connections between childhood experiences and adult personality, conflicted with the expectations of Freudian theory. Instead of trying to control libidinal impulses, children devoted the greatest amount of energy to constructing their interpersonal worlds. Klein had made the discovery that "the inner world of the child was a world of human relationships" (Cashdan, 1988, p. 5).

Observations by Klein and others paved the way for subsequent theories leading away from Freud's drive theory. Several object relations theories were developed by Fairbairn, Winnicott, Balint, Bowlby, and other members of the "British School" of object relations. Later theories were contributed by two American analysts, Kernberg (1975, 1976, 1984) and Kohut (1971, 1977). Although each of these theorists presents a different view of the specific developmental phases of object relations, the importance of the movement can best be appreciated by reflecting on the commonalities that these approaches share.

PERSONALITY DEVELOPMENT. Of foremost concern to object relations theorists is the role that human relationships play in personality development. From this perspective, the best way to view the infant is not as **pleasure-seeking**, as Freud would have it, but rather, as **object-seeking** (that is, person-seeking). Since the child's first encounter with another human being is typically the mother, these authors focus on this relationship as the setting for a drama with profound effects on the child's developing sense of "self." Although the role of the "self" is most strongly emphasized in Kohut's writings, the development of the self is directly or indirectly addressed by all object relations theorists.

According to these theories, the child interacts with the mother through a variety of stages, depending on the particular theory (for an easy-to-read summary of the various object relations theories, see Cashdan [1988]). Consonant with Freudian theory, the goal of these interactions is often viewed as the gratification of basic needs. However, in object relations theory, the child internalizes or "introjects" images or memories of interactions with significant others. In the beginning, the infant's experience does not differentiate between itself and the mother; there is no **boundary** between the infant and the mother. This simply means that the infant has no conception of where it (the infant) ends and the rest of the world (mother) begins. If a baby is hungry or wet, for instance, it is unlikely that it gives much thought to whether mother might have something else to do at the moment!

The first categories that have meaning for the child are those experiences that make him or her feel good or bad. In this way, the child divides or **splits** his or her world into two main divisions, essentially gratifying objects ("the good breast," "the good [rewarding] mother") and bad or frustrating objects ("the bad or empty breast," "the bad [punishing] mother"). These rudimentary divisions of the world into "good" and "bad" are the beginnings of discriminations from which the child will develop a sense of self in relation to other people. For

example, the child experiences himself or herself as “bad” in the presence of a parent who is angry and punishing and “good” when the mother is rewarding and nurturing. An important aspect of splitting is the assumption that in early development, the child’s experience of objects is “either/or.” That is, if the good object is present, the bad object does not exist, and vice versa. Further maturation brings with it some extraordinarily difficult tasks as the child becomes increasingly aware that the same object, including himself or herself, can be simultaneously “good” and “bad.” In this way, the child begins to construct an internal sense of himself or herself and how people regard him or her as well as an internal sense of what the significant people in his or her life are like.

When the mother–child interactions are tinged with too many negative, frustrating experiences, the child cannot tolerate allowing the mother to be simultaneously both good and bad. When the “bad” is very bad, the danger is that the bad will poison or destroy the child’s sense of his or her “good” mother (and of himself or herself). The child copes with this threat by keeping his or her internalized sense of mother (and his or her internalized sense of himself or herself) separated or split into “good” and “bad.” Optimally, the child’s sense of self solidifies into a separate, organized, and essentially positive self that can be essentially “good,” despite being “bad” at times. Similarly, the child’s view of mother as a separate and essentially positive self who can also be “bad” at times solidifies and helps him or her generalize the understanding that others can be generally “good” despite being “bad” at times. Mature, fulfilling relationships are possible because the child can adapt more easily to the natural fluctuations in others’ behaviors and in his or her own.

Psychopathology, in the object relations view, reflects the child’s tendency to rigidly see himself or herself and others as either all “bad” (rejecting, punishing) or all “good” (rewarding, nurturing) at one time or another. Such rigid perceptions cause problems in the adult’s relationships and in his or her feelings toward himself or herself. This rigidity makes it difficult for the person to have mature, fulfilling relationships with others and to succeed in endeavors that help him or her enhance his or her own self-esteem.

Interpersonally Based Psychodynamic Psychotherapies

In recent years, some theorists have extended the idea of internalized object relations to an emphasis on the reflection of these object relations in interpersonal interactions (e.g., Strupp & Binder, 1984). Interpersonal theorists are aware that interactions between people are inherently circular, that “human social behavior is embedded in a feedback network wherein the ‘effect’ influences or alters the ‘cause’” (Kiesler, 1982, p. 9). This circularity reflects the fact that the cause-and-effect sequences in interpersonal communication are predictable. Hence, a person’s interpersonal actions tend to invite, evoke, or “pull” for predictable responses from the other. For instance, if one person approaches another in a hostile manner, chances are the other will respond defensively. Conversely, a warm, open approach is typically met with a warm, open reception.

In one sense, this essential predictability of interpersonal interactions, based on learning in previous interactions, permits comprehensible and effi-

cient social intercourse. If, however, one's previous interpersonal experience has been less than optimal, distorted and overly rigid expectations of others' responses can result. When this happens, the individual attempts to constrain the other's reaction, creating a "pull" for the other to respond in a way that is congruent with the rigid expectations.

At the same time, the individual is unaware of the nature of his or her communications, and there is a tendency to deny the inflexible, controlling aspects of these communications. When the recipient of the communication responds to the unacknowledged "pull" to respond in a particular way, a kind of self-fulfilling prophecy takes place, whereby the very interpersonal outcome one is attempting to avoid actually occurs. This is sometimes referred to as a maladaptive interpersonal pattern or vicious cycle (Strupp & Binder, 1984). For example, a patient expects rejection from others and protects himself or herself (defense) by rejecting them first, developing an angry, chip-on-the-shoulder attitude. Most people respond to this attitude with avoidance, thus ensuring the vicious cycle of expecting rejection and then unconsciously creating the dreaded rejection.

TRANSFERENCE IN DYNAMIC PSYCHOTHERAPY

Psychoanalytic Transference

The perspectives on personality development proposed by the various schools of psychodynamic psychotherapy are essentially maps for guiding the therapist's formulation of the underlying sources of the patient's problems and for figuring out what to do about them. All dynamic therapies, however, see the therapeutic endeavor as involving the same basic elements. As Freud observed earlier, despite the patient's conscious endorsement of the therapeutic aim of release from symptoms, the therapist meets with "a violent and tenacious resistance, which persists throughout the whole length of treatment" (Freud, 1920/1966, p. 286). In dynamic therapy, the patient resists or seems to hold onto his or her symptoms because to give up the symptoms means the person must confront very threatening and uncomfortable thoughts, feelings, or memories. Sometimes resistance involves interacting with the therapist in distorted ways that hinder the therapeutic progress. These distorted ways of seeing and interacting with the therapist are known as **transference**. Understanding how these distorted interactions perpetuate the patient's problems and why the patient clings to this way of interacting with the therapist is a central element of all dynamic therapies.

The patient interacts with the therapist in the same rigid ways that he or she interacts with other significant people in his or her life, both past and present. These rigid modes of interacting are meant to protect the patient from threatening interpersonal consequences such as rejection, injuries to one's self-esteem, inability to get one's needs met, and so forth. However, by unconsciously adhering to these rigid "self-protective" interactions (by resisting change), the patient's distressing symptoms are maintained. At the same time, these transference reactions provide an opportunity for the patient to see, in his or her

behavior toward the therapist, the meaning, purpose, and consequences of his or her interpersonal behavior.

Recall the discussion above of Anna O. who imagined she was pregnant by Dr. Breuer. What Freud eventually learned was that this bizarre reaction of Anna's was a distortion of her relationship with her therapist. Anna's life had left her ill-equipped to establish appropriate love relationships. Instead, she relied on a kind of satisfaction she could get by responding to kind, fatherly figures with forbidden fantasies of love.

While Anna's is a particularly dramatic example of transference, virtually all patients respond to their therapists with unrealistic expectations and wishes. Consider an intelligent and educated woman whose experience has led her to the conclusion that men will be interested in her only if she acts in seductive, girlish ways. She reports to her therapist an inability to establish satisfying relationships with men; she always ends up resenting the way they treat her like a sexual object with no brain. While she is talking with the therapist, he notices that she is giggling and flirting, and is overtly seductive toward him.

For Freud, psychopathology was the result of an **unconscious conflict** between the socialized ego and the threatened expression of unsocialized, libidinal (sexual and aggressive) impulses. The patient's entire psychological system resists conscious awareness of the forbidden impulses as well as the original conflict. **Repression** (literally, forgetting) of the conflict is the basic defense that blocks awareness. This repression, however, is accompanied by a tendency to "act out" or *repeat* attitudes, behaviors, and emotions relevant to the conflict rather than consciously remembering it. The patient's compulsion to repeat with the therapist the essence of the early conflict is, for Freud, the transference.

Object Relations Transference

For the object relations theorists, the patient's inner world is composed of the internalized and conflicted experiences with past objects. In this view, the patient **projects** feelings about these past objects onto the therapist, thereby distorting the "real" relationship with the therapist. These distorted perceptions of the therapist, based on early object relations, constitute the transference. Some object relations theorists describe the experience of the therapist (who is the recipient of the projection) as **projective identification**. A therapist, for instance, finds himself or herself becoming highly critical of a patient who describes herself as only accepting and tolerant. The therapist may examine how the patient's behavior may have caused him or her to respond critically. In this view, one person is more or less manipulated into behaving in a manner that seems to reflect a disowned, or split off, aspect of the person doing the projecting.

The concept of projection is illustrated by the case of Fred, reported by a renowned object relations theorist, James Masterson (1981). Masterson questioned the meaning of Fred's argumentative behavior, threats to see another therapist, and angry feelings toward the therapist. Masterson then offered an interpretation of those feelings, stating that he thought they had nothing to do with the therapist but were related to the progress that Fred was now making in

therapy. The therapist suggested that Fred was feeling what he had often felt as a child when he attempted to be independent of his father and was rejected for doing so. Fred was seeing the therapist as an exact replica of his father. Fred's anger was an attempt to protect himself from the expected ridicule and rejection by the father figure over Fred's move toward independence in therapy. Masterson states that this interpretation was effective and helped Fred begin to work through such feelings and not let such fears inhibit his ability to function as an independent adult.

Contemporary, Dynamic Transference

This projection process of object relations theory is similar to the transactional conception of transference held by some contemporary dynamic theorists, whose theoretical approach focuses on maladaptive interpersonal relationships (e.g., Strupp & Binder, 1984). Both modern psychodynamic and object relations formulations of transference postulate that significant and often traumatic interpersonal experiences with parents (or other important people) continue to exert an influence on later interpersonal behavior. The traditional object relations view is that this influence is rather like a series of billiard balls set into motion by a first strike with the cue (Schacht, Binder, & Strupp, 1984). Thus, later behavior is *directly* affected by the initial, traumatic event. Early objects (e.g., parents) are "projected" onto an otherwise neutral present object (e.g., the therapist). In contrast, the contemporary dynamic theorist emphasizes the **re-enactment** in the present of a self-perpetuating vicious cycle. Thus, rather than a projection from the past, the interpersonal conception of transference emphasizes the circular, transactional quality of human social relations. As previously described, the patient's history of problematic interpersonal experiences results in an overly rigid style of interacting with others, intended to reduce threats to the self. When this style of interacting occurs with the therapist, the patient's style is the transference. The origin of the transference can be traced to experiences with significant others in the past. The present interaction can be seen as a re-creation of an old, familiar (predictable), even if dreaded, interpersonal scenario. Emphasis on the origin of the transference reactions is not as important to the contemporary dynamic therapist as it is to the object relations therapist. Quite literally, the interpersonal problems that brought the patient into therapy emerge within the therapeutic relationship itself. This is the concept of transference in interpersonal terms.

This view of transference assumes that the patient will inevitably re-create the maladaptive pattern with the therapist. Thus, the therapist is not surprised to find himself or herself, to some degree, caught up in an uncomfortable conflict with the patient. The therapist's job is to recognize that this conflict exists and to move not only to extract himself or herself from the conflict, but also to help the patient see (that is, gain insight into) his or her own contribution to creating and maintaining the vicious cycle.

One of the authors saw a woman in weekly therapy to help her deal with memories of childhood sexual abuse. Donna began to construe her therapist's sensitive and caring stance as reflecting romantic feelings toward her. Moreover,

she communicated that she loved him and asked him if he loved her. The therapist responded that he did not share these feelings. She became extremely upset and self-deprecating, adding that of course he could not possibly love her because she was a “bad seed” and “worthless.” When he gently tried to convince her that she was not unlovable, the patient decided that these kind words meant that he really did love her, despite his earlier denial. This resulted in the patient asking more often whether the therapist really loved her, with increased urgency and anxiety. Thus, the therapist found himself “caught” in a bind where he was either cruelly rejecting her tender, loving feelings or giving her the message that some romantic involvement between them would be possible (romantic involvement between therapists and patients is both unethical and harmful to patients).

The therapist was able to pull back from these painful interactions with the patient and formulate the following vicious cycle. Donna’s extreme insecurity led her to seek reassurance that she was “lovable.” This led to desperate and pressing efforts to seek such reassurance in an inappropriate relationship. The inappropriateness of romantic feelings between herself and the therapist assured the kind of answer she most feared, namely “rejection.” Since the stakes were so high for her self-esteem, her reaction to this “rejection” was intense self-loathing. The therapist found himself responding to his patient’s self-punishment with guilt of his own, leading him to try to “soften the blow.” This, however, led to a rejuvenation of her hopes and more efforts to get reassurances, beginning the cycle all over again. The therapist also realized, and was eventually able to convey to the patient, that the ultimate outcome of these interchanges was bound to end in her feeling she had been rejected by her therapist. As this pattern was explored, similar patterns in Donna’s former romantic and family relationships were identified. As a result, the pattern of conflict in the therapeutic relationship began to change.

COUNTERTRANSFERENCE

In classical psychoanalysis, **countertransference** is the therapist’s version of transference. The patient comes to represent a person or persons in the therapist’s past with whom the therapist has unresolved conflicts. The countertransference, therefore, is a breach of the therapist’s objectivity and neutrality. Such subjectivity, according to the classical view, is an impediment to the therapy and must be overcome, usually in the therapist’s personal analysis.

This classical view of countertransference began to yield to the idea that the therapist’s personal reactions to the patient might provide useful information for understanding the patient. Some patient behaviors, such as hostility or seductiveness, naturally engender certain reactions in the therapist regardless of his or her personal background. These reactions do not represent the therapist’s pathology, but instead reflect the kinds of reactions that the patient is likely getting from others outside of therapy.

Indeed, the utility of countertransference responses for enhancing therapists’ understanding of patients has become a generally accepted tenet of psychoanalytic thinking (e.g., Butler, Flasher, & Strupp, 1993). Furthermore, over

the last 30 years, considerable attention has been given to countertransference reactions commonly encountered with certain types of patients, such as borderline and narcissistic disorders. These patients can be quite self-absorbed, demanding, manipulative, seductive, and hostile, and they tend to elicit from therapists a more or less predictable set of responses. Viewing the therapist's reaction to such patients as information relevant to what is "wrong" in the patient's life outside of therapy has been a major development in psychodynamic thinking and therapy.

Despite this emphasis on the usefulness of the therapist's reactions, most psychodynamic theorists still recognize the potentially harmful influence of the therapists' "blind spots" in their own personalities. There is growing empirical evidence that such unchecked countertransference reactions may account for a variety of technical errors on the part of therapists (Henry, Strupp, Butler, Schacht, & Binder, 1993).

PSYCHODYNAMIC VERSUS NONDYNAMIC THERAPIES

Dynamic psychotherapies have fundamental differences from other models of psychological treatment, especially behavioral, cognitive behavioral, or medical (pharmacological) approaches. Unlike these modalities, dynamic therapists view themselves as treating underlying "problems in living" (Anchin & Kiesler, 1982; Strupp & Binder, 1984) rather than symptoms or a disease. In addition, the behavioral approaches see people as basically rational, logical, and aware of their motivations. Thus, behavioral therapists tend to accept at face value the patient's stated desire to change. Dynamic therapists, on the other hand, assume that patients both desire to change and, unconsciously, resist and fear the changes that treatment may bring (see, for example, the debate in Wachtel [1982]).

Patients come to therapists in pain, seeking relief, yet by their actions and attitudes they continually resist the therapist's efforts to help. If asked, "Do you want help to change?" patients uniformly answer in the affirmative. But the tenacity with which they hold onto maladaptive beliefs, perceptions, and behaviors points toward an irrational, nonlogical process that works to resist beneficial change. Emphasis on this clinical observation constitutes one of the main schisms between the dynamic and nondynamic camps. Despite recent developments in the thinking of some cognitive behavioral theorists (e.g., Meichenbaum & Gilmore, 1984), who propose the theoretical recognition of unconscious or "automatic" thoughts, it is psychodynamic theory that takes most seriously the primacy of unconscious involvement in the emotional and interpersonal processes underlying psychopathology.

BRIEF DYNAMIC PSYCHOTHERAPY MODELS

Although different forms of psychoanalytic or psychodynamic therapies have emerged over the years, it is safe to say that there are underlying principles

that all dynamic therapies accept. These can be summarized as follows: (1) the patient's symptoms are the result of problematic ways of thinking and behaving; (2) the determinants of these ways of thinking and behaving are unconscious—that is, the patient is unaware of why he or she behaves and thinks in this way; and (3) the patient will repeat these problematic ways of thinking and behaving with the therapist—that is, transference will occur. Thus, the therapeutic approach most widely accepted by dynamic theorists involves some form of analysis of the transference.

In classical psychoanalysis, patients are seen three or four times per week, for 4 or 5 years, or longer. Over the last 30 years or so, however, as more and more people have sought therapy, the demand has increased to shorten the therapeutic process. In response to this demand, there have been several attempts to develop models of dynamic therapy that were intended for briefer durations, from 12 weekly sessions (Mann, 1973) to around 40 weekly sessions (Davanloo, 1980; Malan, 1963). More recently, there have been efforts to develop “manuals” for specific dynamic approaches to treatment, which are suitable for short-term therapy (usually 20 to 25 weekly sessions). Among the best known of the dynamic manuals are Luborsky's (1984) supportive–expressive therapy and Strupp and Binder's (1984) time-limited dynamic psychotherapy. In a recent review of research studies using manual-guided dynamic therapies and therapists trained in brief treatment, Crits-Christoph (1992) found that brief dynamic psychotherapy is an effective treatment and compares well in controlled studies to other psychotherapies and medications.

These modern approaches to psychodynamic psychotherapy have tended to emphasize (1) focus on a single “core” conflict, and (2) interpersonal rather than intrapsychic conflicts. In these brief therapies, the therapist attempts to make the patient aware (conscious) of his or her core maladaptive pattern and, in so doing, provide the patient an experience of a significant relationship that does not fit with his or her repetitive pattern.

Future developments in psychodynamic psychotherapy will very likely involve efforts to develop specific therapies for specific types of patients. While other therapies (e.g., cognitive and behavioral therapies) have long developed treatments designed specifically for particular disorders, like depression (Beck, Rush, Shaw, & Emery, 1979) and panic disorders (Barlow, Craske, Cerny, & Klosko, 1989), dynamic therapies tend to be conceptualized as applicable to psychiatric patients in general. Greater efficacy, however, may be obtained by tailoring dynamic approaches to the conflicts and interpersonal problems commonly encountered in particular patient groups. Recent attempts to develop specialized dynamic treatment approaches to specific populations are Clarkin and Kernberg's (1993) treatment for borderline personality disorder and Mark, Crits-Christoph, and Luborsky's (1992) supportive–expressive therapy for cocaine addiction. The efficacy of these specific approaches are currently being tested.

SUMMARY

Only 100 years or so ago, Freud made the extraordinary discovery that many of our behaviors are disguised attempts to get certain needs met of which we are

unaware. His legacy includes the idea of unconscious motives and conflicted desires along with the notion that childhood experiences are important determinants of personality. He developed the first, and to this day the most far-reaching, theory of human behavior and psychopathology. Moreover, he put forth a model of a healing relationship that influences all psychotherapy practiced today, regardless of orientation. Also, he left us with the critical understanding that, despite patients' conscious intentions to change, they will vigorously resist such change. Furthermore, his astute observations revealed that this resistance will be reflected in distortions of the patient's experience of the therapist (i.e., the transference). Finally, he showed that through a collaborative exploration of this transference relationship, long-standing psychological problems could be "cured."

Today, new formulations of these insights continue to illuminate the connections between disturbed interpersonal relationships and those chronic maladaptive behaviors that result in pain and symptoms. Armed with this knowledge, the psychodynamic therapist participates in a uniquely personal and fulfilling journey as the patient breaks free of the past and moves toward a more mature and healthy life.

STUDY QUESTIONS

1. When did the inception of psychoanalytic theory begin, and who was responsible for its initial practice?
2. Who was Anna O.? Detail her presenting problems and her treatment by Josef Breuer.
3. Explain Freud's impulse theory and the concept of drives.
4. What are ego defenses, and how do they relate to anxiety?
5. Review the role of the id, ego, and superego in psychoanalytic theory. How were they manifested in the case of "Maggie"?
6. Describe the process and potential value of free association.
7. Define interpretation, resistance, and working through. What is the purpose of each in the psychoanalytic therapy process?
8. Explain the basic premise of object relations theory. What was Klein's contribution to this theory?
9. What are the similarities and differences between object relations theory and psychoanalytic theory?
10. Differentiate between psychoanalytic transference, object relations transference, and dynamic transference. How might these differences affect the therapeutic process?
11. What is countertransference? How can the therapist use countertransference to facilitate his or her understanding of the patient? When is it likely to be harmful to the patient?
12. How do psychodynamic theories differ from nondynamic therapies?
13. Identify several forms of brief dynamic therapy models. What are future developments in psychodynamic psychotherapy likely to involve?

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PART IV

Professional Activities and Settings

As clinical psychology has matured as a professional discipline, so too have the opportunities for its practitioners. Whereas in the 1940s and 1950s, the primary function of clinical psychologists was assessment (with psychotherapy being a distant second), today's graduates of clinical programs can pursue a wide range of activities. Included are consultation, research, private practice, and clinical, research, consulting, and administrative functions in psychiatric settings.

In Chapter 10, Frank A. De Piano and Michel Hersen introduce the graduate student to the numerous consulting opportunities in governmental agencies, industrial concerns, and private facilities. In addition to outlining the models of consultation, the authors examine the relationship between consultant and consultee and the politics of consultation. Illustrations of consulting problems are presented, and advice to the new consultant is offered.

In Chapter 11, Jeffery B. Allen and Alan M. Gross discuss the research possibilities available to the clinical psychologist. They look at the scientific methods, classification of research strategies, and practical considerations. Both single-case and group-controlled designs are surveyed, with illustrations of each provided for the reader.

In Chapter 12, Steven T. Fishman and Michael V. Pantalon give advice to the recent clinical graduate contemplating development of a private practice. They point out that accountability, adaptability, and use of alternative forms of treatment all are key to success in the era of "managed competition." The authors discuss when to begin the practice; the issues of full- versus part-time, generalist versus specialist, and sole practitioner versus group practice; fee setting; burn-out; and other aspects of private practice.

In Chapter 13, Kim T. Mueser and James D. Herbert discuss opportunities for clinical psychologists in psychiatric hospitals, including direct clinical service, teaching and supervision, research, and administration. Also considered are problems for psychologists who work in medical settings, such as the ever-present psychiatry–psychology conflict, the medical model of abnormal behavior, and differences between how academic departments of psychology and psychiatry are administered. Finally, the authors tackle the thorny issue of prescription privileges for psychologists.

CHAPTER 10

Consultation

FRANK A. DE PIANO and MICHEL HERSEN

DEFINITION AND GENERAL DESCRIPTION

Psychological consulting, in the broader sense, refers to an interaction in which expertise provided by a professional facilitates an individual or organization in reaching its goals. The **consultant** may be selected for his or her specific technical expertise, such as the one who is brought in to a residential treatment center in order to plan and assist the staff in implementing a contingency management program. At other times, the consultant is hired to provide another perspective to a particular problem or to an interaction pattern within an agency. For example, the authors are familiar with a consultative situation in which three psychologists were asked to assess problems associated with the running of a particular academic department. This academic department was under a great deal of pressure to increase its enrollments. As pressure increased, the admissions office for the department increasingly blamed its marketers and recruiters for not identifying sufficient numbers of bonafide applicants. Likewise, the department's marketers and recruiters increasingly blamed low enrollment on admissions officers who, it was argued, were rigid and elitist in their admission procedures. As tensions grew, communications between marketers/recruiters and admissions officers diminished, and each faction actually began to withhold information from the other, including information that was vital for the successful recruitment of students. The resulting outcome was in opposition to the stated goal of increasing enrollments. In this situation, the consultants first identified the problems: (1) a lack of communication between the two involved groups (the recruiter/marketers and the admissions officers), and (2) too great a pressure being placed on the department to increase its enrollments (too much

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

in this situation because the pressure paradoxically resulted in fewer enrollments).

After identifying the problem, the consultants brought together the recruiters/marketers, the admissions officers, and representatives from the university central administration. Three group meetings occurred in which participants were able to express their frustrations and to discuss the problems identified by the consultant. Once the problems were identified, the participants were able to effectively solve many of the specific problems through increasing their communication and through a minor modification within the recruitment and admissions procedures. The results of consultation thus led to better morale and increased admissions.

In another consultative situation, a pair of psychologists was requested to work with a group from a state agency that funds health services. The agency had experienced tremendous cutbacks in staff and service funding. The remaining staff were in the difficult situation of needing to balance between the state legislators, who were looking to decrease appropriations, and the direct service providers, who sought additional funding. Communication among the state agency workers was minimal. Many were missing work while looking for other jobs, and in general, they lacked enthusiasm and commitment to their present agency work. In this case the consultant organized a series of group meetings, which allowed the individuals to recognize that they were all experiencing similar levels of frustration, and that this was due to several external causes as opposed to specific incompetent acts. These "insights" increased sensitivity among the workers. They became more courteous and helpful to each other and thereby alleviated some of the job-related stress.

As can be seen in both of these illustrations, the consultant enters a situation to help solve a specific problem or set of problems. Once the problem has been alleviated, the consultant usually has no continuing role with the organization that originally sought his or her services. In other instances, however, a consultant, because of his or her specific technical or clinical expertise, may be hired on a weekly or biweekly basis to preside over a **case conference** format, where students or more junior staff present. As consultants, the authors have had the opportunity to provide such consultation for the Veterans Administration and a university employee assistance program.

OPPORTUNITIES FOR CONSULTATION

The richness and flexibility of the roles of clinical psychologists have been underscored throughout this textbook. By virtue of their extensive and varied training experiences, clinical psychologists are in excellent position to provide consultative services to many different agencies and individual consultees. As early as 1976, Garfield and Kurtz found that the majority of clinical psychologists had their primary employment in the following settings: psychiatric hospitals, general hospitals, outpatient clinics, community mental health centers, medical schools (in a variety of departments, including psychiatry, neurology, pediatrics, family practice), private practice, psychology departments in universities, and other departments in universities. The range of activities in these settings involves, but is not limited to, individual psychotherapy, family ther-

apy, group therapy, assessment and diagnosis, teaching and clinical supervision, research and research supervision, scholarly writing, and administration.

In consideration of the types of settings in which clinical psychologists work and the numerous activities that they perform on a daily basis, the possible combinations and permutations of their activities are impressive. Moreover, given high levels of achievement, expertise, and prominence in particular areas, clinical psychologists have been highly sought after to share their knowledge and experience with a number of professional, community, educational, private, governmental, and legal agencies.

As was pointed out by Bellack and Hersen (1980), "Although almost no clinical psychologists are full-time consultants, many do supplement their income with consultative work" (p. 37). For example, a clinical psychologist with expertise in behavior therapy may be hired one-half day a week to teach staff at a school for children with mental retardation the strategies of behavioral assessment, functional analysis, and precise treatment directed to equally precise targets. Such consultation may be carried out through formal lectures, directed reading, case consultation, and actual modeling of the therapeutic techniques. Or, a neuropsychologist may consult for a legal firm specializing in personal injury suits, with emphasis on evaluating clients' cognitive and emotional limitations as a consequence of their accidents. In this latter example of consultation, the clinical psychologist (neuropsychologist in this instance) also is expected to testify in court about his or her findings. Still another example of consultation is the clinical psychologist hired by a municipal police force to ascertain psychological suitability of new candidates for positions. The consultant's expertise in objective testing (e.g., with the Minnesota Multiphasic Personality Inventory), supported by empirical data for his or her diagnostic conclusions, is critical. Success of his or her diagnostic acumen will, over time, be confirmed by the performance of candidates who subsequently are hired to become police officers.

To give the reader a more comprehensive picture of the full nuance of consultation opportunities available to clinical psychologists, Table 10-1 lists agencies that frequently request this kind of consultative expertise. Indeed, the authors of this chapter, at one time or another, have consulted with most of the governmental, industrial, and private agencies listed. In so doing, they have been called on to provide their clinical (e.g., case consultation for the Veterans Administration), forensic (e.g., evaluation of violence potential of certain criminals for the courts), research (e.g., evaluation of research grants for the National Institute of Mental Health), editorial (e.g., evaluation of new book proposals for publishers), and organizational (e.g., improving staff morale in nursing homes) expertise.

In light of the degree of expertise typically required by agencies that seek external advice, consultation is an activity that newly degreed clinical psychologists rarely perform. Most consultative opportunities are available at midcareer and even later, since one's overall reputation and standing in the field usually are at issue. As will be noted in a subsequent section, consultation fees typically are high, and agencies requesting such services look for those clinical psychologists with "big reputations" (bolstered by extensive documentation in their *curricula vitae*). Moreover, of all the roles enacted by clinical psychologists, consultation does require the most extensive breadth of knowledge combined

Table 10-1. Consultation Opportunities for Clinical Psychologists

Agency	Type
State hospitals	Governmental
Veterans Administration hospitals	
Prisons	
Court systems	
Public school systems	
Police departments	
Juvenile correctional facilities	
Schools for disabled individuals	
State facilities for retarded individuals	
Federal funding agencies (e.g., NIMH)	
State departments of vocational rehabilitation	
Employee assistance programs	Industry
Corporations	
Textbook and professional book publishers	
Public media (radio, television, newspapers, magazines)	
Motion picture industry	
Law firms	Private
Family service agencies	
Halfway homes	
Rehabilitation centers	
Nursing homes	
National and international health organizations	
Private schools	
Religious organizations	
Departments of psychiatry and psychology in universities	Private and governmental

with a talent to put such knowledge to use rapidly and innovatively with novel problems. There is no doubt that the clinical psychologist consultant must think quickly in order to provide the consultee with advice that can be implemented directly. Armchair philosophizing and long-winded theoretical exposition will not enable the clinical psychologist to maintain his or her consultanship for extended periods of time. We therefore argue here that the consultative relationship is the foremost test of the clinical psychologist's knowledge base that must be applied expeditiously and pragmatically. In a subsequent section, we will emphasize how the consultant–consultee relationship is fraught with many political undertones (cf. Hersen, Bellack, & Harris, 1993), thereby further complicating the clinical psychologist's task.

MODELS OF CONSULTATION

In this section, we will very briefly review the models of consultation that have been described in the literature. The consultant's theoretical orientation (i.e., behavioral, psychoanalytic, organizational, systems theory) and the nature of the consulting problem are likely to interact to determine which model he or she will follow. In conceptualizing the issues, Bergan and Kratochwill (1990) have identified 10 such consultation models, and have categorized the process

in terms of five critical questions: (1) theory, (2) knowledge base, (3) goals, (4) stages and steps, and (5) responsibilities of the consultant. Since the detail provided in this analysis is well beyond the scope of this chapter, the interested reader is referred to Table 10-2. At this point let us consider the consultant–consultee relationship that typifies each of the models.

Mental Health Model

In this model, the consultant implicitly and explicitly assumes that the consultee is able to solve most of the problems; hence, the relationship is egalitarian. Adhering to a psychodynamic or crisis intervention perspective, the consultant enables the consultee to extend his or her range of ability, but necessary expert advice and direction are provided.

Behavioral Model

By contrast, in the behavioral model there is a clearer delineation between consultant and consultee, in that the consultant is the acknowledged expert who teaches or shows how learning principles can be applied pragmatically to individuals, groups, and organizational problems. Although there may be mutuality of problem solving, there is a large disparity in the consultant and consultee's behavioral knowledge base.

Organizational (Human Relations) Model

In this mode, given that the focus of consultation is how individuals interact in the context of an organization, the consultant can best be described as a facilitator. Indeed, the consultant shepherds the group through a variety of stages that include orientation, contract setting, reconnaissance, opportunity development, aspirations, analysis, experimentation, results analysis, and program design.

Organizational (Organizational Thinking) Model

This model is a variant of the aforementioned, in that its focus is more on group conflict, intragroup communication, discussion making, and goal setting. Here too the consultant is a facilitator, but he or she also intervenes more directly and functions as a trainer.

Organizational Advocacy Model

Although most similar to the other organizational models, in advocacy the thrust of the consultant is highly goal directed, but the style of implementation

Table 10-2. Analysis of 10 Consultation Models in Response to Five Criterial Questions

Consultation model	Theory for the consultation relationship	Knowledge base for problem solving	Goals	Stages/steps	Responsibilities
Mental health					
Caplan (1970) Meyers et al. (1979)	Assumes that consultees have the capacity to solve most of their work problems and that consultants can help them increase their range of effectiveness (Gallessich, 1982). Theories that have been applied to how the consultant treats the consultee include neoclient-centered psychology (Rogers, 1942, 1951, 1959) and Adlerian psychology (Adler, 1964; Dreikurs, 1948, 1967). No single theory of communication has been applied.	Psychodynamics; clinical skills; crisis concepts; specialized diagnostic and decision-making skills; theme interference reduction; one-downmanship; avoidance of therapy; relationship building.	Consultant chooses one of four possibilities: client-centered, program-centered, or administrative or consultee-centered. Success is measured by the degree to which the consultation expands the consultee's capacity to diagnose, cope with, and solve emotional or technical problems of the consultee or the client.	Consultant chooses type of consultation for the problem and primary target of interventions. <i>Example</i> 1. Consultant seeks information on nature and scope of work problem, consultee's capacity for problem solving, and ways the consultation may be useful. 2. Consultant "treats" the consultee by offering expert opinion, or shared, straightforward problem solving is used.	Consultant is responsible for gathering information on the nature of the problem and for providing solutions to consultant/consultee relationship is egalitarian (Gallessich, 1985)
Behavioral	Assumes that consultant's application of behavioral or social learning theory will help consultee solve problems. Behavioral learning theory has been more consistently applied to methods for problem solving than to how the consultant interacts with the consultee, although the latter would also be applicable.	Flexible knowledge of behavioral programming and principles of social learning theory and applied behavior analysis.	To reduce the frequency of an undesirable client or consultee behavior; to increase the frequency of desirable client or consultee behavior.	1. Problem identification. 2. Problem analysis. 3. Plan implementation. 4. Problem evaluation (Bergan, 1977).	Consultant serves as an expert; consultee is the recipient, although sometimes mutuality of problem solving is emphasized.
Bergan & Tombari (1975, 1976); Kratohwill & Bergan (1978); McNamara & Diehl (1974); Tombari & Bergan (1978)					

Organizational A. Human relations model Argyris (1964); Bennis (1969, 1970); Homans (1950); Lippitt (1969)	Organizational theory: problems of organiza- tions must be solved in a manner that incorpo- rates into the process all those individuals in the organization be- cause of the focus that they bring to bear on one another (Lewin, 1951), the influence of environment on per- sonal growth (Rogers, 1942, 1951, 1959).	Communication skills; decision-making skills; force-field analysis approved, data collection and feedback, social and psychological, cogni- tive behaviorism; ecology, psycho- dynamic systems; statistical models and methods, humanistic values and assump- tions (Gallessich, 1985).	To bring about planned change by focusing on individuals and their attitudes and values and group processes in the or- ganization (Brown, Wyne, Blackburn, & Powell, 1979), to in- crease organizational productivity and mo- rale (Gallessich, 1982).	1. Orientation. 2. Contract setting. 3. Reconnaissance. 4. Problem and oppor- tunity development. 5. Aspirations. 6. Analysis. 7. Experimentation. 8. Results analysis. 9. Program design 10. Implementation. 11. Evaluation and feed- back. 12. Recycling (Gardner, 1974).	Consultant facilitates the group's progres- sion through all stages.
B. Organizational thinking Schmuck & Run- kel (1972)	Same as for the human relations model.	Group conflict, inter- and intragroup com- munication, decision making, methods of goal setting, defining roles.	1. Working with sub- systems of the orga- nization as groups. 2. Developing commu- nication skills. 3. Working with sub- systems to develop problem-solving skills. 4. Developing a series of training exercises, which start with simulation and evolve to a point where the real is- sues of the school are the focus (Schmuck & Runkel, 1972).	1. Entry phase. 2. Diagnosis of organiza- tion's functioning. 3. Selection of a sub- system of the organiza- tion. 4. Demonstration of the intervention (Brown et al., 1979). 5. Organizational training.	Consultant facilitates process, demon- strates interven- tions, and provides training.

(Continued)

Table 10-2. (Continued)

Consultation model	Theory for the consultation relationship	Knowledge base for problem solving	Goals	Stages/steps	Responsibilities
C. Advocacy	Any practitioners of other models may use advocacy consultation; based on conflict theory (i.e., Chesler, Bryant, & Crowfoot, 1981).	Knowledge of law, organizing people, organizing events, media use, negotiation, parent partnership, persuasive writing and speaking, building support networks, tolerance for ambiguity and conflict; known for what they believe in <i>not</i> by particular methodologies. Some advocacy consultants have both expert content knowledge and advocacy process knowledge (Conoley & Conoley, 1982).	To seek due process for various types of clients; to facilitate group process to help people work together; to organize events; to develop partnerships with parents of clients.	None specified.	Consultant facilitates effectiveness of others.
Process Schein (1969)	Systems change theory (von Bertalanffy, 1950).	Understanding of process phenomena; process observation, interaction analysis; decision-making rules; data gathering; role identification; use of empirical approaches; reference for the unique (Conoley & Conoley, 1982; Neel, 1981).	Consultants work to make consultees more aware of events or processes that affect work production and social emotional atmospheres of the system (Schein, 1969); to leave a consultee (organization) with new skills (Conoley & Conoley, 1982).	1. Process observation. 2. Analysis of group interactions.	Consultant analyzes interactions of the group or organization; consultant and consultee work collaboratively to identify problems and to generate solutions; consultee provides information on organizational structure, climate, and norms.

Clinical (doctor-patient)

The general characteristic is that it is patterned after psychiatry and adapted for use when consulting with colleagues about client's problems. No specified theory.

Specialized expertise concerning the client's problem; expert power; referent power based on specialized expertise.

Expert diagnosis of a client's mental or emotional condition and an authoritative recommendation of how staff (consultees) should treat the patient (Gallessich, 1982); problems are conceived of as patient's (or program's, team's, organization's) problems; generally, goals are limited to the particular case; to increase consultees' coping effectiveness.

To help agencies design, develop, implement, and evaluate programs.

Methods are difficult to define because of the diversity in the nature of the consultation (Gallessich, 1982).

No specified theory.

Consultant assumes responsibility for the case, determines data to be gathered and how to gather them, directly examines client, treats or prescribes treatment, consultant-consultee relationship is hierarchical.

Program

No specified theory.

Consultants may assist in all aspects of the program or may be limited to a highly specific task.

1. Diagnosis.
2. Prescription.
3. Treatment

Example

1. Consultee clarifies goals and objectives.
2. Consultant proposes ideal theoretical approaches to objectives.
3. Consultee explains organizational constraints and resources.
4. Both "brainstorm" to develop practical implementation strategies.
5. Together develop a research and implementation plan.
6. Consultee implements the plan (Gallessich, 1982).

(Continued)

Table 10-2. (Continued)

Consultation model	Theory for the consultation relationship	Knowledge base for problem solving	Goals	Stages/steps	Responsibilities
Education and training	No specified theory.	Knowledge of open-systems operations; task analysis; needs assessment; instructional design; evaluation of training (Gallessich, 1982).	To transmit needed knowledge, information, and skills to consultees to alleviate problems (usually client-centered).	No specific stages or steps.	Consultant serves as an expert.
Collaborative	Generic principles of collaboration and consultation have been hypothesized (Idol et al., 1986); based on triadic model of consultation (Tharp & Wetzel, 1969); no formal testing for theory development has been done.	Consultants possess knowledge of social learning theory, classroom assessment, learning processes, child management, and applied behavior analysis; consultees possess knowledge of scope and sequence of curricular instruction, theories of child development, and techniques for large group instruction.	To develop parity between special and classroom teachers, resulting in shared ownership of learning and management problems of exceptional and non-achieving students participating in regular classroom instruction.	<ol style="list-style-type: none"> 1. Gaining mutual acceptance. 2. Assessing causes of problems, problems themselves, and outcomes of problems. 3. Formulating goals and objectives matched to assessment outcomes. 4. Implementing teaching and learning procedures. 5. Evaluating program outcomes, including clients, consultants, consultees, parents of clients, program administrators, and overall programs (Idol et al. 1986). 	Emphasizes mutuality and parity in the consulting relationship, with the consultant serving as a learning specialist and the consultee serving as a curriculum and child development specialist; consultee is primarily responsible for program implementation; all other stages reflect mutual responsibility.
Idol et al. (1986); Kurpius & Robinson (1978); Sarason (1982)					

can still be described as “facilitative.” As noted by Bergan and Kratochwill (1990), goals may include organizing events, developing partnerships with parents or clients, or seeking due process for particular clients.

Process Model

Usually operating from a systems change perspective, the consultant in this model works collaboratively with consultees to enhance their understanding of interpersonal interactions that affect work productivity or the emotional climate of the group or organization.

Clinical Model

In the clinical model, the consultant is the designated expert, and the consultant–consultee relationship is strictly hierarchical. Given the consultant’s unique expertise, he or she diagnoses, prescribes, and treats. Following the psychiatric model, the consultant appraises and instructs staff how to deal with and specifically treat the client in question. There is no mutuality in the relationship between consultant and consultee.

Program Model

In the program model, there is no unitary theoretical perspective, but the primary objective of the consultant is to design, develop, implement, and evaluate. In general, the nature of the consultant–consultee relationship is egalitarian and facilitative. However, the consultant’s resources are such that he or she has a greater knowledge base than the consultee.

Education and Training Model

Again, in this model there is no particular theoretical orientation, but the consultant serves as an expert in order to provide knowledge or information, or teach skills to the consultee.

Collaborative Model

As its title indicates, the relationship between the consultant and consultee here is on par, with each contributing his or her own particular expertise to a more comprehensive program implementation.

GOALS OF CONSULTATION

In their book *Behavioral Consultation and Therapy*, Bergan and Kratochwill (1990) presented the goals of consultation as a tripartite endeavor. “One is to

change client behavior. Another is to produce long-term positive change in the consultee (e.g., skills) and the third is to promote change in the social organization within which the consultee and the client are functioning" (p. 22). Such goals apply primarily when the clinical psychologist is asked to consult on some kind of therapeutic problem in a mental health setting, a behavior problem in a facility for retarded or disabled individuals, or a behavior problem evinced by a child at school. However, as will be recalled from the exposition of consultative activities that were listed in Table 10-1, there are many instances when therapeutic questions are not at issue. For example, when one is asked to consult with the National Institute of Mental Health to review research applications, the goals are to provide (1) an objective appraisal of the project; (2) evaluation of its scientific merit; (3) an assessment of the competence of the investigators and their institution; (4) an evaluation of the feasibility of the study; (5) a determination of the ethicality of the research, including client safeguarding; and (6) an appraisal of the justification of the proposed budget. In short, the goal is to ensure that the funding agency is "getting its money's worth."

A somewhat different consultative issue was presented to one of the authors (MH) a few years ago when he was asked to advise about the characterization of the pedophile in a made-for-TV movie entitled "Bump in the Night," starring Christopher Reeve. Hersen met with the producer, script writer, and lead actor, and it was clear that for dramatic purposes they had mischaracterized the pedophile, in that the climax of the movie had him becoming psychotic. Hersen, who at the time had seen a fair number of pedophiles for assessment and treatment, pointed out that the script did not reflect psychological reality. Indeed, the pedophile was more likely to become depressed after being apprehended by the authorities. In the end, the script was altered, with the pedophile committing suicide for dramatic impact. As for the goal of consultation in this instance, the primary thrust involved convincing the trio (producer, script writer, lead actor) to present the character in a more realistic fashion. This obviously has not always been the case in psychological portrayals in the movies.

Returning to Bergan and Kratochwill's tripartite (1990) analysis of consultation, we should underscore that, although only one of the many activities that clinical psychologists perform as consultants, dealing with client problems does represent a frequent request. Let us therefore consider more specifically the changes that will take place in the consultee, and ultimately the resulting modifications in the organization in which the consultee is employed.

With respect to *change in the client*, let us consider a specific consultation request from the nursing staff of a ward for older chronic psychiatric patients at a large Veterans Administration hospital. Presented to a behavioral psychologist who consults on a weekly basis, the head nurse on the ward complains about a 65-year-old male patient with a diagnosis of schizophrenia who, on average, appears 25 to 35 times a day at the nursing station with seemingly irrelevant requests. Sometimes staff respond to the patient and honor these requests; at other times he is told to return to the day room. Change in this patient, then, would entail reducing significantly the number of irrelevant requests presented to staff at the nursing station. But perhaps more important, change also would involve the systematic shaping and reinforcement of positive prosocial re-

sponses in this patient. This latter change would require the consultant to effect modification in the consultee's behavior.

As pointed out by Bergan and Kratochwill (1990), "One basis for the view that consultation should focus on changing the consultee is the assumption that in some cases, the principal source of client difficulties is the consultee. . . . A second basis for the position that consultation should focus on change in the consultee is the view that change in the consultee may be beneficial to clients who are not directly involved in consultation" (p. 23). Our example confirms both of the aforementioned views. In light of data documenting that inpatient psychiatric staff tend to ignore positive behavior and reinforce inappropriate behavior (Gelfand, Gelfand, & Dobson, 1967; Trudel, Boisvert, Maruca, & Leroux, 1974), and in consideration of our consultant's behavioral analysis of inappropriate reinforcement contingencies taking place with the 65-year-old schizophrenic patient, it is apparent that the consultee's behavior needs to be modified. Specifically, this consultee has to be taught (1) how to prompt positive initiatives in the patient, (2) to precisely reinforce such positive initiatives when they occur, and (3) to systematically ignore inappropriate behavior, as long as it is not harmful to the patient or his environment. To do so requires skill, tact, and finesse, since the message to the head nurse is that her behavior must change. The consultant must show the consultee that by changing her behavior, not only will it improve the patient's behavior but it will facilitate her role on the ward by actually diminishing the amount of time she has to deal with irrelevancies, thus freeing her to pursue more pressing nursing duties. This "soft-sell" program of consultation strives to downplay "theoretical differences" that may be present in the consultant and consultee (Bellack & Franks, 1975). "Here, rather than teaching the consultee the theoretical underpinnings of the behavioral approach the focus should initially be directed to applying techniques. Although most consultees are satisfied with the existing theoretical models, there is, characteristically, a need for and openness to effective techniques. Therefore, when the consultee begins to experience success in carrying out behavioral techniques, he or she may be more amenable to an in-depth evaluation of the basis for the technology being used (Hersen et al., 1993, pp. 160–161).

Some models of consultation hold that an overall goal of the consultant is to modify the organizational structure in which the patient and consultee interact (cf. Schmuck, 1982). Returning to our original example, this would imply that there is a move from standard institutional care to that of a more thoughtful and proactive therapeutic milieu. One strategy used to orchestrate such modification involves teaching nursing staff judicious application of operant principles. But unless approached carefully by the consultant, the exercise is doomed to failure because of extensive staff resistance that will ensue (Hersen et al., 1993). As reviewed by Hersen et al. (1993), data indicate that the traditional approach to teaching psychiatric ward personnel new strategies (e.g., lectures, classroom discussions, videotapes) simply does not work. To the contrary, the consultant, "must be viable, active, and involved" (Hersen et al., 1993, p. 160) and has to model the relevant behavioral strategies himself or herself. Moreover, an empirical study evaluating the most effective means to increase frequency of interaction between nurses and behavioral technicians and their patients on a state hospital research ward documented the importance of the *professional staff*

and *head nurse modeling appropriate behavior* (Wallace, Davis, Liberman, & Baker, 1973).

In summary, to alter the system, the consultant needs to be proactive, but he or she also must co-opt the head nurse. This nursing supervisor must learn the behavioral strategies and be willing to model them for staff. There is no doubt that correct modeling by a member of the same profession (head nurse) for other nursing personnel (ward nurses, behavioral technicians, nursing assistants) will have great impact. (Additional discussion of the game playing that takes place during consultation will be detailed in the section entitled Consultant and Consultee: Politics of Consultation.)

SETTING FEES

Less experienced consultant often find it difficult and awkward to set fees for their consultation. Many factors are brought into consideration when establishing a fee for a given intervention, including the consultant's experience, the nature and complexity of the intervention, and the type of organization for whom such consultation is planned. That is, consideration for differential charges may be given for providing consultation to a not-for-profit children's advocacy program when contrasted to a for profit sales/marketing company. Similarly, differential charges may be given when there are additional opportunities created by the consultation (i.e., future referrals, research opportunities, or other professional development opportunities). Although it is inevitable that consideration will be given to one or more of the above listed factors, these considerations frequently complicate the consultant-consultee relationship. When expectations, on the part of either the consultant or the consultee, are not fully articulated, misunderstandings may lead to frustration and disappointment.

Given the complexities associated with the consultation process, it is the experience of the authors that both parties are best served when fees for specific amounts of work are clearly articulated. Whatever costs, effort, or discomfort is encountered in establishing a clear expectation regarding fees, such effort is well spent. Clear communication will help to avoid misunderstandings and disagreements at more crucial points during the consultation.

In setting fees, consideration also is given to whether to charge an hourly or a daily fee, or to set a "flat" service fee for the entire project. There are advantages and disadvantages to both approaches. An hourly or daily rate allows the consultee to "pay as he or she goes." When the consultee and consultant believe that enough has been gained from the consultation, it is a simple matter to suspend or terminate the relationship. An advantage to the consultant is that an "educated guess" as to the total effort involved in the consultation is not necessary. If the consultation is more complicated or time intensive than originally anticipated, it may proceed as long as both parties agree to continue.

Problems encountered with hourly or daily fees relate to the need for the consultant to appear to be making ongoing and rapid progress; otherwise, the consultee will perceive that the job is being "stretched" for the purpose of increasing the total consultation fee. This potentially is a difficult problem, in

that frequently a low-key, nonfocused environmental assessment is useful to the consultant to determine an intervention strategy that is best suited for a particular setting. This less focused approach taken by the consultant may be mistaken by the consultee as an attempt to extend the process and increase fees.

A flat project fee avoids many of the above-mentioned difficulties; however, the consultant must be careful to anticipate accurately the real amount of work involved with the project. Without an accurate assessment of the duration and intensiveness of a project, an unwary consultant may find himself or herself working for an extremely small hourly fee, yet feel an ethical or even legal obligation to complete the work.

CONSULTANT AND CONSULTEE: POLITICS OF CONSULTATION

The relationship between the consultant and the consultee is frequently complex, and the roles played by the consultant often must be delicately balanced. On the one hand, the consultant is brought into a situation because there is some problem, and he or she is seen to have expertise that will help resolve this problem. On the other hand, a fair amount of resentment develops around the idea of an "outside" individual having a major impact on one's system.

It is an easy enough matter to understand the positive response a consultant encounters related to his or her ability to solve a problem. The negative reactions are somewhat more subtle and are worth exploring in greater detail. Let us examine some of the situations a consultant encounters that may result in a negative and perhaps even a hostile response by those with whom he or she consults.

Consultant as "the Expert"

It is safe to assume that, prior to contacting an **external consultant**, others within the organization or agency have attempted, and not completely succeeded, in solving the problem in question (hence the need for the consultant). That the consultant comes into a situation with deemed greater expertise than those with whom he or she consults inevitably creates some degree of resentment. Unfortunately, the pleasure achieved as a result of having some thorny and persistent problem solved is, at times, not greater than the displeasure experienced by having someone demonstrate that "he or she knew better." Sometimes, the consultee may actually become invested in the belief that his or her particular problem was not solvable, and the consultee may take some pride in showing that "the expert" is not so knowledgeable after all.

EXAMPLE. A large residential treatment facility was increasingly experiencing problems with widespread enuresis (bed-wetting). Over the preceding 3-year period, units throughout the facility experienced an increase in "wet bed incidents" from 30% to nearly 60%. Staff were becoming less tolerant of the children in that greater amounts of time were being spent in cleaning up the wet

beds. Less time was spent in teaching, training, and playing with the children; comments reflecting resentment and frustration related to the children were increasing. In addition, given the difficulties in keeping the facility clean, the facility administration was receiving numerous complaints from family members, visitors, and health officials.

The medical staff at this particular facility had attempted to intervene by engaging in a psychodynamic/cathartic-oriented psychotherapy. This intervention had been attempted for about 2 years, yet the problem worsened.

Given the magnitude of the problem and lack of success experienced through the efforts of the staff, agency administration decided to contract with a group of psychologists to provide consultation and training to the staff to help reduce the enuresis. After 2 days of assessment, the psychologists determined that the problem was a behavioral one and that a systemwide intervention employing the "bell and pad" enuresis treatment technique should be implemented. Equipment was ordered, and training of staff commenced.

The relatively simple (and likely successful) solution that the consultants presented proved to be highly threatening to the psychiatric staff who had been unsuccessful in treating the enuresis for the past 2 years. Concerns were expressed at staff meetings related to grave "symptom substitutions" that ostensibly would occur as the result of eliminating the relatively benign "symptom" of enuresis. In particular, apprehensions related to children engaging in other "symptomatic" antisocial and sexualized behavior were expressed as the staff's concerns grew less consistent with those articulated in the initial consultation. The consultants, recognizing the undermining behavior currently emerging within the agency, stopped all training and focused on reducing the likelihood that staff would fail to cooperate in implementing the program.

The consultants decided to focus on intervening in one 20-bed unit in which about 80% of the children wet the bed 3 or more nights per week. The idea was (1) to solicit cooperation from an overworked and highly frustrated staff; the staff's high level of frustration provided a great deal of motivation for them to work with the consultant; (2) to model implementation of the "bell and pad" procedure; and (3) to closely monitor the staff's implementation of the program so as to short-circuit any undermining behavior. In brief, the consultants could ensure integrity of their consultation and, assuming success of the intervention, gain credibility throughout the 500-bed facility.

The limited intervention in the 20-bed unit, after 3 weeks, resulted in all but one child remaining dry. These results were highly publicized throughout the agency; other unit directors then requested that they be permitted to observe procedures instituted in the "successful" unit. As success was maintained, other units increasingly requested and later demanded that the "bell and pad" procedure be implemented throughout the agency. Staff working in the original "successful" unit were trained in providing consultation/education and were charged with the responsibility of setting up the procedures at other units. Resistance to the program diminished; within 18 months, virtually all children in the agency were "dry." Familiarity with the "bell and pad" technique was maintained almost exclusively to treat new admissions to the agency who presented with enuresis.

On occasion, an agency or organization administrator is faced with an organizational task that is necessary, yet he or she is reluctant to carry it out. This task may involve an unpopular organizational restructuring. It may include changing social patterns within an agency, or even demoting or dismissing one or more employees. The administrator responsible for this action may be reluctant to act for a number of reasons. He or she may feel that the long-term effect of discharging an employee may be disruptive to overall employee morale; this particularly would be the case in a close-knit organization. In other situations, the administrator might want to appear “objective” in making such a decision and not simply functioning on the basis of his or her specific “world view.” In still other situations, the administrator may be attempting to avoid the loss of popularity that accompanies decisions that put the organization’s needs above those of the individual employees.

In some of these situations, the administrator may be inclined to contract with an external consultant. The consultant can bring to the situation an air of objectivity. In addition, once the “cleaning out” is done, the consultant can leave the situation and not be subject to the discomfort hoisted on him or her by virtue of having made an unpopular decision.

EXAMPLE. An advisory board has been established by a local not-for-profit agency. The mission of the board is to engage in public relations activities and to raise funds for the agency. Over time, the board becomes increasingly less effective in accomplishing both of these goals. Instead, the board becomes more involved in issues related to operations and program development, and, in fact, is at times conflicting with the agency administration and the agency’s board of directors. A further complication to this problem is that the agency’s executive director has been the instrumental individual in inviting most of the members to join the advisory board. In addition, most of the advisory board members are personal friends and colleagues of the executive director, and he maintains many professional relationships with these individuals in the general community. These complications notwithstanding, the executive director has concluded that the advisory board needs a major reorganization and that many of the board members should be replaced. Given the executive director’s preexisting relationships with these members, he obviously is not in a favorable position to make these changes.

A consultant therefore is hired to first assess the scope and magnitude of the problem and then to implement any necessary changes. After a 2-week assessment period, the consultant confirms the director’s impressions and indicates that he believes it best if the entire board is dissolved followed by a waiting period of a couple of months, whereupon a new board with a clearer mission can be established. The director thus is protected to the point where the only action required of him is to announce dissolution of the existing board, and this on the direct recommendation of the external consultant. Once the board is dissolved, the consultant identifies appropriate new potential board members and interviews individuals both to inform them of the role they will play if appointed to

this new board and to assess their comfort and willingness to serve in the defined capacity. Finally, the consultant provides the executive director with a list of those whom he recommends as new board members. Within 6 months after identification of a problem, the director has a new board that is functioning in the manner he believes is most useful for the organization. Although there are a few "hurt feelings" among former board members, these annoyances are directed toward the consultant, thereby keeping the director and his role in the community protected.

Consultant with an Unclear Role

At times a consultant is brought into a situation because of overall deteriorating conditions within that organization or agency. In these situations, the consultant may be brought in as a measure of last resort. The consultant's role is vague and unclear. Those responsible for establishing the consultative contract recognize that "things are not working well"; however, they are not able to provide the consultant with a specific charge or responsibility. The hope is that the consultant will bring about an improvement in a failing system. As the consultant enters the system, there are any number of differing expectations about the role that he or she will play. This guarantees that many will be disappointed in the eventual outcome of such consultation. In these types of consultations, it often is most useful to prolong time spent with the people contracting for services. These efforts should be directed toward developing an agreed-on set of expectations about consultation. Once these expectations are agreed on, they can be communicated throughout the system, thereby clarifying the role the consultant is to play.

EXAMPLE. A state university had experienced considerable pressure to provide accommodations and to facilitate access to learning for a growing body of visually handicapped students. Initially, the dean of students viewed this pressure as a challenge to the university's authority and was not responsive to the pressure. The concerns raised by the students were eventually elevated to the state legislative level. As the problem became more politicized, the legislators, in an attempt to reduce friction, funded a Visually Handicapped Program. It was the legislators' hope that this action would be viewed as a sensitive response to a difficult problem. As the program was established, however, little effort was put into defining the program's role or giving it a specific mission.

Once established, this well-funded program immediately was immersed in turmoil. The university administrators saw the program in one light (that of having responded to demands made by a relatively small subset of students), while the visually handicapped students saw the program in several differing ways. Some saw it as a vehicle for making greater political strides. Some saw it as a nonmeaningful gesture of appeasement made by legislators and the university administration. Still others saw it as potential support for handicapped students attempting to secure their education. What was clear was that all were disappointed and dissatisfied with the program. Hence, a consultant was hired. The consultant was initially asked to assess the problem. During the assessment

phase, he was given the authority to implement changes viewed as necessary. In this case, the consultant began to function as a program administrator, and this created even more conflict and ambiguity. Eventually the consultant was fired, and shortly thereafter the Visually Handicapped Program was closed.

Consultant as a Threat to the Status Quo

On occasion, an older and more established system developed very predictable and closed manners of conducting its business. Decisions are made with little or no process, and new ideas are typically stifled. There are several pejorative terms used to describe these types of systems, including “old boy network,” “closed systems,” and “dead systems.” The major characteristic of these systems is that well-ingrained and predictable patterns of interaction have developed, and there is little opportunity for creative development within the system. Another characteristic of these systems is that there is a loss of administrative control over program activities. The relationship patterns and predictable decision making develop to such an extent that effective intervention in the program by the administrator is not possible. In these situations the system administrator may choose to modify the closed system himself or herself, or he or she may choose to contract with a consultant who can assess the system and make one or more strategic interventions that are intended to modify the underlying process through which system members communicate and make decisions.

EXAMPLE. An academic Department of Psychology had been functioning with virtually all of the same faculty members for about 18 years. Relationships were well established among the members, and a great deal of extramural socializing had developed. Early in their careers at the institution, the faculty had reviewed various degree options and had concluded that they were best suited to provide undergraduate training and to offer a very limited master's degree. The dean of the school that housed the department had unsuccessfully attempted several times, through the department chair, to initiate new programs, to review and perhaps modify peer review procedures, and to hire “new blood” into the faculty. Enough faculty control had developed, however, to obstruct any of these attempts. In the view of the dean and to a similar but perhaps less extent, that of the department chair, the department had become stifled. The curriculum had not been revised for years, and the peer review resulted in almost “boiler plate” positive reviews. New hirings were extremely difficult, especially if the applicant represented a departure from the core faculty in terms of professional orientation, ethnic diversity, and gender diversity. The department remained, in the administration's opinion, a closed, white, male system. In an effort to appease the dean while not offending his established faculty, the department chair hired an African-American male and a woman but did not place them in the Department of Psychology; rather, a professional school was announced, and these two new faculty were placed within it with a charge of developing a doctoral program. As the doctoral program developed, it was clear that members of the Department of Psychology needed to participate in training if the program was to succeed. Recognizing their importance in the

system, and further recognizing that the administration had maneuvered around them, the Department of Psychology faculty sought to obstruct development of the program by refusing to participate. Administration asserted its authority by mandating participation; faculty asserted its authority by claiming breach of academic freedom. These claims were especially sensitive, in that an accreditation site visit was scheduled in the near future. At this crucial point, a consultant was hired by the dean with input from the department chair. The consultant was given the specific charge of determining ways that would cause the least ill will yet result in sufficiently significant changes so as to break up the "old boy" pattern of communicating and decision making.

The consultant, after identifying a commitment from the dean and the department chair, recommended that three new faculty be added to the department and that the two faculty ostracized in the professional school be merged into the department. These changes resulted in an immediate identity shift of the department. Next, the consultant recommended that all existing department committees be abolished and that new committees be formed. She urged the chair, who was responsible for committee assignments, to ensure that at least one "new" faculty member be placed in each major departmental committee, and where appropriate, committees be chaired by a "new" faculty member. Within one academic year, in the judgment of the dean, the department chair, and most of the faculty, the department had significantly changed. The resignation of two of the more senior faculty hastened the transition.

ADVICE TO THE NEW CONSULTANT

As has already been articulated herein, the new Ph.D. or Psy.D. graduate is perhaps not in the best position to assume consultative duties, particularly given the nature of the relationship among administration, the consultant, and the consultee. The successful performance of consultation requires considerable self-confidence, a broad knowledge base of behavioral principles, organizational structure, interpersonal dynamics, and the ability to be tactful albeit authoritative. Most important, the consultant should be straightforward and assertive in his or her approach. At times, then, the consultant walks the proverbial tightrope between candor and tact, but must be able to articulate positions clearly. When negotiating between two diametrically opposed factions, an unbiased and open attitude is essential.

There are some differences in the consultant's approach, depending on whether the task is time limited or whether consultation is being requested on an ongoing basis. The consultant hired on an ongoing basis, in some respects, experiences the more difficult task, since reinforcement contingencies are continuously in effect. That is, he or she must deliver expertise repeatedly, otherwise consultative services will be terminated. In such arrangements, it behooves the consultant to provide the consultee with at least one piece of useful advice at each session. Equally important is for the consultant to determine from one consultative session to the next whether that advice indeed was effective. If not, midcourse correction at the next session is warranted. But if the consultee is resistive and does not follow consultative advice, such resistance cannot remain

unresolved. Beneficial consultative suggestions are of no value if they are not implemented.

One final piece of advice to the neophyte consultant should be underscored. We believe that when making contractual arrangements to consult, the psychologist specifically should state what he or she is capable of carrying out and where his or her limitations lie. In addition, the fee, as pointed out earlier, should be clearly discussed. There should be very few ambiguities in the relationship between the consultant and the administration that hires him or her.

SUMMARY

In this chapter, we introduced the student in clinical psychology to the extensive area of consultation. Beginning with a definition and a general description of psychological consulting, we next outlined the numerous opportunities for consultation available to clinical psychologists, including consultation positions with a variety of governmental agencies, industrial concerns, private facilities, and combined private and governmental facilities. Models of consultation were then described (e.g., mental health, behavioral, organizational, advocacy, process, clinical, program, education and training, and collaborative).

The goals of consultation were articulated, and then we discussed the important issue of how to set the fee. The succeeding major section detailed the relationship of the consultant and the consultee and the politics of consultation. Specific consultative issues were considered, such as the consultant as “the expert,” the consultant doing “the dirty work,” the consultant with an unclear role, and the consultant as a threat to the status quo. Throughout this section and the preceding ones, many examples of the authors’ long-term consultative experiences were presented to illustrate the problems and techniques employed to deal with such problems. Finally, the chapter concluded with some specific advice to the new consultant.

STUDY QUESTIONS

1. Describe the primary types of agencies that employ the consultative services of psychologists.
2. Describe the various types of consultative services provided by psychologists (e.g., clinical).
3. Why is it unusual for newly degreed clinical psychologists to provide consultative services?
4. Describe each of the 10 consultative models covered in this chapter in terms of theory, knowledge base, goals, stages, and specific responsibilities of the consultant.
5. According to Bergan and Kratochwill, what are the three goals of consultation in mental health settings?
6. What problems or obstacles may be encountered by a consultant to the institutional staff of a psychiatric hospital? How can these problems be avoided or overcome by the consultant?
7. What factors need to be considered in setting consultation fees? What are the advantages and disadvantages of hourly or daily fees, or flat fees for an entire project?

8. Discuss the “politics” of consulting. What are some of the reasons staff may resist any corrective efforts made by the consultant? How can this resistance be avoided?
9. An administrator might be inclined to contract with an external consultant when there is some unpleasant, but necessary, organizational task at hand. What can a consultant accomplish in this situation?
10. What are some of the problems a consultant may encounter if his or her role is vague or unclear? How can these problems be minimized?
11. Identify key points of advice for the new consultant provided at the end of the chapter.

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CHAPTER 11

Research

JEFFERY B. ALLEN and ALAN M. GROSS

INTRODUCTION

Commonly, students equate scientific research with the flasks and microscopes of a chemistry or biology laboratory. These scientific disciplines contribute enormously to our understanding of the physical world and the creatures that inhabit it. Psychology also provides us with an ever-changing perspective of ourselves and our world through research. The goals of psychological research are quite diverse. As well as increasing our understanding of human and animal behavior, research seeks answers to more immediate problems facing our society. For example, clinical researchers attempt to find ways of alleviating psychological disorders, such as schizophrenia or depression, that afflict thousands of people each year.

This chapter describes the process of clinical research and provides examples of the various elements within the field. The chapter first outlines the model of the scientific method used in all sciences. Following this, a general classification of various research strategies is provided. Next, clinical research is examined in a more practical sense with appropriate illustrative examples. Finally, coverage focuses on sources of error or bias in research as well as ethical issues that arise within clinical research.

THE SCIENTIFIC METHOD

The scientific method is a specific process that assists the researcher in obtaining information that is both **unbiased** and **objective**. The scientific

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

method is unbiased in that it does not favor any given hypothesis or explanation before the research is conducted. The method is said to be objective when other properly trained researchers can replicate the procedure and obtain similar results. The scientific method has five steps, that are outlined below:

1. **Observation:** Daily experiences or personal interests often lead researchers to ask numerous informal questions about various aspects of behavior.
2. **Formulating a research question:** This represents the formal question an investigator hopes to have answered by the study.
3. **Stating a hypothesis:** A hypothesis is the researcher's prediction concerning the outcome of an experiment.
4. **Testing the hypothesis:** At this stage, the experiment is conducted seeking to answer the proposed research question.
5. **Theory formulation:** Finally, scientists assimilate the findings of various experiments into more cohesive trends. When several studies yield similar results, researchers tend to have more confidence in their conclusions.

A real-life example of how each of these steps emerges in a hypothetical research project may be helpful. Suppose that a consulting psychologist visits a day-care center on a regular basis. During one such visit, she observes that children behave somewhat differently after they receive their afternoon snack of juice and cookies. Subsequent to this observation, she asks the more formalized question, "Do children experience some cognitive or behavioral change after ingesting foods with high sugar content?" Next, this question is refined into a more precise hypothesis: Moderate levels of glucose-sugar (25 grams) will speed the reaction time of 4-year-olds, while high levels (75 grams) will slow it. This experiment is then conducted by having three groups of children perform reaction-time tasks after ingesting fruit drinks containing 0, 25, or 75 grams of sugar. Finally, the results of this experiment may be integrated with similar studies that looked at the effects of sugar on other cognitive abilities, such as remembering pictures, working puzzles, or manipulating small objects. Similarly, a different line of research might look at sugar's effect on reaction time in children at different ages (e.g., 4, 8, 14). In this way, a theory is constructed that assists in explaining the effects of sugar on a larger domain of cognitive abilities in children of different ages.

CLASSIFICATION OF RESEARCH STRATEGIES

Although the scientific method guides research in all scientific disciplines, including psychology, the specific manner in which studies are conducted can vary. These differences can be described along a number of separate dimensions. While some authors (Gray, 1992; Hendricks, Marvel, & Barrington, 1990) have suggested that psychological research varies along three dimensions, four dimensions may represent the process more accurately.

The first dimension concerns the **goal** of the research to be conducted. Some research is conducted simply to learn more about a particular psychological

phenomenon and has no immediate utility. This type of research is termed **basic research**. A second goal of research is to solve some existing problem such as alleviating the suffering of patients with a given psychological disorder. This kind of research is commonly referred to as **applied research** because it is being applied to the solution of an immediate problem.

Some people contend that basic research is somehow less valuable than applied research because of its lack of immediate “relevance.” This mindset should be avoided, as we are often unaware of the applied value that basic research may have in the future. For example, the basic research of B. F. Skinner in the 1930s on operant conditioning in pigeons appeared to have no applied value to humans at the time. Years later, however, behavior modification therapy fully incorporated operant conditioning in ameliorating the debilitating effects of such human conditions as anxiety, phobias, and childhood behavioral problems.

A second dimension of research concerns the **setting** in which it is accomplished. Typically, behavioral research occurs in either a laboratory setting or the naturalistic environment. **Laboratory settings** allow the researcher more control over the experiences and stimuli to which the subject is exposed. Such control increases confidence that significant findings are due to the experimental manipulation and not to some irrelevant event or **extraneous variable**. **Naturalistic settings** involve the unobtrusive observation and description of behavior in an unaltered environment. Although this method does not actively control the research procedure, it may provide more accurate data about what happens in the “real world.”

A third dimension that defines the type of research study being conducted involves the type of **research design** that is incorporated. Generally, this indicates that the study is an experimental, correlational, or descriptive study design. No type of design can be said to be “better” than the others. Rather, the most appropriate design is typically dictated by such variables as the potential risks to subjects, the goals of the research, or the stage of a particular research endeavor.

The **experiment** is often viewed as the most direct and conclusive means to establishing a causal link between two phenomena. In describing an experiment, one variable (**independent variable, or IV**) is believed to produce some effect on another variable (**dependent variable, or DV**). The independent variable is so termed because its dependence on other variables is not the focus of the study. The dependent variable is defined in this fashion because the aim of the study is to discern the effects of the independent variable on the DV. Psychological research generally uses some measure of behavior, such as a test score, as the DV, while the IV is some factor thought to influence that measure.

The proposed effect of the independent variable on the dependent variable is known as the **hypothesis**. The accuracy of the hypothesis is evaluated when the experimenter systematically manipulates one or more IVs and monitors change associated with the DV. This type of systematic manipulation is accomplished by randomly assigning subjects to either the **control group** or the **experimental group**. The two groups are treated identically with the exception that the experimental group is exposed to the independent variable whereas the control group is not. By treating the two groups similarly, any differences seen on the DV can generally be attributed to the experimental manipulation (the IV). It is

vital to the experimental method that subjects forming the experimental and control groups be **randomly assigned**. Each subject in the study has an equal chance of being assigned to the control group or the experimental group. Without random assignment, it cannot be assumed that differences found between the two groups are due to the IV. Instead, they could be due to many variables (e.g., age, sex, education level) that created an inequality between the two groups.

A second type of research is referred to as relational or **correlational research**. This method allows certain inferences to be made when an investigator cannot randomly assign subjects to control or experimental groups. Correlational research attempts to describe how one variable or group of variables is related to another variable or set of variables. It is an extremely valuable method for gathering information when ethical or logistic concerns make a more controlled experiment impossible.

For example, most of what is known about the link between smoking and various forms of cancer was obtained through correlational research. It would be highly unethical to assign subjects to a “smoking group” when they had previously been nonsmokers. Thus, the dangers of smoking have been enumerated through carefully designed correlational research that follows people who are already smokers through their lives to document medical problems.

Typically, the strength of a correlation between variables is described quantitatively through what is termed the correlation coefficient. This statistic is commonly denoted by the lowercase letter *r* and ranges in value between -1 and $+1$. A correlation coefficient (*r*) of $-.95$ indicates a very strong **negative correlation** between variables. A strong negative correlation indicates that increases in the value of one variable are strongly associated with decreases in the value of the other variable.

When both variables tend to vary together, a **positive correlation** is found (i.e., $r = +.93$, or simply $.93$). A correlation of zero or near zero (i.e., $.11$) suggests that the two variables are unrelated. Often, correlational studies yield coefficients somewhere between these two extremes. For example, many psychologists have suggested that there is a relationship between children viewing violent television programs and their levels of aggression. A study conducted by Eron (1982) examined the issue by correlating the amount of violent television a group of first-graders watched with self-reports and significant others' reports of aggressiveness. The correlations from this study were consistent but not especially strong, ranging from $.20$ to $.30$.

A cause-and-effect relationship cannot be inferred in correlational studies as it is in more controlled experiments. In many cases, researchers are unable to decide which variable is causing the other. For example, does television viewing elevate aggressive behavior, or are aggressive children simply more interested in viewing programs with aggressive themes? A strong correlation between these two variables does nothing to determine causality.

Second, some third variable may be producing an elevated correlation coefficient. For example, it was believed at one time that soft asphalt caused the disease polio, as it was positively correlated with the number of reported cases of this disease. However, it was later determined that a third variable, warm climate, was obviously producing softened asphalt as well as increased social

exposure (i.e., at the swimming pool). Thus, it was the increased social exposure and opportunity to contract the infectious virus that produced the rise in polio cases, not the hot asphalt.

A final type of research design is the **descriptive study**. Descriptive studies are undertaken when the goal is to describe the behavior of an individual or group of individuals without systematically investigating the relationship between variables. Observation and description of human and animal behavior as it occurs naturally is often the starting point for much psychological research. Careful observation and description of a given phenomenon can often assist in improving future experimental or correlational studies. For example, observation of primate behavior in the wild may provide researchers with startling insights into their social organization that may benefit subsequent laboratory work.

In many descriptive studies, researchers attempt to study subjects unobtrusively. This type of study is termed **naturalistic observation** and means that subjects are unaware they are being observed. Naturalistic observation tends to interfere less with the natural flow of human and animal behavior and probably gives a more accurate picture of the target population. The temptation with observational research is for the experimenter to interpret objective observations in an attempt to explain the function of a given behavior. For this reason, it is important that observers learn to observe and describe without projecting their own biases into the data.

A final dimension of research involves the manner in which data are collected. In general, psychological data can be gathered through two primary channels: **self-report** and **observation**. As mentioned previously, observational data are gathered by the experimenter through the careful and objective description of subjects' behavior. While these descriptions may take narrative form, it is also common to present stimuli or problems for the subject to respond to in the form of **tests**. Examples of tests that are commonly used in psychological research are reaction-time measures, intelligence tests, and personality inventories. Additionally, researchers often employ various **rating scales** when observing more naturally occurring behavior.

For example, investigators interested in childhood behavior may wish to categorize several behaviors into only a few categories and to tally the incidence of these more global episodes. A rating scale might then be used to code a child's episodes of fighting, crying, or tantrums according to severity, duration, or frequency in a more consistent manner.

A second method of acquiring psychological data is through the subjects' own description or self-report. Here the experimenter asks subjects to rate or describe their own behavior or mental state. The researcher places a great deal of responsibility in the hands of subjects for being forthright and accurate. People asked to discuss their own behavior or attitudes often feel compelled to appear "well-adjusted" or "healthy." Further, they may attempt to "figure out" the purpose of the study and to respond in a fashion consistent with that purpose. These issues brought about by the presence of the experimenter are referred to as **demand characteristics** and should be minimized if possible.

Self-report data are typically gathered through the use of **questionnaires** and **interviews**. Questionnaires commonly use multiple-choice items, true or false questions, or essay-style questions in a written format aimed at generating a

personal description. Alternately, this personal description can be obtained through the use of an interview in which the experimenter gathers similar information through an oral inquiry. Although the interview may produce greater demand characteristics, it also allows the experimenter to follow up on topic areas or subject statements that would be impossible with a written questionnaire.

It is vital that tests, questionnaires, and rating scales used in gathering psychological data be designed and used with a great deal of care. If the instrument chosen to measure the behavior or attitudes of subjects is a poor one, the data generated by the instrument are useless. For this reason, it is necessary to evaluate the measure(s) to be used in a study according to at least three qualities: (1) **sensitivity**, (2) **validity**, and (3) **reliability**.

A measure is said to be sensitive if it is capable of discriminating subtle differences across individuals or test conditions. A test or questionnaire unable to detect the differences between subjects or conditions is of no value as a research tool. This would be the case with a personality inventory that yielded the same score or personality profile for all individuals regardless of obvious behavioral differences.

A testing or rating procedure is reliable when it produces similar results each time it is used with a specific individual under a specific set of conditions. Thus, if an individual obtains a similar score on an intelligence test when tested at two separate times, the test is said to be a reliable one. Typically, the reliability of an instrument is quantified through use of a correlation between two administrations of the test. For example, a correlation of $r = .92$ would indicate that the measure was a relatively reliable one, whereas a value of $.13$ would suggest that the measure is not reliable.

Finally, a measurement procedure is said to be valid if it measures what it was intended to measure. For example, a particular test of depressive symptomatology is valid if it adequately evaluates the broad **construct** (a hypothetical concept that can be measured) that we define as depressive illness. If common sense suggests that the items included in our test measure what they are intended to measure, the instrument has **face validity**.

Although face validity is a fundamental aspect of psychological assessment, it is not an altogether sufficient indicator of the validity of a measurement device. Often it is important to show that the measure being evaluated correlates with other measures (or criteria) of the same or similar traits. For example, many colleges relate scores on the Scholastic Aptitude Test (SAT) with the external criterion of first-year college grades. Such type of validity is known as **criterion validity** and often serves a predictive function.

A measure can also be evaluated according to the degree of content validity it possesses. **Content validity** refers to how representative a test is of the entire domain of interest. For example, does the previously mentioned test of depressive symptomatology fully assess all aspects of depressive illness or just a small portion (i.e., vegetative signs)? A test that is too limited in scope may provide a poor assessment of the quality or ability targeted for measurement.

The preceding discussion should provide a template for the methods of psychological research. It may be useful to keep the four dimensions in mind as a way of categorizing the diverse array of available research. Given this review,

attention will now turn to a more focused discussion of *clinical research strategies*. While these strategies are part of the larger matrix of psychological research strategies, they are specifically intended to assist with the gathering of data relevant to clinical disorders and their treatment.

CASE STUDY

Typically, the first step in clinical research simply involves the observation of some clinically relevant phenomenon. For example, the clinician may notice that an elderly depressed patient on her ward tends to respond more favorably to medication when it is given at night rather than in the morning. Although no experimentally controlled data have been obtained, the beginnings of a research idea have been generated. At this point, the interested clinician may decide to study a single patient at a more intensive level. This method is commonly referred to as the case study.

The **case study** essentially involves the collection and organization of various sources of information about the patient in relation to the presenting problem. Generally, the case study relies rather heavily on interviewing the patient and significant others to obtain current information as well as historical data. The historical data gathered for a case study should be carefully selected so that pertinent details are not ignored. Commonly, areas of inquiry include a statement of the presenting problem, description of the client's current life situation, developmental history, family background, and medical and psychological history. Although the case study can be quite helpful for generating and focusing research ideas, it is not scientifically rigorous and is incapable of generating valid scientific conclusions.

The case study has played a major role in the development of clinical psychology. Further, the understanding of the individual has been recognized as one of the defining characteristics of clinical psychology for many years (Korchin, 1976). Historically, much of what is known about relatively rare forms of psychological disturbance has been obtained through the careful study of individual clients. Furthermore, the case study method has contributed enormously to what is currently known about treating psychological problems. For example, Sigmund Freud's detailed observation of the patient known as Anna O. was quite instrumental in the development of his ideas concerning psychoanalytic theory and treatment.

Although the case study is typically inadequate for drawing scientific conclusions, it can serve many valuable functions in the initial phase of research endeavors. Specifically, it may assist in the generation of hypotheses related to various assessment or treatment procedures. Second, the case study can be used to chronicle the course and clinical presentation of rare disorders of which little is known or documented. Finally, the case study provides opportunity for the clinician to make relatively rapid changes in the research strategy or treatment approach.

There are a number of methods for gathering information to form a case study. Clinicians and therapists often include such sources as direct observation of the client, administration of psychological tests, and the clinical interview in

their repertoire of techniques to fully understand all facets of the person and his or her disorder. Perhaps the most important aspect of the evaluation and study of the client is the clinical interview. This not only provides the clinician with information on the client's current psychological status, but also allows insight into prior personal and social history. This biographical history may generate hypotheses about possible precipitating or causal factors for the client's present difficulties. Of course the inferences the clinician makes are simply hypotheses and cannot be viewed as scientific evidence until experimental studies confirm the inference.

SINGLE-CASE RESEARCH DESIGNS

Single-case research designs have recently emerged as a means of drawing valid inferences about individual cases. More precisely, single-case designs permit the researcher to draw inferences about the effectiveness of a given intervention by using the subject as his or her own **control**. This means that the subject is assessed repeatedly at times when the intervention or treatment is present and at times when it is not present (control condition). Because of the repetitive nature of assessment, this type of research strategy is often termed **time-series methodology**.

While a variety of designs exist within the time-series methodology, they have a number of commonalities. First, they require that some intervention or treatment be determined before the experiment is conducted. Second, they all necessitate repeated measurement of the individual at various times throughout the study. Two major types of time-series designs are the **reversal design** and the **multiple-baseline design**.

The reversal design involves two primary elements termed the **baseline phase** and the **intervention or treatment phase**. These two phases are commonly referred to as the "A" and "B" phases, or elements, respectively. Throughout the baseline phase, the subject's behavior of interest or **target behavior** is assessed. Essentially, the researcher is attempting to determine the frequency, duration, and intensity of the behavior as it occurs under typical conditions without any treatment or intervention. Baseline data ultimately provide a point of comparison against which the treatment phase can later be evaluated.

For this reason, the baseline phase should provide the investigator with relatively stable data. Stable baseline data are important because they provide a representative sample of data concerning pretreatment levels of the behavior of interest. If a stable baseline is not obtained, it is uncertain as to whether the observed change in behavior was due to the treatment or to some random factor that was never identified during the baseline phase.

After an adequate baseline element is obtained, the treatment phase of the study is implemented. During the treatment phase, the subject is assessed according to the behavior of interest just as he or she was during the baseline phase. During this element, however, some treatment or intervention is introduced. It is imperative that any intervention or treatment be monitored and documented accurately. Failure to specify an intervention appropriately can often lead to an inability to replicate the findings of a time-series study. For this

reason, it is important to record such variables as the time of day an intervention was provided, the individual or therapist who provided the intervention or treatment, and any idiosyncratic details that may prove informative.

While the above **A–B design** may begin to inform us about the efficacy of a given clinical intervention, additional elements should probably be added. The single phase change found in the A–B design is undoubtedly insufficient to confirm that a given treatment produced the observed behavior change. A number of other life events may have intervened at the time of treatment to modify the target behavior. For example, was it the praise the teacher gave the child for attempting classroom questions or some unreported disciplinary action of her mother that produced the change?

One way to increase confidence in the effectiveness of the intervention is simply to add phase elements. Instead of a simple A–B design, the researcher can return to baseline and construct an **A–B–A design**. Typically, single-case experimental studies are terminated in the treatment phase constituting an **A–B–A–B design**. This is done for two primary reasons. First, it is in the best interest of the patient to end with an intervention or treatment that has previously proven to be effective. Second, it allows the researcher to witness the influence of a third phase change as well as a second introduction of the treatment condition. These additional phase changes assist the researcher in eliminating alternative explanations of the behavior change.

Illustration of A–B–A–B Design

An example of an A–B–A–B design may prove helpful at this point. Luce, Delquadri, and Hall (1980) document an A–B–A–B design in which the verbal and physical aggressive behaviors of a 7-year-old boy named Ben were successfully treated. Specifically, Ben's hitting of classmates was selected as the target behavior. Initially, this behavior was observed to occur approximately 30–40 times per day on average. A mildly aversive consequence (physical exercise) was the intervention selected for this problem behavior. The contingent exercise required Ben to stand up and sit on the floor 10 times each time he was seen hitting a classmate. After 17 days of baseline, the intervention was introduced for 10 days. After the intervention phase, baseline conditions were again monitored (7 days), and the study was terminated with a final treatment condition. Graphically (see Figure 11-1), the resulting effect on Ben's aggressive behavior is quite impressive. Ben's aggressive behavior remains high during the baseline phase but decreases dramatically when the intervention is introduced. When the treatment is withdrawn, however, the hitting behavior again increases drastically. Finally, the intervention is reintroduced during the final B phase, and Ben's aggressive behavior once again subsides. The observation that alterations in Ben's behavioral pattern closely follow introduction or removal of the intervention reflects a functional relationship between the intervention and the behavior change. This observed relationship assists the researcher in ruling out alternative explanations for the behavioral change. Furthermore, an 18-month follow-up study revealed that the dramatic elimination of Ben's physical aggression had been maintained over time.

A second type of design that can be used to study the individual case is the **multiple-baseline design**. This type of design can powerfully demonstrate the control imposed on behavior by the intervention without returning to baseline. This strategy is often used when the researcher intends to study the effectiveness of the intervention across *subjects*, *situations*, or *behaviors*. With this procedure, the researcher initiates a baseline period for two or more behaviors, situations, or subjects. Next, the treatment or intervention phase is sequentially introduced to subjects (or situations or behaviors). By staggering or sequentially introducing the intervention, the multiple-baseline design helps to control for many of the threats to validity seen in the simple reversal design. That is, if changes occur only after treatment is introduced, the intervention is believed to have produced the modification in responding.

Illustration of Multiple-Baseline Design

A clinical example may serve to clarify the use of the multiple-baseline design in research. For example, Varni (1981) used this type of design to evaluate the effectiveness of self-control training in reducing the arthritic pain of three hemophiliac patients. These patients suffered from severe arthritic pain caused by recurrent internal bleeding that affected the joints and caused cartilage and bone damage. Because medication is of limited value in reducing such pain, a

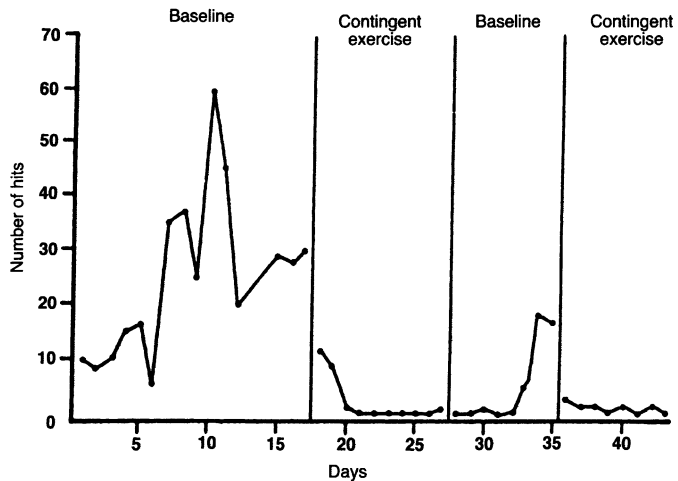


Figure 11-1. The number of hits exhibited by Ben while at school. During baseline, the behavior was ignored, and no special program was provided to alter aggressive behavior. During the contingent-exercise phase, Ben was required to stand up and sit on the floor for instances of hitting. Source: Luce, S. C., Delquadri, J., & Hall, R. V. (1980). Contingent exercise: A mild but powerful procedure for suppressing inappropriate verbal and aggressive behavior. *Journal of Applied Behavior Analysis*, 13, 583–594.

self-control strategy was developed in which patients were trained in responses that would compete with pain. Specifically, patients were instructed to relax deeply, to engage in deep breathing while saying the word *relax* to themselves, and to imagine themselves in situations previously associated with relief of pain. Evaluation of pain levels was accomplished by having patients report the number of days per week that arthritic pain was experienced.

All three patients were monitored during a 3½-week baseline period where no intervention was present. At the end of this 3½-week period, Patient 1 began the intervention phase, while Patients 2 and 3 continued to be monitored under baseline conditions. After 4½ weeks had elapsed since the beginning of the study, Patient 2 was introduced to the self-control procedure, while Patient 3 was maintained in the baseline phase. Finally, the intervention was initiated with Patient 3 after a 5½-week baseline period. The reduction in self-reported pain in the three patients is rather dramatic (see Figure 11-2).

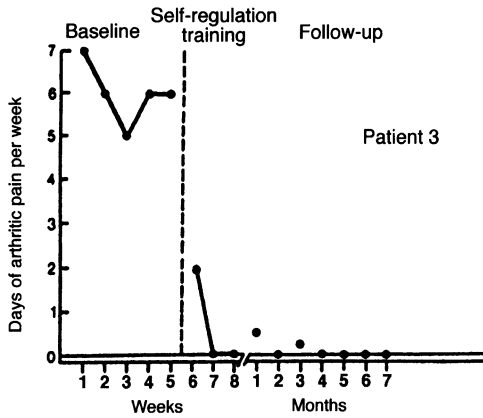
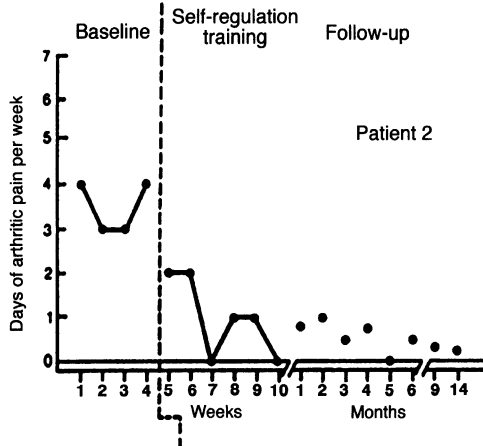
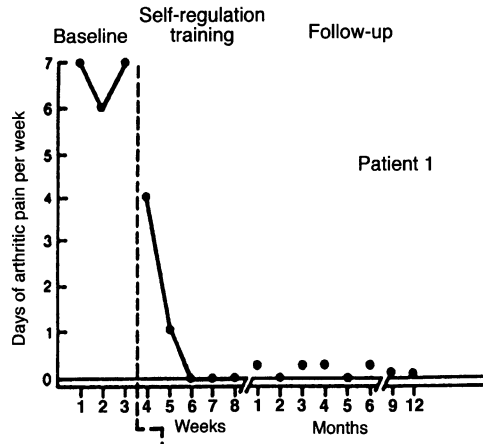
As can be seen in Figure 11-2, reduction of self-reported pain was maintained during a 12-month follow-up period as well. This design is quite powerful in eliminating alternative explanations of the data by allowing the patients in the baseline phase to serve as controls for comparing a patient in the treatment condition. Thus, if a new medication or treatment were introduced to all patients during the study, the resulting influence on pain reports would likely be seen during segments of baseline conditions and not be mistaken for a treatment effect.

GROUP EXPERIMENTAL DESIGN

In group or experimental–randomization research designs, the researcher compares groups of individuals exposed to different interventions or treatments. At the most basic level, group studies involve randomly assigning subjects to either the experimental group or the control group. Both groups are measured with various assessment devices (i.e., clinical interview, observation, testing). **Pretesting** is used to confirm that the groups are initially similar as to the behavior of interest. The pretreatment similarity of the groups is essential so that any differences that surface after treatment can be attributed to the intervention.

After pretesting, subjects in the experimental group receive the predetermined intervention, whereas those in the control group do not. At completion of treatment, both groups are again assessed with the measures used at pretesting. This evaluation is typically termed **posttesting**. Any significant change in the groups seen in posttesting is attributed to the intervention received by the experimental group. Later, subjects may be tested a third time (termed *follow-up testing*) to evaluate the influence of the intervention on long-term behavior or symptom reduction. Follow-up testing can often provide the clinician or researcher with valuable information concerning relapse and its prevention.

Although the procedure outlined above appears straightforward methodologically, the clinical setting generates many obstacles. First, denying treatment to individuals in distress for the formation of a control group clearly creates an



ethical problem. There are additional practical problems with asking this untreated group to extend their cooperation by undergoing repeated assessment.

Conversely, the purpose of the control group is to ensure a sample that is identical to the treatment group aside from the treatment itself. However, a number of factors may produce change in the control group during the period in which they are deprived of treatment. For example, rather than enduring a waiting list, the control subjects may seek help at some other psychiatric facility or modify their own behavior in a way that renders them quite different from an “untreated” group. Finally, simply coming to the clinic and speaking to a supportive clinician may make the control group different from individuals who truly receive no assistance or treatment. To remedy this problem, many researchers will place the control subjects into “supportive” therapy. Here, they are given a chance to discuss their current life difficulties with a therapist who does not provide any direct therapy. Although this is an interesting way to deal with the control group problem, in reality it is quite difficult to provide an inert type of psychotherapy.

On assessing both the control and experimental groups after completion of treatment, results are compared. If the two groups differ **significantly** in terms of the various scores and measures achieved during posttesting, it is assumed that the intervention has had some influence on the experimental group. The word *significantly* is important here, as an investigator would not want to tout an intervention as effective if the two groups only differed slightly because of random error.

Determining the significance of the difference between two groups is accomplished through the use of statistical methods. **Statistics** are mathematical procedures that allow the researcher to partial out the differences between groups that are due to factors that have nothing to do with the intervention under evaluation. These factors are often described as **sources of error** in clinical research and should be minimized at all times. Two types of error sources termed **random error** and **systematic error** are often discussed. Systematic error sources may include unreliable testing instruments, sloppy recording procedures, or inaccurate compilation of data. Systematic error affects the data in a constant manner and is often considered the most dangerous to the validity of a study. Random error is simply due to the fact that people are unique. Random error is believed to be equally distributed across the sample population and thus is not seen as a substantial threat to experimental validity.

Once the error and random variability of individuals is extracted from the data, statistics assist the researcher in determining whether the remaining difference between groups is meaningful. In simplest terms, this is accomplished by comparing the **variability** found within a group to the variability observed between the experimental and control groups. Variability refers to how different or “spread out” subjects or groups are on the measure of interest. When the

← **Figure 11-2.** Days of arthritic pain reported per week during baseline, self-control training, and follow-up for each of three patients. Source: Varni, J. W. (1981). Self-regulation techniques in the management of chronic arthritic pain in hemophilia. *Behavior Therapy*, 12, 185–194.

variability between groups is larger than the variability within groups, the researcher's confidence in the intervention is increased. Reducing within-group variability can greatly increase a researcher's chances of observing a significant treatment effect.

Significant findings in a clinical study should be examined quite critically for the presence of various factors (termed **extraneous variables**) that may have produced significant, yet invalid, results. Extraneous variables can threaten the validity of a study and, when left uncontrolled, can be confused or confounded with the effects of the intervention. Generally, these threats are of two types: **internal threats** or **external threats**. Internal threats are factors such as more subjects dropping out of one group than another, historical events occurring between pretesting and posttesting that change the subjects, and the effect of taking a test on scores of a second test. Controlling for internal threats to validity allows researchers to state that the observed experimental difference was due to the intervention and not to some extraneous variable. Controlling the various threats is accomplished through many procedures. Perhaps the most important of these is the **randomization** of subjects to various conditions or treatments. The intent is that randomly assigning subjects to the various groups will permit uncontrolled subject variables (e.g., age, sex, income) to "cancel out." Alternately, subject variables can also be controlled through the process of **matching** subjects on various characteristics or attributes. Here, each subject in the control group is matched with a subject in the experimental group on such attributes as age, diagnosis, or prior years in therapy.

External threats to validity include issues that make a particular sample unrepresentative of the larger population. When a research sample is unrepresentative or uncharacteristic of the larger population, significant findings may not be meaningful to subjects or patients outside the study. When results are representative of the larger population, a study can be **generalized**. Generalization is paramount because without it research findings could never be implemented outside the small group of subjects actually studied.

A myriad of other sources of error or bias can pose as substantial threats to the validity of clinical research. One such source of bias is **experimenter effect**. This refers to the change in the subject's behavior that stems from some attribute or characteristic of the experimenter. The experimenter's age, sex, or manner of dress could serve to alter subject behavior in some uncontrolled manner. For example, an experimenter in a lab coat may receive much more compliance from subjects than one in jeans and a T-shirt. These issues can often be controlled for by removing the experimenter from direct contact with subjects and allowing a trained assistant to perform many of the procedures.

Conversely, the term **experimenter bias** refers to the effect of the experimenter's own expectancies about how subjects are treated or data are recorded. A researcher who expects or desires dramatic change in the treatment group may unintentionally judge this group to be "healthier" during posttreatment interviews and testing. Experimenter bias is much more likely to pose a threat in more subjective research calling for clinical judgments. This situation can often be remedied by the use of a **double-blind** design in which both the research assistant and the subjects are given no knowledge of what effects the treatment might produce or in which condition subjects are placed.

A final type of biasing source originates with the subject and is termed **subject-expectancy effects**. If different treatment procedures are used in a study, subjects may have different expectations about these treatments. Observed behavior differences may then be due to these expectations rather than the effects of treatment per se. Often, researchers query subjects after participation in the study to uncover any expectancies they may have had going into the study.

While the simple two-group study outlined above begins to illustrate many of the issues inherent in group research, designs are often much more complex and involved. It is often necessary to look at many different aspects of an intervention simultaneously. Specifically, an investigator may wish to examine characteristics of the therapist doing therapy (i.e., level of training, age, sex, etc.), the setting of therapy (i.e., inpatient versus outpatient), or the type of treatment (i.e., cognitive, psychodynamic, behavioral) used. A research design that evaluates all of these factors both independently and jointly is termed a **factorial design**. While an exhaustive discussion of the various group experimental designs is beyond the scope of this chapter, the interested reader is directed to Campbell and Stanley (1963).

Illustration of Group Study

A brief example of a clinical group study may help illuminate the value of this strategy in validating the effectiveness of a given intervention. A study conducted by Long (1984) provides a relevant illustration of how various types of treatment can be compared in an attempt to ascertain which is the most effective in treating a given problem or disorder. In this investigation, the efficacy of two methods of stress management (aerobic conditioning and stress inoculation) were examined via the group experimental method. Along with the aerobic conditioning (AC) and stress inoculation (SI) groups, a control group was included using patients from the waiting list (WL). The 73 subjects enlisted in the study were randomly assigned to one of the three groups.

After subjects were assigned to one of the three groups, pretesting was conducted. Each subject, regardless of group status, received a number of questionnaires and surveys (e.g., state-trait anxiety inventory) that assessed levels of situational and trait anxiety. Along with these paper-and-pencil ratings, subjects also underwent evaluations of their level of physical fitness (e.g., heart and lung functioning).

On completion of pretesting, AC subjects began a 10-week progressive walking/jogging program in which they were encouraged to increase their distance and decrease their time in a systematic way. The SI group met weekly during this same 10-week period to undergo training in the method of stress inoculation, as conceived by Meichenbaum and Cameron (1973). This procedure consists of helping individuals better cope with stress by mentally rehearsing what they will do in a variety of stress-invoking situations. Generally, this is accomplished by assisting clients in becoming more aware of the self-statements they currently make in anxious situations (e.g., "I can't handle this"), and helping them to replace these with more useful statements and strategies.

On completing the 10-week treatment program, the three groups were post-

tested with the same questionnaires and aerobic conditioning measures that were administered at pretesting. These same measures were administered a third time, during follow-up testing 3 months after posttesting, to evaluate how well any treatment effects were maintained after the completion of treatment.

The data from this study indicate significant reductions in reported levels of stress at posttesting and 3-month follow-up for both the SI and AC groups. The waiting list control group failed to show any reduction of stress during the 10-week period. The results of this study are presented in Figure 11-3.

A final method for studying clinical problems and the effectiveness of various intervention strategies is **meta-analysis**. Meta-analysis literally means "analysis of the analysis." Over the last decade, meta-analysis has received increasing attention as a means of evaluating an entire body of literature. More precisely, it can be employed to evaluate many different studies taken together. The method is quite useful when the results of various studies concerning a given treatment approach appear to be in conflict. Meta-analysis uses an index termed **effect size** to establish a common metric for which widely divergent investigations can be compared. This method is commonly used to draw conclusions concerning interventions when the results of various studies are contradictory.

For example, Smith and Glass (1977) used a meta-analytic procedure to study the effectiveness of psychotherapy across 375 separate investigations. By calculating an effect size for each study, they were able to draw a number of general conclusions about the utility of psychotherapy. Specifically, this work led to the finding that psychotherapy of different modalities does appear to generate clinical improvement over no-treatment control conditions. Second, these authors go on to suggest that the specific type of therapy (i.e., cognitive, gestalt, behavioral, etc.) tends to produce similar results.

GOALS OF CLINICAL STUDIES

The goals or motives for conducting clinical studies are as important as the various research strategies and designs used to gather and analyze clinical information. One such goal is to discover whether a particular type of therapy or intervention is effective. This type of study is referred to as an **outcome study** and is perhaps the most common type of research conducted in clinical settings. The goal is to evaluate how effective a particular therapy was in alleviating patient distress or symptoms. An example is to study how effective gestalt therapy is in reducing the symptoms of anxiety in a group of individuals suffering from agoraphobia.

More recent studies have not simply looked at the outcome of a single type of intervention but rather have contrasted two or more therapeutic approaches. This type of study is referred to as a **comparison study** and attempts to discern which of a number of therapies or treatments appears to be most effective in producing positive therapeutic outcomes for a specific clinical problem or patient population.

A third type of research effort investigates issues related to the process of therapy rather than the outcome. **Process research** focuses on the specific events

occurring in the therapy session rather than the outcome of treatment. In process studies, the therapy session is often videotaped so that it can later be studied and analyzed for the elements of interest.

An example of process research, provided by Lassen (1973), examined the effect of physical distance between therapist and client. This study involved three groups of clients interviewed by a therapist at distances of 3, 6, and 9 feet,

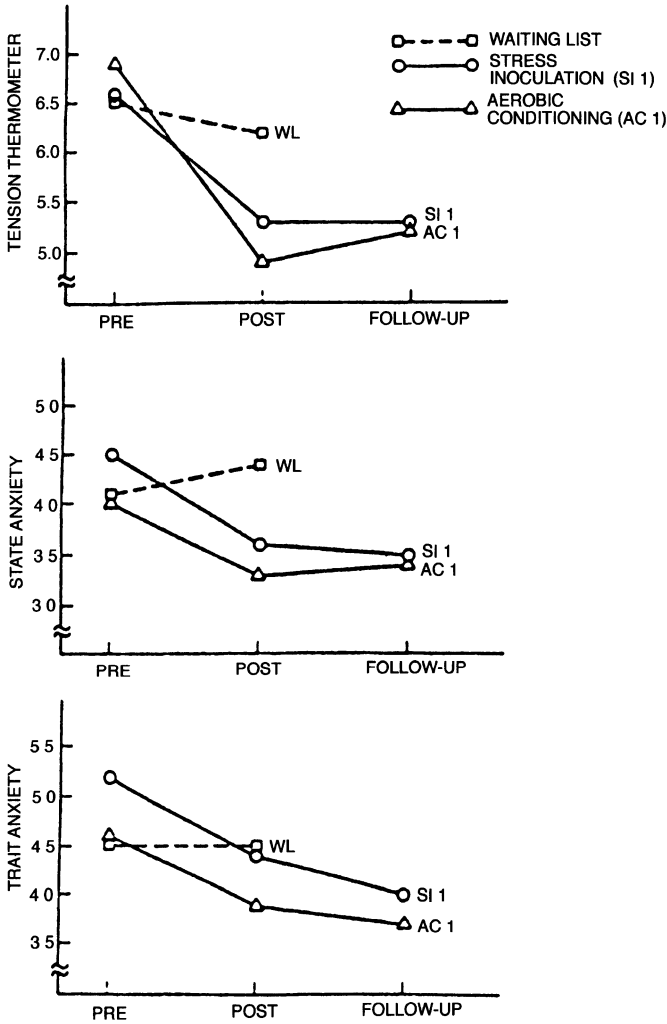


Figure 11-3. Mean ratings of change on measures of stress before and after treatment, and at 3-month follow-up. Source: Long, B. C. (1984). Aerobic conditioning and stress inoculation: A comparison of stress-management interventions. *Cognitive Therapy and Research*, 8, 517-542.

respectively. Results of this study indicate that clients were most comfortable discussing their difficulties at a distance of 6 feet. Furthermore, they reported feeling less understood at larger distances.

Finally, some studies are motivated by a desire to better understand how **patient variables** and **therapist variables** influence the efficacy of treatment. Studies of this kind attempt to evaluate the role that characteristics, such as patient age, gender, occupation, education, or motivation for therapy, have on treatment outcome. Similarly, personal traits or attributes of the therapist may be examined in an effort to better understand their influence on client behavior and improvement. Therapist variables that have been studied include professional experience, empathy, and personality style.

The preceding discussion outlines a variety of elements within the field of clinical research. The various types of experimental designs were described along with the accompanying risks to scientific integrity. Additionally, the diverse goals of clinical studies were enumerated. Although each of these aspects of clinical research can be scientifically successful in isolation, the sequential application of diverse research designs on goals can be an enormously powerful investigative approach. This **systematic approach** to research allows the experimenter the flexibility and versatility of the single-case experimental study in the formative stages of an investigation, while providing increasing confirmative power through the use of group designs.

The single-case experimental design can be employed early in the research process to economically evaluate new hypotheses concerning a given treatment strategy. Later, group designs can be used in an attempt to increase scientific rigor and reduce threats to external validity. Subjects who fail to respond within the group design can subsequently be studied with a single-case experimental methodology to ascertain the reasons for treatment failure. Again, clinicians are allowed greater flexibility, enabling them to modify or alter a treatment procedure relatively quickly.

PRACTICAL CONSIDERATIONS

Because clinical research is carried out with human beings, psychologists must consider the ethical issues inherent in their work. Research with human subjects must consider the three interrelated ethical issues of the client's right to privacy, the possible psychological discomfort research may produce, and the use of deception with subjects.

The first two issues regarding right to privacy and possible discomfort are ensured in a number of ways. First, researchers are obliged to obtain **informed consent** from each subject participating in the study. This means each subject has received a complete description of the study, including the possible risks and benefits that might be expected. Subjects are informed that they may withdraw from the study at any time without penalty. Subjects are also guaranteed that all test results or information obtained will remain anonymous.

As for the issue of possible harm or discomfort, researchers are typically required to allow a panel of professionals and laypersons to review their proposed research plan. This committee evaluates the likelihood that subjects will

experience discomfort from the study. If discomfort might result, the committee may ask the researcher if an alternative research strategy could answer the same clinical question without placing subjects at risk. If no alternative is available, the committee must weigh the potential benefits of the study with the known risks before approving the project. Perhaps the most effective way of reducing these risks is by providing individuals with as much information as possible before they begin participating in the study.

The issue of deception in clinical research is perhaps the most controversial ethical issue. While a number of researchers believe that some psychological processes can only be studied with deception, others believe that its use is never justified. One way to resolve this issue is by informing subjects prior to participation that some aspects of the study must be withheld until after the experiment is completed. Subsequent to the study, the subject can be **debriefed**. Debriefing subjects involves a full description of the study and the experimenter's hypotheses regarding outcome. During the debriefing period, the researcher can also assess the subject for any negative effects that were possibly produced by the study. Subjects experiencing some adverse reaction related to the study should then be referred for appropriate intervention or assistance.

In summary, it is most important that researchers attend to both the scientific and ethical issues involved with research in the clinical setting. Individuals who participate in well-designed and ethically sound intervention and treatment studies often reap significant therapeutic rewards. Although clinical research can be enormously rewarding, it also poses a great challenge to the clinician, who must meet high standards of client welfare and care while maintaining rigorous scientific conditions.

ACKNOWLEDGMENTS. Preparation of this manuscript was supported in part by NIH Grant DE08641.

STUDY QUESTIONS

1. Outline and explain the five steps of the scientific method.
2. How do goals affect research? Differentiate between the goals of basic and applied research.
3. How does setting influence research methodology? What are the strengths and drawbacks to conducting research in laboratory settings? In naturalistic settings?
4. Develop a hypothesis about human behavior. Identify your independent and dependent variables. Who would be in the experimental group? In the control group? How would you accomplish random assignment? What interpretive limitations will you face if you do not use random assignment?
5. What are the differences among experimental research, correlational research, and a descriptive study? What are the bases for choosing one design over another?
6. Define and give an example of a negative correlation between two variables. Do the same for a positive correlation.
7. What are some of the common methods used in descriptive studies?
8. What are the two primary channels for gathering psychological data? Describe each channel in terms of its strengths and its procedures. Discuss potential drawbacks inherent in each.

9. Tests, questionnaires, and rating scales must be developed with great care. To use any measure in a research study, the investigator must evaluate its sensitivity, validity, and reliability. Why are these qualities important? What makes an instrument sensitive, valid, and reliable?
10. Validity may be established in a number of ways. Differentiate among construct, face, criterion, and content validity.
11. Several methods are available for gathering case study information. Identify each.
12. What is a single-case research design? Create a research project using this design, and describe it in detail. How would time-series methodology fit into your project design? Would it be best to use a reversal design or a multiple-baseline design? Why?
13. What is the purpose of an A–B design? What are its strengths and weaknesses? How do A–B–A and A–B–A–B designs improve the researcher's ability to prove the effectiveness of any given treatment?
14. What is the importance of pretesting in group experimental designs?
15. Clinical researchers may encounter a number of "real-world" obstacles as they design their study. Discuss several of these obstacles, including their ethical implications and any potential solutions available to the investigator.
16. How may random error and systematic error affect clinical research data? What steps should the investigator take to protect against sources of error?
17. Identify and discuss internal and external threats to validity.

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CHAPTER 12

Private Practice

STEVEN T. FISHMAN and MICHAEL V. PANTALON

INTRODUCTION

When psychologists contemplate starting a private practice after completing their graduate education, they may think about the satisfaction that can be derived by helping people who are suffering any one of a number of problems (e.g., panic and agoraphobia, obsessive-compulsive disorders, social phobias, depressive reactions, marital discord); about the variety of ways in which they can function professionally (e.g., consultation, teaching, research); about the prestige of being a member of a distinguished profession; or about the financial rewards commensurate with a successful practice. In all likelihood, however, they are unaware of the numerous issues and problems facing them in starting a practice. Few, if any, graduate courses, and most certainly no undergraduate courses, in psychology adequately prepare the neophyte practitioner in the skills necessary for the development and management of a professional practice.

This chapter acquaints the reader with the business aspects of clinical practice, the development and marketing of a practice, and the emotional liabilities of practice. The chapter concludes with an extensive section on the future trends and directions for professional practice.

BEGINNING PROFESSIONAL PRACTICE

New standards of eligibility for licensing examinations are now in force in many states that have made it difficult to establish a private practice immediately on completion of one's graduate education. According to new statutes, one must first successfully complete the requisite hours of clinical work, re-

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

search, or therapy, and be supervised by a licensed psychologist during a 1-year, full-time postgraduate internship.

The delay in licensure may have several beneficial effects. The “waiting period” affords new psychology graduates an opportunity to study or intern with new mentors who help to expand their psychotherapy armamentarium, in terms of either the specific techniques used or the types of populations serviced. This period allows new doctorates the time to get their professional “bearings,” so to speak, to build confidence in their clinical functioning, and to learn the skills addressed in this chapter on the “business of clinical practice.”

The waiting period, additionally, helps new psychologists to avoid many of the pitfalls common to start-up practices (see below) that can lead to demoralization and early disenchantment with professional practice. Thus, the delay is helpful to beginning professionals, for it forces them into a gradual approach to practice, thereby giving them the time to save money, to establish contacts by giving talks, to generate marketing strategies, to visit other established practices and talk to successful clinicians, and to be afforded a needed break from the stress of academic pressures.

FULL-TIME VERSUS PART-TIME PRACTICE

One of the first questions facing new practitioners is how much time they would like to devote to their professional practice. In other words, how much time is actually functional (i.e., utilized), and what percentage of their allocated time will turn out to be “dead time”? Even though an individual may be eager to launch a career as a practitioner, as a rule, it is more practical to begin on a part-time basis. The rationale for this recommendation is as follows:

1. The operating expenses of an established office can be prohibitively high for a practitioner just starting out.
2. Building a practice is not an easy matter. There are many mental health workers in the various disciplines with varied orientations competing for the same “psychotherapy dollars.”
3. Working in another professional setting (e.g., an academic department, a community mental health center, or a hospital) affords the neophyte clinician both the experience of dealing with a clinical population and the exposure to potential referral sources.
4. The pressure of having to generate income for office maintenance or support of one’s family can impose undue stress on the new clinician, where every phone call (i.e., cancellations or new referrals) can take on monumental proportions. In other words, it can have an emotional toll on new clinicians if they have to rely solely on developing practices for their only means of financial support.

GENERALIST VERSUS SPECIALIST

Another question that needs to be addressed, but one that is usually influenced by one’s graduate and practicum training, is how one presents himself or herself professionally—as a practitioner with a particular orientation, function-

ing as a “**generalist**” or as a “**specialist**” with a particular treatment approach (e.g., hypnosis, cognitive therapy), or as a clinician with expertise in a particular problem area (e.g., obsessive-compulsive disorder, anorexia), or with a particular patient population (e.g., child, adolescent, geriatric).

The opinions on the generalist versus specialist question are mixed at best. It is our opinion that when one is attempting to develop a practice, one should see a variety of patients in order to build a following and a referral network. In the early stages of the practice development, referrals are made to new practitioners, especially from other professionals, primarily because of financial considerations. That is, some prospective patients cannot afford their fees, so they are referred on to less experienced practitioners. For this reason alone, early specialization is impractical.

The other point of view is that a new practitioner will command referrals by virtue of the fact that he or she has more knowledge in a certain area or with a certain population of patients. There are a number of areas of specialization, other than the obvious ones by discipline or problem area, that a psychologist can consider developing. For instance, one can offer an outreach program (i.e., home treatment); one can work primarily *in vivo* (in the live situation) with phobic and obsessive-compulsive patients; or one can specialize in time-limited or short-term approaches. Other areas of specialization include working with groups or couples, or doing evaluation and testing. Such specialization is especially valuable to a group practice in the respect that such psychologists can offer a variety of services to the general public.

SOLE PRACTITIONER VERSUS GROUP PRACTICE

Another question to be answered is whether a clinician starting out should do so alone or join with a group of other practitioners. There are several models by which clinicians can structure their private practice: (1) they can function as a sole practitioner either in an independent office or in an agency (e.g., in a university or hospital setting that allows for such independent practice); (2) they can practice from a home or apartment; or (3) they can operate within a group format either with other practitioners or as an independent in a multi-office suite that hires other practitioner assistants or employees.

As Chapman (1990) points out, there are both advantages and disadvantages to solo practice. These are as follows:

1. Sole practitioners can structure their own hours depending on individual preference, including taking time off when necessary.
2. They have a greater potential for income. The downside is that there is much greater risk for a declining income due to referral sources “drying up” as a consequence of a depressed economy or delays in third-party payments.
3. They are personally responsible for their own decisions, professional ethics, and actions. However, they must be comfortable with that degree of independent responsibility.
4. They are responsible for any and all business aspects of the practice,

such as fee collection, submission of insurance forms, and development and marketing of the practice.

5. They have to provide their own benefits.
6. They must be concerned with the emotional toll and liabilities of practicing alone. They are more susceptible to personal and professional isolationism.

Group practice counters many of the disadvantages of solo practice. Specifically, overhead is shared, so there is less financial pressure. It provides a more collegial environment where professional issues and problems can be exchanged. An aggregate of practitioners can have the capability of providing a wider range of evaluation and treatment services. Merely knowing that other peers are in the same space, or having brief conversations with colleagues during breaks or cancellations, serves to lessen the feeling of isolation.

The principal problem of a group practice, however, is having to share office space with other professionals, which can lead to professional competitiveness, personality clashes, and other problems that occur with cohabitation. The individual must weigh his or her own temperament and need for financial, professional, and emotional support from others in order to determine whether a solo or group practice is more suitable.

The new practitioner can also opt to run the practice from his or her own home. The principal advantage of operating a practice out of one's home is holding down operating expenses, as well as functioning in a more comfortable climate. However, new tax rulings may have made a home practice less of an advantage than in the past. In our opinion, the disadvantages of home practice outweigh the advantages, in that patients may become privy to one's personal life and family. In some known cases, this can lead to danger or harassment, and can affect the psychotherapeutic process because of greater familiarity.

Group practice affords the practitioner the opportunity for a greater variety of professional experiences. "Burnout" (discussed below) can be avoided when the practitioner engages in varied activities, such as being interviewed by the media, writing books and articles, and conducting workshops either for the training of other professionals or for patient populations.

A group practice allows the practitioner an avenue to more easily address ethical questions by providing in-house supervision for difficult patients or patients who present ethical dilemmas. It also provides for (1) greater emotional and professional support, (2) a more convenient "coverage" system when the practitioner is away because of sickness or vacations, (3) in-house referrals for other family members of patients being seen, and (4) easier formulation of homogeneous patients for group treatment because there is a larger pool from which to draw members.

FEE SETTING

Setting and receiving fees for services rendered establishes one as a professional with all the real and implied ramifications of professional functioning. The charging of **fees for service** or "helping others" may present a conflict for

clinical psychologists who embarked on their graduate careers with the humanitarian ideal of primarily “wanting to help people.” Charging fees for service in their view contradicts this ideal, but as Canter and Freudenberger (1990) so aptly stated, “It becomes a matter of balancing idealism with realism” (p. 217). A psychologist in private practice has operating expenses, has to support a family, and has to repay loans for graduate education.

Charging fees for service is imbued with excess meaning for some novice clinicians. It is more acceptable for them *not* to charge for their services; consequently, they feel less accountable for the quality of treatment that is delivered.

The charging of fees in the service of helping others evokes numerous emotional problems for some psychologists. For instance, some professionals view money as an indicator of one’s self-worth, and particularly self-worth as a professional. As Canter and Freudenberger (1990) point out:

Often one finds that psychotherapists disavow the importance of money, claiming that they are really functioning as professionals, and that the professionals are not “in business.” . . . It is important to point out that the independent practitioner is in business—in the business of being a professional—and that therapists who are uncomfortable with money issues really need some self-exploration. (p. 218)

Besides the therapist’s own concern about charging money for helping suffering people and the meaning of money to the therapist personally, the whole issue of how fee setting and collection affect the course of therapy requires some examination. Paying a fee motivates patients to work hard on their problems to hold down costs. Also, the degree of respect patients have for therapists is often measured by what therapists charge for their services. If the therapist undercharges (“undervalues”) for psychotherapy, then patients may undervalue it as well. If the therapist charges too little or is too liberal about collection of fees, then, as Freudenberger (1987) suggests, he or she is acting as a “superior being,” fostering dependency in patients. This runs contrary to the expressed purpose of psychotherapy—personal growth and autonomous functioning.

Therapists must consider a number of variables in setting fees for the spectrum of services offered. They should charge fees that are “in line” with those of other practitioners in the same discipline. Other considerations in fee setting include the therapist’s breadth of training and education, years of experience in service delivery, and credentials (i.e., degree, certificates of specialized training, National Health Register, Diplomas from ABPP, etc.). Finally, the market or geographic area in which the practice is operating must be considered.

Collection of Fees

Collection of fees is the mainstay of a professional practice. A schedule of fees has to be established for each therapy segment, whether it be a 30-, 45-, or 50-minute session, and for each type of service offered (e.g., individual, group, couples, family, testing, consultation, court appearances). Patients appreciate therapists being direct and “matter-of-fact” in their discussion pertaining to fees. It is inappropriate for a therapist to surprise a patient with the cost of any service rendered.

It should be common practice that a patient signs a contract (i.e., “informed consent”) before initiation of sessions, acknowledging that he or she is aware of the rules and policies by which the clinician’s practice is governed, as well as his or her own obligation to remit fees for service. Additionally, the “informed consent” contract includes not only the fees to be paid, but when and by what means. There is also a section devoted to collection of arrears, a cancellation policy, the policy on telephone calls, and, most important, an introduction to and an explanation of confidentiality. The importance of developing a comprehensive document that “informs” the patient of as many parameters of the administrative and (where appropriate) clinical aspects of the treatment on which he or she is about to embark cannot be overemphasized. This document facilitates the course of treatment, as it provides a clear understanding between patient and therapist and delineates the respective responsibilities of each.

MARKETING AND DEVELOPING A PRACTICE

Marketing one’s psychotherapy practice requires a continuing, time-consuming effort that should last throughout the life of the practice. Even established practitioners must continue to concentrate on development of their practices.

In the sections to follow, we will touch on five of the most effective marketing and promotional strategies that our facility has employed. Some were more effective during the start-up phase of our practice; others have been useful during our slower periods when we needed to revitalize the practice.

Trade Names

By taking on a **trade name**, such as “The Center for” . . . or “Phobia care” . . . , one is able to recruit better-qualified colleagues and establish a professional center that provides a multitude of services. Prospective patients are more often attracted to a group practice than to an individual practitioner for at least two reasons.

1. There is the belief that in a group practice, clinicians are more competent by virtue of the interplay and consultation with other practitioners who are on “the cutting edge” of developments within their specialty. Referring professionals hold similar views, believing that patients will receive more comprehensive care in a group practice.
2. Advertisements under an assumed name for a group practice can usually be far more flexible (promoting the particular expertise of each member and promoting far more specific programs, such as agoraphobia clinic, stress management training, adult children of alcoholic groups) than an individual practitioner can. Such a comprehensive image is appealing to the average consumer of psychological services, who has limited knowledge about the quality of service delivery by the individual practitioner.

As Fishman and Lubetkin (1991) have pointed out in numerous workshops on practice development, “A solid, trusting relationship with one referring professional is worth far more than a year’s worth of advertising! Yet it is perplexing as to how little extra time and effort are actually expended by psychotherapists nurturing these relationships” (p. 71).

It is strongly encouraged that new clinicians make it a habit to acknowledge every referral from colleagues with a thank-you note and a brief report of their findings with the referred patient, including a description of future interventions. Such reports must protect the patient’s confidentiality and, as such, should be incorporated in the informed consent form that the patient signs initially.

For many years, our facility has regularly mailed out to referring colleagues or potential referral sources copies of research or clinical reports that would be of interest to them. This procedure reminds them of our facility several times each year, thereby ensuring continued support of our practice. We also regularly disseminate newsletters with articles written by our staff members to potential referral sources—a subtle but effective strategy for promoting our practice to other professionals.

Affiliation with Self-Help Groups

As a consequence of soaring medical and therapy costs and the generally poor economic climate, large numbers of potential therapy consumers are turning to **self-help programs** to receive the support and guidance they require. Because most such groups provide rather pat formulas for emotional growth and do not respond to individual needs, many of their members eventually seek out professional help. It therefore is sensible for clinicians to work with self-help groups in order to increase exposure with this potential patient pool.

Use of the Media

Appearances on radio and television (either local or national presentations) have, by and large, proved to be ineffectual in developing our practice. We have found the same to hold true for national magazine coverage. We have been interviewed numerous times by national magazines, but aside from a few letters from readers, these articles did little more than fill a scrapbook.

One form of media coverage has, however, proven to be consistently effective in generating interest in our practice: local newspaper coverage. Such coverage can be in the form of interviews with interesting professional personalities in the community; in the form of quotations about important psychological issues; or in the form of articles about particular areas of clinical interest (e.g., contemporary sex therapy, biofeedback for headache management, therapy for shyness). More action-oriented practitioners can expedite this process by writing a brief synopsis of their work in the form of a “press release” and

forward it to editors of the newspapers in the geographic area in which they are practicing. Appropriate disclaimers and qualifiers should be included in the write-up of such work.

Advertising

Since the late 1970s, there has been a drastic shift in the policy and attitudes toward advertising from both the professional and private sectors. This movement began with a series of antitrust rulings from the Federal Trade Commission that permitted lawyers to advertise their services in a variety of ways. Since that time, many professionals have departed from the traditional conservative posture of little or no use of the media for advertising their professional services to actively advertising. Radio and television commercials, newspaper advertisements, and the like are now commonplace for attorneys, medical specialists, and other professionals. In our experience, it appears that the most successful professional advertising is both repetitive and tasteful.

The various mental health professions have issued clear guidelines concerning advertising, and these should be adhered to as closely as possible. This not only protects the clinical psychologist from unprofessional conduct charges, but also serves to ensure that the profession is portrayed in the best possible light.

BURNOUT AND OTHER LIABILITIES OF PROFESSIONAL PRACTICE

Independent professional practice has many rewards, financially, intellectually, and creatively. It offers a variety of experiences, such as practice, supervision, writing, and teaching, and additionally some degree of prestige. A word of caution, however, should be sounded. Clinical functioning, particularly with a difficult population of patients over many years of practice, can have a devastating toll on an individual, especially when such factors as personal, health, and financial problems begin affecting one's life. Such occurrences, unless checked, can lead to depression, isolation, boredom, and general feelings of disenchantment with life. Freudenberger (1980, 1983) has labeled this condition "burnout."

Freudenberger (1980, 1983) views clinician **burnout** as an exhaustion of an individual's mental and physical resources attributed to his or her prolonged yet unsuccessful striving toward unrealistic expectations. Burnout occurs over years of practice, when the intellectual stimulation, financial rewards, prestige, and relationships with patients and colleagues no longer are as meaningful. Some practitioners fail to maintain their earlier level of commitment and enthusiasm for their clinical practice and for the field of psychology in general.

Clinicians frequently become trapped in their own feelings of loneliness and isolation, which are known to be components of practice. They are invested in evincing only the most competent of behavior and have to maintain the facade of being in charge (Freudenberger, 1983; Smith, 1990).

The following are some stressors inherent in professional practice:

1. The population of patients that therapists may see in their practices. Infantile, depressed, hostile, suicidal, and borderline/dependent patients require considerable attention, nurturance, support, compassion, and understanding to the point where the therapist is emotionally drained.
2. The natural “roller coaster” effect of clinical-practice.
3. The development of alternative systems of mental health delivery (discussed below).
4. The increased reliance of patients on third-party payment and their demand for assignment or reduced fees.
5. Increased overhead or other operating expenses both personally or in the professional setting.
6. Threats of malpractice suits.

The “burned-out” clinician may turn to some form of substance abuse as a means of relief from the everyday pressures of practice, or may be more inclined to “stretch” the ethical boundaries of a sound practice.

Freudenberger (1984) recommends that clinicians recognize burnout as a real phenomenon and that they take precautions in preventing its occurrence. He suggests the following prophylactic measures:

1. Vary one’s clinical commitment by being involved in other professional areas, such as teaching, supervising, research, or attachment to an agency, hospital, or hotline.
2. Organize and develop peer supervision support groups to share experiences and sharpen skills. Such groups afford the clinician the opportunity to discuss problematic cases, to air frustrations, and to discuss ethical dilemmas.
3. Determine what activities, involvements, or types of patients are personally draining and invoke some limitations on this type of referral or activity.
4. Take short vacations, limit the number of hours of work, engage in various desirable recreational diversions, and say no to some professional commitments (i.e., be more discriminating).
5. Pay particular attention to health, nutrition, and exercise. Exercise is an excellent way to alleviate mental stress.
6. Be honest with yourself about your emotional state. If you are emotionally spent, then seek out professional help.

Freudenberger (1984) points out that not only are the more senior therapists vulnerable to burnout, but novice therapists can also develop similar symptomatology, for different reasons. In new professionals, symptoms of stress and burnout may occur if they are not constitutionally or emotionally suited for practicing psychotherapy. They may find themselves overidentifying with their clients and virtually adopting their patients’ suffering and feelings of helplessness. Another difficulty occurs, particularly in the early stages of therapists’ careers, when they feel ill-prepared or lacking in sufficient knowledge to help their patients, or believe that their interventions are ineffective. The feeling of impotency in carrying out psychotherapy can be emotionally devastating for a new clinician.

RECENT DEVELOPMENTS IN PROFESSIONAL PRACTICE

As we will see in this section, psychologists in private practice usually enjoy greater professional independence than psychologists in other settings, but with greater restriction and scrutiny of services. Recent developments in the field of clinical pathology, especially in the private sector, directly affect the ever-changing manner in which psychotherapy services are delivered to the general public. Some of these developments include, but are not limited to, **prescription** and **hospital privileges** for psychologists, **Medicare** and **Medicaid coverage** for psychological services, and perhaps most important, alternatives to conventional mental health delivery systems. This latter development seems to be cross-cutting medical disciplines and will eventuate in the restructuring of the United States' national health care policy. In this section, we will look at each of these issues in turn, with an emphasis on the proposed alternatives to our current system of mental health care delivery.

Prescription Privileges

Until very recently the privilege to prescribe psychotropic medications was reserved exclusively for psychiatrists. Currently, however, the picture is beginning to change. Training sites have been established, such as those in Florida and Hawaii, where 1-year fellowships with course and practicum work will enable licensed Ph.D. clinical psychologists to prescribe psychotropic medications (DeLeon, 1993). Other states, such as Washington and Illinois, are actively pursuing similar training options. The services psychologists have historically provided have been educational in nature (e.g., assessment, therapy), whereas psychiatrists have historically embraced the "medical model" of the treatment of mental illness (where medication is the primary, if not only, mode of treatment). Some believe that these two models are incompatible (Barron, 1991). Indeed, Barron views those in favor of prescription privileges for psychologists negatively, accusing them of "succumbing to the organic medical view" (p. 1) of mental illness, and he fears that there will continue to be an overreliance on medication rather than integrated biopsychosocial treatment. Others, however, believe that integration of the two theoretical models is both sensible and effective (DeLeon, Folen, & Jennings, 1991). These psychologists believe that they are in the best position to make clinical judgments about both psychotropic medication and psychotherapy for a patient.

The debate continues, but it seems likely that many more clinical psychologists in the near future will be prescribing medication to their clients. Whether one is in favor of this development or not, it does assert psychologists' role as complete and independent mental health providers without bowing to the medical establishment (as it has in the past). In fact, it promotes the image of psychologists as competent professionals. It improves access of quality mental health care, particularly in rural areas, where many people in need of medication currently do not receive it because of the scarcity of psychiatrists in those

areas. Also, it increases financial benefits for psychologists, which, in turn, elevates professional esteem (Brentar & McNamara, 1991).

However, since psychologists will be sharing some of the same territory in which psychiatrists have enjoyed exclusivity, working relationships between the two may become strained and difficult for some time. Psychologists already have been prescribing psychotropic medication in federal agencies, and a Department of Defense program has been training psychologists in the prescription of psychotropic medication with positive results (DeLeon, 1993). In fact, the Department of Defense has recently allowed military psychologists to receive such training in nonmilitary hospitals. This is viewed as a big step, because it qualifies more settings for training of nonmilitary psychologists in the future (DeLeon, 1993).

Hospital Privileges

New entitlements have recently allowed for clinical psychologists to practice independently in traditional medical settings such as hospitals. As hospitals have expanded their outpatient and home health care programs, they have enlisted the aid of psychologists (Wiggins, 1992). Psychologists have found themselves working with depressed elderly, patients recovering from serious illness, terminal cases, and trauma and injury cases, in addition to helping with diagnosing disorders and consulting with hospital personnel (Wiggins, 1992). It has been shown that such involvement helps to reduce medical over-use, stress-related disorders, hospital stays, and the risk of malpractice suits (Ludwigsen, 1992). A shift from the disease to a patient education model of health care has occurred in such settings where psychologists have become more active participants in direct patient care. This contrasts to the traditional role of principally carrying out assessment and testing. Specific hospital practice privileges vary from state to state and from site to site. However, the psychologists' position in these settings is firm, notwithstanding the tension of working alongside psychiatrists (Morris, 1993). Medicare and Medicaid coverage have also been extended to psychologists.

Each of the above developments expands the manner in which psychologists conduct their clinical practices, but as we shall see in the following section, they also cause psychologists to have the same dilemma as their medical colleagues. That is, momentous changes are occurring in the way third-party payments (e.g., insurance companies, federal agencies, and employers who pay for medical coverage) will be allocated for these services.

CONVENTIONAL MENTAL HEALTH DELIVERY SYSTEMS

Until recently, psychologists provided clinical, assessment, diagnostic, and psychotherapy services within a free-market economy where the choice of therapeutic modality, number of sessions, choice of practitioner, fee-for-service

arrangements, and third-party reimbursements were left to the discretion of the psychologist/practitioners and their patients. Currently, with enormous pressures to restructure the mental health system to better control the rapid acceleration of health care costs, drastic changes are being considered by the Clinton administration. Many new "cost-control measures" have already been implemented by insurance companies across the country. The proposed reforms are collectively termed "managed health care." The reforms call for the scrutiny and accountability of all health care services so as to control costs and to allow delivery of services to all Americans.

This effort began some years ago. During the mid- to late 1970s, health care costs increased dramatically, and employers searched for less costly ways of providing health care plans to their employees. Therefore, alternatives to the conventional mental health care delivery system were developed. Included are **Health Maintenance Organizations (HMOs)**, **Preferred Provider Organizations (PPOs)**, and **Employee Assistance Programs (EAPs)**.

An HMO is a health care plan that delivers comprehensive care to members for whom the premiums are prepaid by employers. Members of the plan cannot choose their practitioners. Instead, they are serviced by a staff of practitioners recruited by the HMO administration. These practitioners receive fees that are less than their normal private practice rate, but their income is stable regardless of how many patients they see. However, they must service all subscribers regardless of numbers or types of problems presented.

A PPO is a group of independent practitioners that contracts with employers or insurance companies, offering services for less than the usual fee in exchange for a steady flow of patients and prompt payment. However, there are "medical gatekeepers" for such plans who refer patients to professionals and who frequently favor psychiatrists in the plan over psychologists. For subscribers the PPO offers distinct advantages over the HMO. They have the privilege of selecting their own providers, and reviews of cost-effectiveness of treatments are common.

EAPs are legal entities that contract with corporations to provide no-cost assistance to troubled employees, usually those with alcohol or substance abuse. The therapy involved is brief and focuses on behaviors that interfere with job performance (Fishman & Lubetkin, 1991).

MANAGED MENTAL HEALTH CARE DELIVERY

Managed health care delivery will be regulated by a system of "managed competition." Managed competition refers to an offshoot of managed health care, where the health care providers are organized in such a way that they in essence vie or compete for patients, charging low fees. Essentially, what managed mental health care would do is to attempt to equitably distribute quality mental health care to all Americans, while lowering the cost of such services. Thus, organizations such as PPOs and HMOs will regulate place, provider, and cost of services. Individuals and small businesses will combine their resources and buy health care from competing networks, organized by doctors, hospitals,

and insurance companies (which would compete with one another by offering high-quality care at low prices).

Effects on Providers and the Insured

Because the regulation is fostered predominantly by a “cost-containment mentality,” the use of services currently provided will be severely cut. One of the defining characteristics of a managed care company is brief, intermittent therapy, allowing in most cases 20–30 sessions per calendar year. Therapy approaches that are goal-directed, short-term, problem-focused, collaborative, and cost-efficient, including single-session therapy, cognitive therapy, and behavior therapy, are being welcomed into such a system. Although we practice cognitive-behavioral treatments that can be characterized in the above manner, the essential difference in a managed mental health care system would be that the decisions to be made about treatment protocols (e.g., length of intervention, as well as number of sessions allowed per week) will be taken away from us and will be made by the agents of large insurance companies. In other words, there is no private practice within managed care because the therapy is governed by the company, not the therapist. Psychologists are essentially salaried workers, second in status to psychiatrists, who will no longer determine therapy technique, length of treatment, or need for services based on clinical judgment. Rather, economic feasibility and what the insurance company deems allowable will determine treatment.

Further, it may be possible that inclusion of psychological services within a managed competition package of services will be considered based on its “medical offset” effect alone. In other words, psychotherapy services may be included only to the degree to which they actually reduce the use of medical services (Dorken & Cummings, 1988). This is contrary to the notion that we should not only ameliorate the effects that psychological problems have on physical health and economic productivity, but also increase the subjective quality of life of each individual we treat, independent of his or her physical well-being.

Ethical and Legal Issues

The major ethical concern within managed care is the denial of services practitioners deem necessary. “**Utilization reviews**” will be conducted by those who never meet the patient and who often are not licensed mental health professionals, to establish the “medical necessity” of initiating, approving, or continuing treatment. In fact, the client usually must sign a blanket release of any and all information in order to remain eligible for insurance.

Unfortunately, this process often will lead to requesting deeply personal information, thus intruding on the confidentiality of the therapist–patient relationship. Practitioners and patients alike will be required to face both a loss of choice within such a system and a loss of privacy, which usually is the prime vehicle through which meaningful change is achieved.

In practical terms, the above will result in severe restrictions in the number

of sessions for which a patient can be reimbursed per calendar year, the type and modality of treatment, and perhaps most important, the choice of practitioner. This aspect of managed competition may create an environment where ethical dilemmas will abound. For example, the power to deny services will potentially be based more on reducing costs than on improving health care. Another ethical dilemma may arise when clinicians may not be able to secure the care they believe is necessary for patients, in which case opportunities to appeal adverse decisions may not be available or may be too time consuming. Unfortunately, the personnel making such decisions are not always qualified health care professionals. Also, "reasonable care" is seldom explicitly defined by the managed health care company. As it is, practitioners are frequently required to justify, in endless streams of paperwork, treatment decisions to off-site utilization managers to receive authorization for both continuity of treatment and its reimbursement.

Companies may require that practitioners assume legal responsibility for their decisions. In other words, a psychologist who terminates with a patient he or she had been treating because continued payment was denied by the insurance company could be held liable for damages from withholding psychological treatment.

THE FUTURE OF PROFESSIONAL PRACTICE WITHIN A MANAGED MENTAL HEALTH CARE SYSTEM

At this point, the reader have both a sense of urgency to change the above predicaments and a sense helplessness about doing so. Some practitioners and authors have sounded the death knell for clinical practice as we know it, but it is our feeling that any rumors of its demise may be premature. It is all but certain, however, that the proliferation of more organized alternative mental health service delivery plans, within the context of a "managed competition" system in the 1990s, will yield greater modifications of the landscape of clinical practice. The key words of the 1990s will be *managed competition*, *cost containment*, *cost-efficiency*, and *accountability* in all treatment, where, in the latter, providers are required to document the effectiveness of specific techniques with particular patients.

The issues for clinical psychologists are therefore independence versus accountability; quality care versus economics; waste within mental health care delivery versus premature terminations based on arbitrary decisions; and clinical decisions versus financial decisions. It is our contention, as supported by data, that managed health care is here to stay and gaining on private practitioners. It also is our belief, however, that a balance can be struck between sides in each of the above issues, and that psychologists would do best to assert their expertise as members of the health care provider community and to ensure quality care. In our opinion, if psychologists do not accept the system, then HMOs and PPOs will look to other less costly and less qualified providers.

Independent or group practitioners in the 1990s not only will have to compete with mental health workers from other disciplines and orientations,

but also will have to compete with organized plans that can offer treatment for less and that also will have greater financial resources for promotion of their programs. The independent practitioner will have to work harder to get a slice of the mental health market and will have to be more innovative in diversifying services offered. Psychologists will compete with master's-level psychoanalysts, marriage and family therapists, certified social workers, mental health counselors, and certified pastoral counselors. Three possible solutions are (1) accountability, (2) adaptability, and (3) alternative forms of treatment.

Accountability

Being accountable for treatments means that psychologists have an increased responsibility to demonstrate their effectiveness in a systematic manner. Clinicians need a system that substantiates their practice as effective and cost-efficient and that achieves its primary purpose—to help people in the way they believe best. Such a system has been proposed by Kazdin (1993).

Adaptability

Clinicians must begin to develop and devote a good portion of practice and promotional time to becoming involved as service providers in these new systems if they want to develop a viable practice. Furthermore, practitioners should be involved in and adapt to such programs so as to ensure continued quality care. Such adaptability must be a key ingredient in the growth and maintenance of an independent practice.

Alternative Treatments

To compete within a managed competition market, psychologists should, as mentioned above, diversify the types of treatments currently offered. For example, if cost-effectiveness must be demonstrated, perhaps group, rather than individual, therapy with short-term, standardized treatment programs shown to be clinically effective should be employed more often. This would maximize therapist time and reduce costs. If this type of system works, psychologists would do well to formulate such protocols for the more commonly treated mental disorders.

SUMMARY

In summary, the keys to a successful private practice of clinical psychology within a system of managed competition are accountability, adaptability, and alternative forms of treatment. Astute clinicians with their minds on successfully ameliorating the problems they have been trained to treat will (1) become accountable for these treatments by producing empirical support to justify

their application; (2) adapt to managed competition by establishing relationships with HMOs, PPOS, EAPS, and the like; (3) market himself or herself with at least one specialty area, and be trained in time-limited, effective treatments; and (4) emphasize alternative treatments or alternative modalities of treatments (e.g., groups), maximizing clinician efficiency and keeping costs down.

STUDY QUESTIONS

1. What minimal requirements must be met in most states before a clinical psychologist can establish a private practice? What are the advantages of the “waiting period” before independent practice?
2. The authors recommend that new clinicians initially start a part-time, rather than full-time, practice. Discuss the reasons for this recommendation.
3. How do financial considerations influence referrals to new practitioners?
4. Why would new clinicians want to present themselves as generalists? Specialists? Argue the pros and cons of each view.
5. What are the models by which clinicians can structure their private practice? What are the advantages and disadvantages of each model?
6. Discuss some of the difficulties and conflicts a new clinician may encounter when setting fees for professional service. How does a clinician decide what fees are appropriate?
7. What information should be included in an “informed consent” contract? Discuss the importance of this contract both professionally and in terms of the therapist–client relationship.
8. Identify the five most effective marketing strategies reviewed in the chapter. What can each strategy accomplish?
9. Define “burnout.” What are some of its causes? How does it affect the personal and professional life of a clinician? What precautions can be taken to protect its occurrence?
10. A discussion of prescription privileges for psychologists is provided in this chapter. What is your opinion about these privileges being offered to future psychologists?
11. How might hospital privileges for psychologists affect patient care? What are some of the difficulties encountered by psychologists in hospital settings?
12. Describe the primary characteristics of “managed health care.” How has it affected delivery of mental health services?
13. What are HMOs? PPOs? EAPs?
14. What is “managed competition”? How does managed competition lower fees?
15. Discuss the ethical and legal concerns raised by managed care.
16. How will the changes in reimbursement affect the practice of clinical psychologists? What solutions are offered in this chapter?

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CHAPTER 13

Psychiatric Hospitals

KIM T. MUESER and JAMES D. HERBERT

INTRODUCTION

Clinical psychologists are most often employed in one (or a combination) of the following three settings: private practice, a university or college, or a psychiatric hospital. Many psychiatric hospitals are affiliated with a medical school, so that work in these settings provides opportunities to psychologists who are interested in research and pursuing careers in academia. However, there are a number of differences between psychiatric hospitals and other settings in terms of the roles played by psychologists, their relationship to other professionals, and entry into academia. In this chapter, we describe the nature of psychiatric settings, followed by a discussion of the different activities performed by psychologists in psychiatric hospitals. We then consider several professional issues relevant to work in psychiatric hospitals, and conclude with a look at the future of psychologists in psychiatric settings.

DESCRIPTION OF PSYCHIATRIC SETTINGS

There is a wide range of psychiatric settings in which psychologists may work. Some psychiatric settings are relatively small units (e.g., less than 30 beds) that are located within a general hospital and provide mainly temporary care (e.g., treatment of psychiatric emergencies, very short-term treatment, and discharge or transfer). With the trend toward increased specialization in the treatment of medical conditions, however, many psychiatric settings are now free-standing psychiatric hospitals with the capacity to treat numerous patients.

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

For example, it is common for a psychiatric hospital to have at least 50 beds devoted to the treatment of inpatients, with as many as several hundred inpatient beds in some hospitals. In addition, most psychiatric hospitals provide outpatient treatment to an equal or greater number of patients. Thus, psychiatric hospitals are often responsible for providing comprehensive care that includes both inpatient and outpatient services for the most serious disorders, such as schizophrenia and manic-depressive illness, as well as outpatient care for less debilitating disorders that can be treated in the community, such as major depression, anxiety disorders, most personality disorders, and attention-deficit/hyperactivity disorder in children. Furthermore, many psychiatric hospitals have specialized inpatient and outpatient treatment programs for substance abuse disorders, which are the single most common form of psychiatric disorder in the United States with a lifetime prevalence of approximately 16.7% in the general population (Regier et al., 1990).

Three broad types of psychiatric hospitals can be identified: **private hospitals** that chiefly serve patients with ample economic means or generous health insurance, **public hospitals** that provide time-limited inpatient treatment (e.g., 2–6 weeks) and extended outpatient treatment, and **state hospitals** that specialize in the long-term inpatient care of patients with treatment-refractory psychiatric disorders. There are a few private psychiatric hospitals that provide long-term inpatient treatment of chronic psychiatric illnesses, but private hospitals more often cater to disorders that require briefer durations of inpatient treatment (e.g., major depression), and many such hospitals specialize in the treatment of specific disorders (e.g., substance abuse) or populations (e.g., adolescents). By their very nature, most public psychiatric hospitals treat a wide variety of disorders in patients whose economic resources may range from low to high. Because of the exorbitant costs of private long-term inpatient treatment (upward of \$100,000 per year), most patients with treatment-refractory cases of serious psychiatric illness receive care in state psychiatric hospitals. Although the number of patients in state hospitals has dwindled since the introduction of psychotropic medications in the 1950s and the ensuing deinstitutionalization movement over the following 20 years, state hospitals continue to play an important role for 5 to 10% of the most seriously ill schizophrenic patients, and a handful of other grossly impaired psychiatric patients. Psychologists have important roles to play in each of these types of psychiatric settings.

There are no precise data on exactly how many psychologists work in psychiatric settings. We can begin to get an idea, however, from a major survey of 60,596 American psychologists conducted in 1989 by the National Science Foundation. This survey found that 12.5% of psychologists spend the majority of their time in hospitals and clinics. Although most of these settings are primarily psychiatric in nature, some nonpsychiatric medical settings are included as well. In addition, 43.6% of psychologists identified their primary setting as an educational institution. Although many of these are traditional colleges or universities, this figure also includes those psychologists working in psychiatry departments of medical schools. It is important to keep in mind that these figures reflect psychologists' *primary* work settings, and do not include those who work part-time in psychiatric hospitals. Thus, although precise numbers are unavailable, substantial numbers of clinical psychologists identify their primary work settings as psychiatric in nature.

ROLES OF PSYCHOLOGISTS IN PSYCHIATRIC SETTINGS

Given the diversity of psychiatric settings, it is not surprising that psychologists perform numerous activities in psychiatric hospitals. The roles of the psychologist can be grouped into four broad categories: clinical, research, administrative, and teaching/supervision. With the exception of psychological testing (e.g., the administration of intelligence or personality tests), none of the activities performed by psychologists is entirely unique to their own discipline. In many settings, for example, psychotherapy is performed by psychiatrists, nurses, or social workers, as well as psychologists. Although the roles played by psychologists tend to overlap with the roles of other mental health professionals, psychologists bring a unique perspective to their activities by virtue of several aspects of their training. These include their knowledge of basic psychological theory and research methods (e.g., theories of social psychology, experimental design, and research), their extensive training in nonpharmacological assessment and intervention methods, and perhaps most important, the critical thinking abilities and healthy skepticism that stem from the formal research training that is a requirement for attaining an advanced degree in psychology (e.g., M.A., Psy.D., Ph.D.). Thus, although most of the activities psychologists perform in psychiatric hospitals may not be unique, the overall perspective on and approach to these activities is. The various activities psychologists perform in psychiatric settings are described below and summarized in Table 13-1.

Clinical

Provision of professional services is the single most common activity psychologists engage in, with 46.4% of psychologists identifying service delivery as their primary work activity (National Science Foundation, 1989). Indeed, most psychologists in psychiatric settings spend the majority of their time engaged in clinical work of one sort or another. **Clinical work** refers to the direct provision of psychological services to patients and their families. Such work includes

Table 13-1. Roles of Psychologists in Psychiatric Settings

Role	Typical activities and responsibilities
Clinician	Crisis intervention Psychotherapy (individual, family, group) Psychological testing Consultation
Researcher	Principal investigator or collaborator on research studies Consultant on methodological and statistical issues
Teacher/Supervisor	Instructor for small, clinically oriented seminars Clinical supervision (individual or group)
Administrator	Management of clinical or training programs Serving on or chairing hospital committees or divisions Utilization review

crisis intervention; individual, family, and group psychotherapy; psychological testing; and consultation.

CRISIS INTERVENTION. **Crisis intervention** is common in psychiatric settings. Most patients in psychiatric hospitals, regardless of diagnosis, are in acute distress, at least at the time of admission. Depressed patients are often admitted because of an imminent risk of suicide or because of a suicide attempt. Patients in a manic episode are admitted when their behavior becomes threatening either to themselves or to others. Chronic psychiatric patients, such as those with diagnoses of either schizophrenia or schizoaffective disorder, enter the hospital during an acute symptom exacerbation, when florid symptoms (e.g., auditory hallucinations or paranoid delusions) severely limit their ability to function in the community. Children and adolescents are hospitalized when their problems exceed the coping resources of their family, such as when a child sets fires or an adolescent develops a substance abuse disorder. In each of these cases, the psychologist must be able to respond quickly to the crisis and take steps, along with other members of the inpatient treatment team, to contain potentially dangerous behaviors and limit their impact on family members. Crisis intervention for many psychiatric inpatients includes **pharmacological management**, such as the administration of minor tranquilizers for extreme irritability and agitation. Since the psychiatrist often has his or her hands full overseeing the pharmacological treatment of patients, the other aspects of crisis management often fall on the psychologist.

PSYCHOTHERAPY. In addition to crisis intervention, many psychologists in psychiatric settings engage in more traditional forms of psychotherapy. Almost all psychiatric inpatient programs include some form of psychotherapy as part of the treatment plan for all patients. Although psychiatrists sometimes take primary responsibility for psychotherapy, the rise in popularity of pharmacological interventions and the ever-increasing number of **psychotropic agents** have had the effect of requiring psychiatrists to spend an increasing amount of time in the medical management of patients. In addition, several short-term, inpatient psychotherapeutic programs for various forms of psychopathology and social disability have recently been developed.

For example, Michael Thase and colleagues at the University of Pittsburgh School of Medicine have developed a cognitive group therapy program for depressed inpatients (Thase, Bowler, & Harden, 1991; Thase & Wright, 1991). Similarly, for over 5 years the first author of this chapter (K.T.M.) and his colleagues have provided a brief (2 to 3 weeks) social skills training program for acutely ill inpatients hospitalized at The Medical College of Pennsylvania at Eastern Pennsylvania Psychiatric Institute (Douglas & Mueser, 1990; Mueser, Levine, Bellack, Douglas, & Brady, 1990). Developments such as these have given psychologists increasing prominence as the primary psychotherapists in many psychiatric settings.

The nature of the psychotherapy provided to patients varies widely across settings. **Individual psychotherapy** is almost ubiquitous in outpatient settings, and is common in inpatient settings as well. **Group therapy** is common in both outpatient and inpatient settings, although the nature of the groups tends to

differ. Outpatient groups are often centered around a certain theme, such as overcoming an eating disorder or losing weight. In some cases, the group meets for a finite period of time, and the same contingent of participants completes the entire group. Because most inpatient settings include patients with a variety of problems who are admitted and discharged at different times, inpatient groups tend to be broader in focus and include a constantly changing mix of participants (Brabender & Fallon, 1993). Although **family therapy** is common in some outpatient settings, it is particularly common in inpatient settings. The crisis nature of inpatient hospitalization tends to mobilize families into action and make them more open to consultation with a psychotherapist than they otherwise might be.

Despite the diversity in the forms of psychotherapy provided in psychiatric settings, there are several increasingly common themes. First, psychotherapy is rarely administered in a "pure" form, especially in inpatient settings, but is instead viewed as a component of a multifaceted intervention effort that is likely to include pharmacotherapy, various activity therapies (e.g., occupational, movement, or music therapy), and **milieu therapy** (the idea that being part of the structure of a psychiatric unit is itself therapeutic). Second, psychotherapy with inpatients tends to be relatively short-term and problem focused. Most stays in psychiatric inpatient units now last only 2 to 4 weeks. Such a time frame does not permit extensive exploration of patients' personalities, but instead demands that the most problematic issues be addressed as directly and efficiently as possible. Various forms of behavior therapy have traditionally been relatively short-term. Short-term psychodynamic therapies (e.g., Strupp & Binder, 1984) are more suitable to psychiatric inpatient settings than traditional psychoanalytic psychotherapy. Finally, theoretical purity is sacrificed for technical eclecticism. The exigencies of psychotherapy with acutely disturbed patients demand that the psychologist be flexible and use whatever means work, even if that means borrowing strategies outside of one's own theoretical persuasion (Lazarus, 1981).

PSYCHOLOGICAL TESTING. Historically, one of the principal functions of psychologists in psychiatric settings was to administer and interpret psychological tests. In fact, the development of clinical psychology as a discipline was due in part to the need for psychological testing of large numbers of soldiers during both World Wars. Although a few psychiatrists may develop an interest in some form of psychological testing, the area is almost solely the unique purview of clinical psychologists.

Although the overall frequency of psychological testing appears to be on the decline as psychologists take on other professional roles (Keddy & Piotrowski, 1992), the frequency with which testing is conducted and the nature of the instruments used vary widely across settings. In some settings, all patients receive some standard battery of tests. More commonly, the psychiatrist or the treatment team as a whole refers patients for psychological testing in order to address one or more specific issues. In such cases, it is important that the psychologist work with the referring party to clarify as much as possible the specific question being asked. Otherwise, miscommunications and wasted time may result. For example, some psychiatrists occasionally refer patients for

testing in the hospital with a request such as "Please give a Rorschach to describe the patient's personality." In these cases, it is necessary to obtain more information from the referring party before proceeding in order to clarify precisely what prompted the request for testing. For example, one request to "describe the patient's personality" became, after consultation, "Does this patient have a specific personality *disorder*, and what sort of outpatient psychotherapeutic follow-up is most appropriate?" We also make it clear that although we are quite willing to discuss various testing instruments and their uses, we as psychologists will make the final decision as to the specific tests to be administered to address the referral question. Such clarification increases the likelihood that the psychologist's efforts will have a positive impact on the patient's treatment plan.

CONSULTATION. A final clinical function of psychologists in psychiatric settings is **consultation**. Consultation refers to working with another professional (the consultee) in order to improve or assist the consultee's own work with patients (Alpert & Spencer, 1986). Consultation may or may not involve direct contact with patients. Psychological testing is a form of consultation, since the psychologist in this role is acting as a consultant to the treatment team by exercising his or her expertise. One of the most common forms of consultation psychologists provide in psychiatric settings is establishing and directing structured environmental interventions. For example, psychologists may use their knowledge of learning principles to design a token economy for an entire inpatient unit. Patients on an adolescent unit may earn poker chips for attending activities, completion of appropriate grooming, constructive engagement with peers, and so on. These chips may then be exchanged for privileges such as recreational activities or passes off of the unit. Alternatively, the psychologist may be called in to set up a program for an individual patient whose behavior is particularly difficult to control. For example, psychologists in some settings are frequently consulted to design and supervise the implementation of **exposure** and **response prevention** programs (a form of behavior therapy involving repeated exposure to feared stimuli while blocking escape behaviors) for inpatients with obsessive-compulsive disorder.

Perhaps more than any other clinical activity, consultation requires keen interpersonal skills on the part of the clinical psychologist. It is imperative that professional boundaries be recognized and respected. Telling a psychiatrist that he or she should prescribe a specific medication for a depressed patient is less likely to result in the desired outcome than suggesting that a patient's symptoms are such that a course of antidepressant medication be considered. In our experience, if the psychiatrist feels comfortable that we are sensitive to turf issues, he or she is much more open to our suggestions and recommendations, even to the point of including us in specific decisions about medications.

Astute interpersonal skills are also needed when designing behavioral programs, such as those described above. Although these programs may be designed by a psychologist, it often falls on others such as nurses and psychiatric aids to implement them. In many settings, nurses are already overworked and may have little patience for elaborate behavioral programs. If such a program is to stand any chance of success, the psychologist must work closely with those

who will implement it in order to make it feasible from the perspective of the provider.

PSYCHOLOGIST'S ROLE IN THE TREATMENT TEAM The clinical activities of the psychologist in the hospital involve functioning at some level as a member of a treatment team, with members of other professions such as psychiatry, nursing, and social work (see Table 13-2). In some hospitals, psychologists function as members of interdisciplinary treatment teams responsible for coordinating the patient's inpatient treatment. In other hospitals, psychologists serve mainly as specialists who provide services throughout the hospital, depending on their particular area of expertise.

Teaching and Supervision

Following the direct provision of clinical services, the next most common activity of psychologists working in psychiatric hospitals is teaching and supervision, with 22.2% of the psychologists in the National Science Foundation survey stating that this was their *primary* activity. Because of their unique training in both a wide range of psychotherapeutic interventions and research methodology, psychologists have much to offer as teachers and supervisors in psychiatric settings. There are several differences between the teaching responsibilities of psychologists employed by hospitals and those working in university settings, including the nature of the students and their level of training, the teaching topics, and the methods of instruction.

CHARACTERISTICS OF STUDENTS. One of the most important distinctions between teaching in a hospital setting and teaching in a more traditional university setting (e.g., in a department of psychology) is the age and background of the students. Undergraduates who take courses in psychology in colleges and universities tend to be young (17–24 years) and in most cases have not yet established a clear professional identity (e.g., psychologist, social worker). Graduate students in clinical psychology also tend to be relatively young (21–30 years), although they have chosen clinical psychology as their profession. In contrast, the students whom psychologists teach and supervise in psychiatric settings are usually older (25–45 years) and are not limited to the profession of psychology, but typically include other professions as well, such as psychiatry, social work, nursing, and therapeutic activities.

**Table 13-2. Members of
the Interdisciplinary Treatment Team**

Psychiatrist
Psychologist
Social worker
Nurse
Activities (recreational), art, or music therapist

Many of the students whom psychologists teach or supervise in the hospital are at advanced stages of their professional training and are within 1 to 3 years of receiving their formal certification. For example, to receive a Ph.D. in clinical psychology, most graduate programs require the student to complete a 1-year psychology internship training program that consists of intensive clinical training in a hospital or clinic setting. Similarly, formal certification in psychiatry requires the physician to complete an approved 4-year residency program in a teaching hospital. Direct clinical experiences are also requirements of training programs in social work and psychiatric nursing. Finally, it is common for psychologists to teach and supervise other professionals in the psychiatric setting who have already completed their formal training but wish to expand their repertoire of clinical skills. For example, the social workers in one psychiatric hospital in which we worked expressed an interest and received training in behavioral family therapy for psychiatric patients (Mueser & Glynn, 1995), which was one of our specialty areas. Thus, the "students" who are taught by psychologists in a hospital setting tend to be older, more established in their profession, and from a broader range of different professions than the students in university settings.

TEACHING TOPICS. In contrast to teaching undergraduate or graduate students, where a greater emphasis is placed on theory development and teaching the building blocks of scientific inquiry (e.g., experimental design, the philosophy of "hypothesis testing"), teaching in the hospital setting is usually more pragmatic with a focus on applied topics that have immediate relevance for clinical work or research. Although theoretical considerations may be given some attention, they are secondary in importance to teaching that has clear and immediate applications.

The preponderance of teaching in psychiatric hospitals is aimed at training in specific methods of clinical assessment and intervention. Examples of the primary teaching roles for psychologists in hospitals include the provision of training in group and family therapy, clinical supervision of psychology and psychiatric trainees in the principles of exposure-based psychotherapy for anxiety disorders, and the education of on-line nurses and psychiatric aids about the behavioral management of disruptive inpatient behaviors (e.g., verbal aggressiveness, excessive dependency, medication noncompliance, or frequent requests for additional medication). In psychiatric hospitals with an academic affiliation and a strong research focus, psychologists may also be involved in teaching basic statistical methods and the use of statistical software packages. Such courses on research methodology generally have two main foci. First, they are designed to enable the student (chiefly, psychiatry residents) to read and critique research articles, including the technical "Results" section of articles. Second, these courses provide a primer to those persons interested in becoming more involved in research, either as a sideline to their clinical activities or as a primary career focus.

INSTRUCTIONAL METHODS. Consistent with the greater focus on teaching applied methods in psychiatric hospitals, the methods of instruction used place less emphasis on didactic, classroom-based approaches in favor of more indi-

vidual or small group training that is highly interactive and tailored to the specific needs of the students. Unlike most university classes, it is rare for a psychologist working in a psychiatric hospital to teach a group of more than 8 to 10 students, and classes of 3 to 6 students are relatively common. Similarly, formal "testing" (e.g., quizzes, reports) to evaluate the extent of learning of students in psychiatric hospitals is rarely, if ever, conducted. Rather, the true "test" of learning is measured by the student's ability to apply what he or she has learned, with additional teaching or supervision provided on an as-needed basis. One positive consequence of the low priority placed on giving tests, assigning papers, and grading is that teaching in psychiatric hospitals tends to occur in a more relaxed atmosphere, with students freely asking questions, admitting when they do not know something, and seeking additional help when they feel it is needed. However, because attendance at many small group classes offered in the hospital is often voluntary, and because there are many other demands on participants' time, the psychologist must make special efforts to ensure that the material taught is both highly relevant and interesting to the participants.

Much of the teaching psychologists perform in psychiatric hospitals occurs in the context of clinical supervision for psychotherapy. Supervision is usually conducted either individually or in small groups of two to three persons, with the major focus on formulating cases, planning treatment, monitoring progress in therapy, and managing therapeutic difficulties and impasses. Different instructional methods are used when providing clinical supervision, depending on the supervisor's personal style and the nature of the clinical activity. Often, trainees will audiotape or videotape treatment sessions and review these sessions with their supervisor. Some supervisors will attend therapy groups conducted by trainees or observe sessions through a one-way mirror. Role playing (i.e., reenacting segments of a therapy session to evaluate problem areas or practice new clinical skills) during the supervisory sessions is another common teaching method. Frequently, the trainee will be given book chapters and articles throughout the course of supervision to fill in specific gaps in knowledge or to address special problems. The common element across the many different methods employed by the psychologist performing clinical supervision in the hospital is the concern for practical training that can be immediately applied, and whose effects can be evaluated over the short- and long-term course of the therapeutic intervention. In this way, the rewards of clinical supervision include both observing trainees develop better clinical skills and being involved in improving psychopathology and the quality of life of the patients who receive treatment.

Research

A smaller, although significant (11.5%), number of psychologists identify research as the *primary* work activity in the psychiatric hospital (National Science Foundation, 1989). Because of the ready access to patients, research in hospitals tends to be more applied than theoretical, with an emphasis on larger scale collaborative projects that include a range of different mental health

professionals. For example, from 1984 to 1992, the Treatment Strategies in Schizophrenia (TSS) study (Keith, Bellack, Frances, Mance, & Matthews 1989; Schooler, Keith, Severe, & Matthews, 1989) was completed, with five hospitals providing long-term treatment to over 300 patients. The TSS study, which was funded by the National Institute of Mental Health, was aimed at comparing three different strategies for providing pharmacological treatment of schizophrenia and two different methods for working with the families of patients with this serious illness. At each hospital, upward of 10 professionals were involved in the study, either providing direct clinical service or conducting research assessments. The collaborators on the project included psychologists, psychiatrists, psychiatric nurses, and social workers.

There are both advantages and disadvantages associated with conducting research in psychiatric settings, as summarized in Table 13-3. In many psychiatric hospitals, it is possible for a psychologist to devote more time to research than in a university setting, because of the decreased (or in some cases negligible) teaching responsibilities. In addition, the logistics of conducting research in a psychiatric hospital are often easier to master than in a university, especially research involving clinical populations. To conduct much clinical research in the university, liaisons with appropriate hospitals must be arranged, research privileges must be secured, and the psychologist must travel between the hospital and the university to collect his or her data. None of these obstacles needs to be overcome if the psychologist works directly in the hospital. Furthermore, **Institutional Review Boards** (“IRBs”; the committee of persons who review research proposals to ensure that the rights of human subjects are not violated) in hospitals are usually more familiar with the difficulties of conducting applied clinical research than the IRBs in universities, and hence may erect fewer obstacles to the psychologist undertaking a research project.

A disadvantage of conducting research in the psychiatric setting is the relative unavailability of graduate students in clinical psychology. In university settings, graduate students typically serve as research assistants to the faculty, offering their time and labor as part of their academic training. Most university psychology departments with clinical programs are not closely affiliated with psychiatry departments or hospitals, and thus graduate students tend to have a low presence in these hospitals. When graduate students are present, their role tends to be more clinically and less research focused (e.g., doing a practicum in psychological assessment, completing a predoctoral internship program). The

Table 13-3. Advantages and Disadvantages of Conducting Research in Psychiatric Hospitals

Advantages	Disadvantages
Good access to clinical research subjects	Poor access to “normal” subjects
More time to devote to research	Lower availability of graduate students (as
More lenient Institutional Review Boards who approve research protocols	low-cost labor and valuable collaborators in research)
Opportunity for multidisciplinary, collaborative research	Difficulty conducting research without external funding

upshot is that there is a greater emphasis in psychiatric hospitals on obtaining external funding for research so that the necessary staff can be hired to perform research-related activities. However, an advantage is that when psychologists are successful in obtaining such external funding, they have the assurance of knowing that staff members whom they hire are committed to their research alone. This is in contrast to graduate students, who must juggle research responsibilities with a host of other commitments, such as classes, tests, qualifying exams, clinical practica, the student's own research, and the writing of M.A. theses and Ph.D. or Psy.D. dissertations.

A final consideration is that psychologists who work in psychiatric hospitals are often a valued commodity for their expertise in statistics and experimental design, and frequently serve as consultants to psychiatrists on research projects. This involvement may range from conducting informal seminars and answering brief questions to active involvement as a co-investigator or co-principal investigator on a funded research project. The strong training in research methods that is a requirement of most graduate programs in clinical psychology serves to increase the unique contributions psychologists can make to research in psychiatric settings.

Administration

One of the fastest growing activities of psychologists in applied settings of all kinds is administration. According to the National Science Foundation survey described above, 11.6% of psychologists identify administration as the primary focus of their work. This figure does not include the substantial number of psychologists for whom administrative duties form a significant, although secondary, part of their jobs. Administration in this context refers to the management of academic or clinical programs, including formulating and executing policy decisions. Some examples of administrative duties of psychologists in psychiatric settings include directing clinics or clinical services, directing clinical internship programs, performing utilization reviews (i.e., reviewing the appropriateness of services provided to patients and the adequacy of medical records), or serving as the head of a psychology division or service. Although the top reaches of the administrative hierarchy in psychiatric hospitals (e.g., department chairperson) are almost always held by psychiatrists, psychologists have recently risen to the level of vice chairperson in some psychiatry departments of medical schools, and some psychologists are even the heads of private or state psychiatric hospitals.

There are several reasons why psychologists have found themselves playing increasing roles as administrators. First, clinical psychologists' interpersonal skills and understanding of group dynamics provide a foundation for effective administration. Second, psychologists' increasing scope of practice has blurred the distinction between psychology and psychiatry. Consequently, administrative appointments in many settings are more likely to be made according to which individual is best for the job, with less emphasis on professional discipline. Finally, the salaries of psychologists are typically lower than the salaries of psychiatrists at an equivalent level or academic rank. Because

most administrative duties do not require a medical degree, it costs an institution less to have a psychologist perform many administrative duties than to have psychiatrists do them.

Psychologists often have mixed feelings about administrative duties. Advancement in psychiatric settings, whether one's work is primarily clinical, research, or consultative, typically brings increased administrative responsibilities. These duties often seem cancerous: They gradually devour increasing amounts of time, leaving less time and energy for the work that resulted in the appointment in the first place. Not surprisingly, successful administrators are masters of time management. On the other hand, administration often provides exciting opportunities to build new programs or develop existing ones, permitting the psychologist to be quite creative and resourceful. In addition, high caliber administration posts in psychiatric hospitals can be extremely lucrative, commanding salaries considerably greater than either psychiatrists or psychologists engaged in clinical work, teaching, or research typically earn. Regardless of one's personal feelings about it, administration will likely continue to be an increasing part of the job of psychologists in psychiatric hospitals.

PROFESSIONAL ISSUES

Several of professional issues are pertinent to psychiatric hospitals as an employment setting for the clinical psychologist, including the relationship of psychology to psychiatry within the hospital, the dominance of the medical model, and various academic issues.

Psychology within Psychiatry Departments

As might be expected, psychiatrists tend to have more administrative power than psychologists in psychiatric hospitals. Despite this fact, the relationship between psychology and psychiatry differs widely across institutions, and can have an important impact on the overall quality of the working environment and the potential for the psychologist in the hospital. In some psychiatric hospitals, a rigid line separates the roles of psychologists and psychiatrists, with relatively circumscribed duties relegated to the psychologist, such as testing, group psychotherapy, or consultations for the management of difficult patient behaviors. In other hospitals, the roles of psychologists are less clearly demarcated, and they may fulfill a wide range of functions such as participating in interdisciplinary treatment teams and case conferences, providing a variety of psychotherapeutic treatments, and conducting supervision and research.

Ultimately, the relationship between psychology and psychiatry in the hospital is a reflection of both the history of the particular hospital, and the attitudes, beliefs, and expectations of the psychiatrists and psychologists who are employed in the institution. For example, psychologists who believe that their main professional strengths lie in the areas of testing and group or family supervision will enjoy a positive relationship with psychiatry in hospitals where psychiatrists share the same beliefs. A negative or tense relationship

between psychology and psychiatry often occurs when psychologists have *higher* expectations and psychiatrists have *lower* expectations for what psychologists are capable. Of course, attitudes, beliefs, and expectations are subject to change. Nevertheless, it is important for a psychologist considering an appointment in a psychiatric setting to assess the match between his or her own professional identity as it relates to relations between psychology and psychiatry in that setting.

Despite the possibility for tension and conflict, a very satisfactory and mutually beneficial relationship exists between psychology and psychiatry in many hospitals. The best way for the psychologist to assess this relationship is through open discussions with psychiatrists and other psychologists who work at the hospital. By clarifying the roles and expectations of psychologists in the hospital, the psychologist can evaluate whether the affective climate of the working conditions and type of work performed meet his or her needs.

Medical Model

Psychiatry is a branch of medicine. However, the lay public often mixes up psychiatry and psychology and views both as distinct from the rest of medicine. Despite this confusion and the great deal of overlap in the activities of psychologists and psychiatrists, each discipline has its roots in very different traditions, a fact that affects the way professionals in each field are trained and how they practice (Kingsbury, 1987).

Consider, for example, the way in which **abnormal behavior** is classified. As a branch of medicine, psychiatry views abnormal behavior within the so-called **medical model**. The medical model assumes that psychiatric disorders are analogous to medical diseases (see Table 13-4). Abnormal behavior is thought to cluster naturally into discrete **syndromes** of co-occurring symptoms. These syndromes are assumed to share a common course and a common underlying etiology. Abnormal behavior is “diagnosed” according to a categorical classification scheme, and decisions about what treatment is indicated follow from this diagnosis. Historically, the search for the etiology of psychiatric disorders or diseases has centered within the individual, focusing either on biological or unconscious psychoanalytic variables and processes.

Clinical psychology, in contrast, is rooted historically in philosophy, and has been heavily shaped by basic research in personality, social psychology, and animal learning. Psychologists have criticized the medical model as applied to aberrations in behavior on several grounds. Some have pointed out that once a

Table 13-4. Assumptions of the “Medical Model”

Psychiatric disorders are analogous to medical diseases
Causes of psychopathology are centered primarily within the individual (e.g., biological abnormalities, unconscious psychodynamic conflict)
Abnormal behavior “clusters” into discrete syndromes, which share a common course and etiology
Categorical rather than continuous classification system

disorder is labeled, it tends to become reified, and the label itself is given as the cause of the disorder (Davison & Neale, 1986). For example, if an individual describes hallucinations and paranoid delusions, he or she is labeled as schizophrenic. When asked why the patient is hallucinating or having delusions, the answer becomes “because he has schizophrenia.” Another criticism is that focusing on putative internal causes of abnormal behavior neglects important **sociocultural factors** (Szasz, 1961). A third line of criticism asserts that variations in behavior do not fall neatly into discrete categories, but instead are continuous (Eysenck, 1986). Finally, psychologists have questioned the wisdom of considering certain problems as “disorders” (Garfield, 1986; Schacht & Nathan, 1977). For example, the official psychiatric nomenclature, the **Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)** (American Psychiatric Association, 1994), includes difficulties in reading or performing arithmetic, excessive dependency on others, and pathological gambling as “mental disorders.” Some psychologists believe that although such phenomena are indeed problematic, conceptualizing them as mental disorders unnecessarily pathologizes them.

The point here is not to suggest that psychiatrists are “wrong” in their adoption of the medical model. Indeed, defenders of the model can give sound counterarguments to each of the points raised above. Moreover, not all psychiatrists adhere strongly to the medical model, and not all psychologists find it problematic. Rather, our point is simply that psychologists who work in psychiatric settings must be cognizant of the differences in the way the two disciplines tend to conceptualize their subject matter. Since psychiatrists are positioned at the top of the power hierarchy of almost all psychiatric hospitals, the structure of clinical services provided is likely to be influenced by the medical model. In our experience, psychologists who are successful working in psychiatric settings have learned to “speak the language” of their psychiatric colleagues, while retaining their unique perspective derived from their training in psychology. For example, thorough working knowledge of the DSM-IV is imperative for the psychologist working in a psychiatric setting. One need not adopt all of the assumptions of the medical model in order to make good use of the DSM-IV. Psychologists are more likely to have a favorable impact on their psychiatric colleagues by promoting their ideas within the context of the conventional diagnostic system rather than rejecting the system wholesale.

Academic Issues

From the perspective of entry into academia and academic appointments, there are several important differences between psychiatric hospitals affiliated with medical schools and departments of psychology in universities or colleges, as summarized in Table 13-5. Perhaps the most important difference between the two settings is the issue of tenure for academic appointments. **Tenure** refers to a formal commitment on the part of the university or medical school to continue to employ an individual, provided he or she continues to meet the responsibilities of the job (e.g., teaching, serving on committees). Most tenure agreements allow the academic institution leeway to transfer a tenured professor to

another position in the university (including an administrative position) or, during times of extreme fiscal emergency, to terminate the employment of a tenured professor. However, in practice it is rare for a tenured professor to lose his or her job, and for most psychologists tenure represents much sought after job security in academia.

The vast majority of academic appointments in psychology departments at a university (or college) are for **tenure-track** positions. The “tenure-track” refers to the system by which an individual earns tenure by demonstrating excellence in research and teaching over several years on the job. In a typical university, psychologists who land their first academic job are given the rank of **assistant professor of psychology** and have 5 to 7 years to establish competence in their field before they apply for tenure at the same university. The old adage of academia, to “publish or perish,” refers mainly to academic appointments in universities, in which developing a strong publication record (e.g., 10 to 15 publications during the first 5 years of the appointment) is the single most critical factor in determining whether an individual is granted tenure. If the psychologist’s application for tenure is approved by the university, he or she is promoted to the level of **associate professor**, and job security is ensured. Promotion to rank of (full) **professor** in the university can occur anytime from 3 to 10 years after promotion to the associate level, and is determined by the individual demonstrating continued excellence in research and teaching, often resulting in national or international recognition. If the application for tenure is denied, the psychologist must usually apply for jobs at other universities or medical schools, or choose to leave academia.

The tenure system at medical schools, with which most psychiatric hospitals are affiliated, is radically different from the university system described above. Most appointments at medical schools are *not* tenure-track, and therefore provide less potential for job security. Promotion from the level of assistant professor (of psychology/psychiatry) to associate professor in medical schools is determined by demonstrated excellence, but provides no guarantee of job security. In most medical schools, tenure is given only to those individuals who are promoted to the rank of full professor, with relatively few individuals at this level. Although developing a strong publication record is necessary for promotion from associate to full professor, in most medical schools it is also necessary for the psychologist to secure external funding for his or her research by obtaining grants. Although obtaining grants can help psychologists secure tenure at the university, it is a more critical factor in the medical school setting.

Table 13-5. Academic Differences between Medical Schools and Universities or Colleges

Medical school	University/College
Fewer tenure jobs	More tenure jobs
Tenure usually given at (full) <i>professor</i> level	Tenure usually given at <i>associate professor</i> level
More entry positions	Highly competitive
Emphasis on grantsmanship	Emphasis on publishing
More clinical or research work	More classroom teaching

Thus, a first-time academic appointment at the assistant professor level in a university will usually provide a good opportunity over the next several years to earn promotion to the associate level and tenure. In contrast, a first-time appointment to the assistant level in a medical school provides less opportunity for tenure, although promotion to the associate level may actually require less time. As a consequence of this difference, academic appointments at the assistant professor level in departments of psychology at universities are generally more competitive and difficult to obtain than at medical schools. For example, one department of psychology advertising for applicants at the assistant or associate professor level recently received over 140 applications for a single position!

The extreme competitiveness of university jobs makes an academic appointment at a medical school an attractive alternative for many psychologists. Since most academic positions in medical schools are not tenure-track, the number of academic appointments is not as limited by the medical school, and there are consequently more entry-level positions at the assistant professor level. For example, it is common in medical schools for a senior-level psychologist or psychiatrist to obtain a grant that requires hiring a junior-level Ph.D. psychologist to coordinate the research and/or provide clinical service following a specific research protocol. The psychologist who gets this job may be given an appointment of assistant professor. Through this position, the psychologist may develop a track record of publications and apply for his or her own grants. Some psychologists whose first appointments are in medical schools eventually take university positions because of the security provided by tenure. Others prefer to remain in the psychiatric hospital and medical school setting because of the greater access to research subjects and fewer teaching responsibilities. Once a psychologist has established his or her reputation as a researcher who can obtain grants, his or her job security is high at either a university or a medical school, because grants provide indirect fiscal support to the academic institution.

FUTURE TRENDS

There are numerous opportunities for psychologists to work in psychiatric hospitals. In addition to the current demand for well-trained psychologists in psychiatric settings, there are additional reasons to be optimistic that psychology will play an even more important role in the hospital in the future. Furthermore, the issue of **prescription privileges** may also have important implications for the work of psychologists in psychiatric hospitals.

Increasing Role of the Psychologist in Psychiatric Settings

Several trends have developed over the past two decades that suggest a growing role for psychologists in psychiatric hospitals, including the discovery of new pharmacological treatments, the continued trend toward **deinstitutional-**

ization of people with serious psychiatric disorders, and the advent of managed care of psychiatric disorders.

NEW DRUGS. The discovery of the efficacy of **antipsychotic medications** for schizophrenia, **lithium** for manic-depressive illness, and **tricyclic antidepressants** for major depression in the 1950s was heralded as a "revolution" in psychiatry that radically changed the practice of this branch of medicine. Although the discovery of the therapeutic properties of each of these types of medication was serendipitous, it paved the road for systematic research aimed at understanding the physiological and neurochemical mechanisms underlying their effects. Clinical psychopharmacology is no longer driven by the hope that new and effective compounds will be stumbled on, but rather by the synthesis and development of new types of drugs that are designed to affect specific brain systems and neurotransmitters hypothesized to underlie psychopathology. The result is that more effective and less toxic medications are being developed that further improve hitherto treatment-resistant patients.

For example, clozaril (a novel antipsychotic medication) has been demonstrated to significantly improve the symptoms of schizophrenia in patients who are only minimally responsive to other classes of antipsychotic medication (Gratz & Simpson, 1992). Similarly, risperidone (another antipsychotic medication) has been shown to be of comparable clinical efficacy to other antipsychotics for the treatment of schizophrenia while producing significantly fewer unpleasant side effects (e.g., restlessness, mild tremors, dry mouth; Gratz & Simpson, 1992). Prozac (a novel antidepressant) has been demonstrated to be of comparable efficacy to the more conventional tricyclic antidepressants or monoamine oxidase inhibitors for the treatment of depression, while producing only minimal side effects and having much less lethal potential when taken in overdose.

The consequence of the continuing advances in psychopharmacology is that increasing numbers of seriously ill psychiatric patients can be helped by new drugs. However, despite the advances, most patients are not "cured" of their disorders by medications, although many are more prepared to cope with the "real world." Psychologists have already begun to play an increasingly important role in helping to improve the adjustment of seriously ill patients and their families, and it is likely that this role will expand as new and more effective medications are discovered. Since psychiatric settings are often the locus of treatment for patients with serious mental illness, the role of psychologists in these settings can be expected to grow.

DEINSTITUTIONALIZATION. The movement toward treating chronic psychiatric patients in the community began in earnest in the 1960s, spurred by economic and human rights concerns as well as the revolution in psychopharmacology, and has continued up to the present. As the social and emotional problems of severely impaired patients have become more prominent now that these patients are living in the community, recognition has grown of the need for psychotherapeutic approaches intended to remediate deficits and improve quality of life. Psychology as a profession is better equipped to meet these emerging

needs for remediation than psychiatry, which is primarily oriented toward psychopharmacology, or social work, which tends to focus on the coordination of existing services in the community. Psychiatric settings will continue to be a major locus of treatment for individuals with serious mental disorders, with an expanded role for psychologists in organizing and providing state-of-the-art rehabilitation technologies.

MANAGED CARE. As private health insurance companies and public health care entitlement programs have experienced increased difficulty paying for the spiraling costs of medical care, a trend has emerged toward **managed care** as a strategy for containing costs. The essence of the managed care approach is that an individual's treatment is orchestrated by a single group of health care providers, who receive a fixed sum of money for managing the health care of that individual. This arrangement is intended to reward health care providers for limiting the costs of treatment. At the same time, preventive interventions (e.g., prenatal checkups) that may decrease the need for more costly treatments at a later time (e.g., premature births) are encouraged because they are cost-effective. Finally, managed care companies may compete with each other for contracts to provide health care, further lowering costs by reintroducing competition into the health care field (see Chapter 12).

An important characteristic of managed care is the trend toward centralizing treatment. The fewer the number of hospitals and locations in which treatment is provided, the easier it is to coordinate different facets of treatment, such as pharmacological treatment and psychotherapy. Psychologists employed in psychiatric settings stand to be in greater demand with the rise of managed care for two reasons. First, because of the expertise of psychologists in assessment and psychotherapy and the lower cost of employing psychologists compared to psychiatrists, use of psychologists to provide these basic services has become increasingly attractive. Second, psychologists have tremendous potential to contribute to managed care through their expertise in administration and knowledge of overall health care for psychiatric disorders. Although managed care systems for psychiatric disorders tend to be complex and multifaceted, they do not typically require a medical degree to administer. Psychologists are in a good position to coordinate and oversee managed health care for psychiatric patients, which should increase their prominence in psychiatric settings.

Prescription Privileges

If there is a single issue that is at the forefront of current debate about the practice of clinical psychology, it is the question of whether psychologists should be granted the privilege to prescribe psychotropic medications. Although this issue is not the unique concern of psychologists working in psychiatric hospitals, it is of particular interest to them. Psychologists in psychiatric settings tend to work with more patients with relatively severe forms of psychopathology (e.g., schizophrenic and major affective disorders), for whom pharmacotherapy is often a necessary component of treatment. Moreover, psychologists working in psychiatric settings typically have developed close working

relationships with their psychiatric colleagues. It is possible that this close interdisciplinary collaboration will reduce the need for such psychologists to prescribe medications, since it is likely that mechanisms have already been established to provide medications to patients who need them. However, many psychologists in psychiatric settings have become well versed in clinical psychopharmacology, and may be frustrated that they are unable to apply their knowledge and skill directly.

Brentar and McNamara (1991) have reviewed the issue of prescription privileges for psychologists, including the arguments for and against. They note that several other groups of nonphysician health care providers (e.g., dentists, podiatrists, optometrists, nurse practitioners) have obtained limited prescription privileges, and suggest that psychologists may be next in line. Proponents of prescription privileges for psychologists emphasize the lack of access to comprehensive mental health services in rural areas where the number of psychiatrists is very low. They note that most psychotropic medications are in fact prescribed by general practitioners, who have little or no training in the diagnosis and management of psychopathology and only limited knowledge of clinical psychopharmacology. In fact, most medical school curricula include only one course in pharmacology and none in psychopharmacology. Even for patients outside of rural settings, it is argued that prescription privileges for psychologists would result in more cost-efficient mental health services (Welsh, 1992). Along these lines, Fox (1988) has even suggested that failure to grant psychologists prescription privileges constitutes a restriction of free trade. Proponents argue that completion of medical school is not necessary for the effective practice of clinical psychopharmacology, and several alternative curricula for training psychologists to prescribe psychotropic medications have been proposed.

As evident from a perusal of recent issues of the American Psychiatric Association's newsletter, *Psychiatric News*, the psychiatric community has reacted swiftly and almost unanimously to what they view as an inappropriate and dangerous attack by organized psychology on the essence of their professional prerogative. Opponents of prescription privileges are not, however, limited to psychiatrists. Surveys have found that psychologists themselves are divided on the issue (Folen, 1989; Piotrowski & Lubin, 1989). A central thesis against prescription privileges for psychologists is that psychology's traditional focus on psychological and behavioral assessment and intervention strategies would suffer as the focus of treatment shifted toward pharmacotherapy. DeNelsky (1991) argues that the increasing popularity of clinical psychology is due to the public's perception of psychologists as providing nonmedical alternatives to psychiatry. Prescription privileges for psychologists would completely confound the distinction between psychology and psychiatry in the public's eye. Significant changes would be required in training programs, probably extending the time required to obtain the doctorate in clinical psychology (Riley, Elliott, & Thomas, 1992). Malpractice liability insurance premiums for those psychologists who chose to practice pharmacotherapy would undoubtedly skyrocket. In addition, psychology licensure laws in all 50 states, which currently explicitly forbid prescription privileges, would require modification.

The contentious issue of prescription privileges is far from being resolved,

and the next decade is likely to be quite eventful as this issue plays itself out. A great deal of attention is currently focused on a pilot program currently underway under the auspices of the Department of Defense in which four psychologists are being trained to prescribe medications. There is already evidence that pharmaceutical companies are preparing their marketing plans targeting psychologists (DeLeon, 1992). The issue of prescription privileges must be watched closely, as it has the potential to alter dramatically the nature of clinical psychology, especially as it is practiced in psychiatric settings.

SUMMARY

Psychiatric hospitals offer a range of exciting and interesting opportunities to the clinical psychologist. The activities of psychologists working in psychiatric settings include the provision of direct clinical services, teaching and supervision, research, and administration. Many psychologists are involved in all four of these types of activities, providing variety to their day-to-day responsibilities. Several professional issues are important to psychologists considering the prospects of employment in a psychiatric hospital, including the presence of a power hierarchy with psychiatrists above psychologists, the dominance of the medical model of abnormal behavior, and academic differences between medical schools and departments of psychology at universities or colleges. Specifically, entry positions for faculty appointments tend to be more available in medical schools than in universities, but tenure is more difficult to obtain in a medical school. Encouraging trends suggest that the role of psychologists in psychiatric hospitals is growing. As new medications enable more patients to benefit from psychotherapy and the continued deinstitutionalization of seriously ill patients has made their need for psychosocial rehabilitation more apparent, the need for psychologists to work in psychiatric settings continues to expand. Finally, the ongoing debate about prescription privileges for psychologists may further add to the roles and responsibilities of specially trained clinical psychologists in psychiatric hospitals. Psychiatric hospitals are likely to continue to be fruitful settings for clinical psychologists who enjoy working alongside persons from other mental health professions, including psychiatry, social work, and nursing.

STUDY QUESTIONS

1. Describe each of the psychiatric settings in which a psychologist may work. What are their similarities? Differences?
2. Define "crisis intervention." Provide three examples of clinical crises.
3. How has the increased use of psychotropic agents influenced psychotherapeutic practice in psychiatric settings? What recent developments have increased the prominence of psychologists in psychiatric settings?
4. What are the differences in inpatient and outpatient group therapy?
5. Describe the common themes found across the different forms of psychotherapy.
6. What form(s) does psychological consultation take in psychiatric settings? What professional skills are essential to successful consultative relationships?

7. How do teaching and supervision in psychiatric settings differ from teaching and supervision in university settings in terms of students, topics, and teaching methods?
8. Who are the likely collaborators for psychologists conducting research in psychiatric settings? What are the advantages and disadvantages of conducting this type of research? What is an IRB?
9. Provide examples of administrative duties commonly undertaken by psychologists. Why have psychologists played increasing roles in the administration of psychiatry departments? What are some of the drawbacks psychologists have encountered in these roles?
10. When is the relationship between psychiatry and psychology in the hospital most likely to be positive? When is it most likely to be negative?
11. Compare the histories of psychiatry and psychology. How do their roots influence present diagnosis and treatment?
12. What are some of the arguments for and against the medical model of diagnosis and treatment of psychiatric patients?
13. Define "tenure" and "tenure-track." Why is tenure important in academia? How does the tenure system in medical schools differ from that in general university settings?
14. Identify the different job ranks of college professors. Describe the requirements at each level and the usual time frame for promotion.
15. How have deinstitutionalization and the development of new psychotropic medications influenced the role of psychologists in treatment?

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PART V

Clinical Specialties

As clinical psychology continues to develop as a profession and a science, new specialties and activities emerge within the field. Changing client or societal needs may account for the development of some specializations (e.g., forensic psychology), while successful clinical application of research findings has led to new and exciting opportunities in others (e.g., neuropsychology). There is a clear trend toward interdisciplinary research, assessment, and treatment. For example, most behavioral medicine specialists work in consultation with physicians, nurses, social workers, physical therapists, or other health care providers. Forensic psychologists frequently consult with lawyers, psychiatrists, and police officers and serve as expert witnesses in court proceedings.

In Chapter 14, Anthony J. Goreczny provides an introduction to the specialty of behavioral medicine. He describes a range of clinical problems commonly encountered by behavioral medicine practitioners, including headaches, chronic pain, adherence to medical regimens, chronic illness, smoking cessation, obesity, AIDS prevention, and psychophysiological disorders. Goreczny also considers the role of the clinical psychologist in health promotion and health care policy. Case studies are featured throughout the chapter to increase the reader's understanding of relevant medical terminology, assessment techniques, and clinical interventions within each problem area.

In Chapter 15, Michael D. Franzen introduces the reader to the relatively new specialty of clinical neuropsychology and its interdisciplinary approach to patient care. The author outlines a variety of methods used to identify brain dysfunction and brain-behavior relationships, including neuropsychological testing, magnetic resonance imaging, computed tomography and positron emission tomography scans, and electroencephalogram. Educational and training requirements, key professional organizations, and employment opportunities are also detailed, with typical professional interactions and responsibilities illustrated in the author's description of "a day in the life of an academic clinical neuropsychologist."

James W. Sturges and Ronald S. Drabman, in Chapter 16, provide a sense of the exciting and expanding role of psychologists in children's mental and physical health care. Some of the clinical challenges faced in pediatric psychology are illustrated through case examples (e.g., coping with painful medical proce-

dures, correcting problems leading to failure to thrive). The authors emphasize the importance of valid and reliable assessment as a requisite to clinical intervention. A wide range of interventions is examined, such as teaching new skills to the patient (e.g., communication, relaxation, distraction) and his or her family (e.g., parenting skills, safety, health promotion).

In Chapter 17, Charles Patrick Ewing provides a definition of the often misunderstood term *forensic* and explains the role of the forensic psychologist. After highlighting the history of forensic psychology, he covers both psychological research on legal issues and the practical application of psychology in the courts. Key issues—such as conflicts between defense and prosecution experts in terms of sanity at time of crime, future dangerousness of the defendant, and public response to the insanity defense—are covered comprehensively.

CHAPTER 14

Behavioral Medicine

ANTHONY J. GORECZNY

INTRODUCTION

Behavioral medicine is an interdisciplinary field composed of individuals representing psychology, nursing, psychiatry, audiology, pharmacy, medicine, social work, epidemiology, dentistry, and many other fields. Within medicine, nearly every specialty area has the potential to benefit from techniques available to the behavioral medicine specialist. Specialty areas, such as cardiology, neurology, surgery, and oncology, have accepted the role that behavioral medicine practitioners play in the overall management of their patients.

The term *behavioral medicine* has long been debated by both practitioners in the field and those who might use its services. Some physicians refuse to use the term because the techniques practiced are not “true medicine.” However, most physicians and other health care workers recognize the important role of behavioral medicine in the overall care of their patients, and they express no concerns over the use of the term. Noteworthy is the recent formation of a new division within the **National Institutes of Health** termed the Alternative Medicine Division. **Biofeedback** (one technique described below) is considered to be within the realm of the Alternative Medicine Division.

This chapter presents general assessment issues and some of the areas in which behavioral medicine practitioners have contributed. However, it is not possible within this chapter to discuss all of the areas in which behavioral medicine specialists are involved nor to elaborate in great detail on any one area. Rather, an overview of several interesting areas is presented with the hope that the reader will be encouraged to seek new information and discover an interest in the area of behavioral medicine. First, general assessment issues are presented. Next, specific areas within behavioral medicine are addressed: pain,

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

health behavior, psychophysiological disorders, and rehabilitation issues. The chapter ends with sections on empirical considerations and future directions, followed by a summary.

GENERAL ASSESSMENT GUIDELINES

As one part of the behavioral medicine assessment, a psychological evaluation will typically be conducted, and recommendations for treatment generally will be given. While performing the assessment, the psychologist must take into consideration a variety of information from a number of sources. The practitioner begins by addressing issues typical for most psychological evaluations, including the patient's demographic information, marital history, employment history, history of legal difficulties, history of psychological difficulties, and current psychological complaints. In addition, the patient's military history may provide relevant data for the evaluation.

The behavioral medicine assessment is almost always complicated, however, by the presence of significant medical problems. These medical problems need to be understood, and the complications they present need to be taken into account.

Case Example: An intern recently consulted with me on the case of a male veteran who had been the victim of an automobile accident and had suffered a significant head injury. He was attempting to teach this patient relaxation skills involving the tensing and relaxing of 16 different muscle groups. After the first session, the intern learned that this patient had spoken angrily about him to a hospital staff member. At the next treatment session, it was clear that the patient's anger was due to the frustration he experienced in trying to remember and perform what he regarded as a set of instructions too difficult to master. A less complex set of instructions was subsequently developed for use with this individual.

Patients referred to a behavioral medicine clinic usually will be taking some type of medication. The effects and side effects of these medications must be recognized because of the potential impact on treatment. Many patients will be taking several medications, so a variety of drug interactions must be considered. Effective communication with the patient's physician and/or pharmacist is essential to the overall treatment plan.

Case Example: One patient who presented to the clinic reported that he had been prescribed 15 different medications for a number of problems. Several of the medications were prescribed to counteract the negative side effects of other prescribed medications.

The behavioral medicine practitioner must also assess for **disability status**. Because patients referred to a behavioral medicine clinic usually have one or more physical conditions, they are especially likely to have a claim for disability pending. In the case of veterans, they may be seeking compensation from the government, claiming that their physical (or psychological) condition is the result of their military service. When Social Security disability or military service disability status is an issue, treatment may be especially difficult be-

cause the patient must prove that he indeed is disabled. If the patient gets better, he will lose the opportunity to receive financial compensation. This inevitably complicates designing effective treatment protocols. Therefore, the effects of financial disincentives to getting better must be considered.

AREAS OF PRACTICE

Pain

HEADACHE. **Chronic headache** problems are a common medical complaint and a frequent referral to behavioral medicine clinics. Traditionally, most chronic headache problems were seen as representing one of two headache types: **muscle-contraction headaches** and **migraine headaches**. Muscle-contraction headaches are characterized by a dull, aching pain located bilaterally in the forehead or in the back of the neck. Migraine headaches are described as a pulsing pain usually located unilaterally and accompanied by sensitivity to sounds, lights, and smells. They are also associated with severe nausea and occasional vomiting. In some cases, there is a warning sign (called the **aura**) that a migraine is soon to develop. The aura can be a disturbance in the visual field, such as the appearance of wavy lines or spots. When an aura precedes the migraine headache, it is termed a **classical migraine**. When no aura is present, the headache is termed a **common migraine**.

Other, less commonly diagnosed headaches include **posttraumatic headaches** and headaches attributable to problems of the **temporomandibular joint**. Posttraumatic headaches result from a trauma to the head and/or neck region, such as might be expected from a motor vehicle accident or fall. Posttraumatic headaches can resemble muscle-contraction headaches or migraine headaches, or may present with a unique symptom description. Posttraumatic headaches were once thought to be refractory to behavioral medicine interventions, but recent research studies have shown that some selected patients suffering from posttraumatic headaches may benefit significantly from behavioral medicine treatments described below (Goreczny, 1993).

Temporomandibular joint disorders result from a problem associated with the joint located just below the ears. These problems are hypothesized to result from either structural abnormalities or significantly high levels of muscle tension. The resulting symptomatology can include headache, earache, pain in the jaw that is aggravated by chewing, and other face and head pain. Thus, when evaluating patients with a headache problem, it is important to consider the role of the temporomandibular joint and seek a dental consultation when appropriate.

Behavioral medicine techniques used to assist in the treatment of headaches have included **relaxation training** and biofeedback. Both are designed to aid the client to make changes in the physiological mechanisms assumed to be responsible for production of such head pain. Muscle-contraction headaches have been postulated to be due to increased levels of tension, while migraine headaches have been theorized to result from changes in cerebral blood flow. Recent research has questioned these hypotheses (Olesen & Edvinsson, 1988).

Nonetheless, treatment techniques based on the hypothesized theoretical mechanisms have been used with relatively good success.

Biofeedback is a technique whereby physiological equipment is attached to the body in order to monitor specific physiological parameters, such as muscle tension or blood flow. The information is then displayed visually on a screen (**visual biofeedback**), or a tone is produced with higher or lower frequencies, corresponding to higher and lower levels of the measured parameter (**auditory biofeedback**). EMG (**electromyographic**) biofeedback is generally used for patients with muscle-contraction headaches and is typically conducted by attaching electrodes to the forehead muscles. The goal of this procedure is to lower the level of muscle tension. Treatment results obtained from these techniques often astonish patients and other health care providers.

Case Example: Mr. A. was a World War II veteran who had been suffering from headaches since he had been discharged from the service in 1945. His physician had tried numerous pharmacological interventions for his daily headaches. Mr. A. was referred to the Behavioral Medicine Clinic for evaluation and possible treatment of these headaches. He was so used to having the chronic headaches that he had come to accept that nothing would help relieve them, and he was skeptical that biofeedback had any chance. He did, however, agree to undergo a trial of treatment. After less than 8 months of EMG biofeedback, Mr. A. has been headache-free for 3 weeks. The referring physician expressed surprise at the successful treatment.

Although EMG biofeedback has been used in the treatment of patients with migraine headaches, **thermal biofeedback** training is more commonly used with this patient group. During thermal biofeedback, a sensor that measures blood flow to the periphery is attached to the finger. The goal of this procedure is to increase peripheral blood flow, generating a relaxation response and a reduction of cephalic blood volume.

Although relaxation and biofeedback therapies are generally effective techniques in the treatment of muscle-contraction and migraine headaches, they are not effective for all patients. Recent research suggests that in addition to the hypothesized peripheral mechanisms, the neurons of the **central nervous system** (i.e., brain and spinal cord) may be involved in initiation of headache problems (Olesen, 1991). Future research will undoubtedly focus more on these issues.

In an attempt to develop a more useful **headache classification system**, the Headache Classification Committee of the International Headache Society (1988) published a new recommended system. The new system sets specific criteria for each of 12 major headache types and includes 145 subcategories. Use of standardized criteria is certain to improve reliability of this system over the previous system, in which clinical impressions determined headache diagnosis. However, validity of the new system, implications of different diagnostic criteria for treatment, and practitioner receptiveness to a more stringent and more complex diagnostic system are issues that need to be addressed in the future. This new classification system is considered to be preliminary, with a final revised system to be made public in the near future.

CHRONIC PAIN MANAGEMENT. Although headache problems can be “cured” (some clinical researchers would debate this), several headache problems and

other pain conditions that are chronic (greater than 6 months) have little likelihood of remission. For this reason, it is important that patients learn to manage pain and pain-related impairment in an effective manner. Although EMG biofeedback and relaxation strategies are frequently used with chronic pain patients, effectiveness with this population is generally limited.

Prior to implementing treatment, a thorough assessment of pain complaints is essential. A description of the pain and its onset may provide the clinician with avenues to address further.

Case Example: When I was an intern, one of my patients undergoing assessment described a sharp, stabbing pain, as though someone were thrusting a knife into the affected area. This patient happened to work at a knife factory and was having difficulty with supervisors who had reportedly “betrayed” him. (Being a staunch behaviorist, I debated about whether to include this example because of the clear symbolic content. However, with apologies to B. F. Skinner and John B. Watson, it is important to point out that analysts often do a better job of observing behavior than do self-identified behaviorists who use only standardized self-report instruments. For example, some clinicians may rely solely on use of standardized tests to evaluate a patient’s complaint. However, it is important to observe individuals during clinical interviews to determine if they appear to become anxious or tearful: for example, when discussing certain parts of their lives or certain behaviors. Standardized testing is best used in conjunction with clinical interview data, including observations of behavior.)

Prior to treating chronic pain patients, it is essential that a full assessment include evaluation of pain-related impairment, emotional distress, and marital and vocational factors. The assessment also aims to identify specific activity goals and determines appropriateness of the patient for rehabilitation. Patients who have pain relief as their primary goal are not the best candidates for treatment, because the goal of the rehabilitation program is generally one of increasing activities despite much pain. Patients who continue to seek pain relief generally continue to look for the “magic cure,” thus subjecting themselves to multiple procedures that may exacerbate the pain because of **iatrogenic effects** (e.g., scar tissue resulting from multiple surgeries).

To obtain the most benefit from rehabilitation programs, patients generally need to have pain-related impairment (e.g., social activities, work-related activities, and recreational activities), some emotional distress, and a significant other willing to attend treatment sessions with them. Such impairment is essential, since treatment aims to get the patient to engage in activities despite pain complaints. The emotional distress is usually what keeps the patient motivated for treatment. The spouse or significant other is encouraged to reprogram the patient’s environment (see below).

Treatment of chronic pain typically involves reconditioning through physical therapy and prescribed exercises, cognitive restructuring, reprogramming the patient’s environment, and addressing vocational issues. Cognitive restructuring is aimed to help the patient and family members set reasonable goals and limits for what is considered an appropriate amount of work. Contrary to the opinion of many uninformed individuals, chronic pain patients are usually “workaholics,” whose difficulties partially result from overwork. They have not learned how to judge appropriate work levels, nor have they learned that it is

acceptable, even beneficial, to be engaged in “nonproductive” activities at times.

The environment is reprogrammed by including the patient’s spouse or a significant other. This individual is taught to ignore identified pain behaviors (not to ignore the patient) and reinforce healthy behaviors. Two typical patterns among spouses of patients with chronic pain are the “solicitous” spouse and the “punishing” spouse. The solicitous spouse performs most of the household duties and attends to the patient’s needs, actually encouraging the patient not to exert himself or herself. This promotes continuation of dependency and prevents the patient from engaging in health-promoting activities (e.g., structured prescribed exercise). The punitive spouse punishes the patient with little or no opportunity to obtain positive reinforcement. The punitive spouse will frequently blame the patient for the pain problem and actually accuse him or her of malingering. This only serves to prompt the patient to engage in an increased frequency and magnitude of the pain behaviors in order to prove to the spouse how disabled he or she is. Involving spouses or significant others in treatment sessions is essential so that they do not undermine treatment by prohibiting patients from engaging in health-promoting behaviors or pushing them beyond reasonable limits.

Vocational issues are frequently paramount for chronic pain patients. Employers may see employees as malingering in order to avoid doing their jobs and to obtain disability benefits. It is essential to work with the employer and employee to promote a cooperative interaction. This is often very difficult and may best be handled by a vocational rehabilitation specialist, who has specific expertise in dealing with these issues.

Health Promotion

Health promotion activities are behaviors aimed at reducing the risk of developing diseases. Such health-promoting activities include exercise adherence, smoking cessation, weight management, stress management, medication adherence, and practicing safe sex. These behaviors are routinely difficult to maintain. One of the primary reasons for this is that the potential good consequences of engaging in the healthy behaviors (e.g., avoidance of illness) are often years away, while the immediate effects of the unhealthy behaviors are often more pleasurable (e.g., good tasting food, physiological arousal associated with smoking), and do not require sustained effort (e.g., the patient avoids exercising or taking medication). Health-promoting activities may result in some discomfort (e.g., exercise resulting in exhaustion or mild pain).

EXERCISE ADHERENCE. Technological advances have led to a decline in the need for physical activity. Physical exercise has both mental and physical benefits, but most Americans do not exercise regularly enough to obtain these benefits. Physical activity is generally recognized as an accepted form of treatment for a variety of disorders, including diabetes, obesity, hypertension, coronary heart disease, and chronic pain conditions. Exercise has also been prescribed to aid in the treatment of depression. However, although many individuals begin an exercise program, few adhere to it for more than a year.

Behavioral medicine practitioners work to increase **adherence** to prescribed exercise regimens. In this way, psychologists and other behavioral medicine professionals work in conjunction with physicians and physical therapists to develop programs that will increase likelihood of adherence. One technique frequently employed is to have the patient monitor the amount of physical exercise performed and establish some type of reward system for completion of a prescribed amount of exercise.

Case Example: One individual with whom this technique worked was a college student who wished to increase his cardiovascular endurance. He had little self-control with regard to adherence to an exercise program, but he enjoyed buying music albums. This individual chose running in an effort to increase cardiovascular endurance. Thus, a program was established whereby he would begin running leisurely for a prescribed amount of time (15 minutes). If able to meet the stated criterion, he would deposit a certain amount of money (25 cents) into a jar for that day. However, in order to prevent injury, if the client exceeded the time limit by more than 5 minutes, he would not deposit the quarter. This money, and only this money, could then be used to purchase his albums. The amount of time spent running was slowly increased until, after 6 months, he was running 60 minutes (his target), and the distance run was about 8 miles each time. This behavior was maintained at 1-year follow-up.

Another intervention is feedback and social support from family members, friends, and treatment staff. This can be in the form of person-to-person contacts, telephone calls, or letters delivered by mail. Another approach has been to identify the primary impediments to maintenance of exercise for an individual and then to develop ways to cope with such impediments. Some of these impediments include lack of a partner required for some sports, weather conditions, time pressures and competing activities, and lack of awareness of the benefits of exercise. Each of these requires a different intervention in order to increase the likelihood of success.

An important consideration to keep in mind is that not all physical activity is equivalent psychologically. The individual's perception of the exercise is an important predictor to determine likelihood of adherence. For one individual, the idea of running a mile is meaningless, but this person would not at all mind mowing the lawn and performing other "productive" activities. Another individual might consider housework a drudgery but be willing to engage in a tennis game or other competitive sport. Still another may not like competition but prefer the solitude of long-distance bicycle riding. Each of these factors must be considered when establishing an exercise program for a particular client.

SMOKING CESSATION. Smoking contributes to all three of the leading causes of death in the United States: heart disease, cancer, and stroke. Nonetheless, approximately 53 million Americans still smoke, with 1 million new smokers added each year (Pierce, Fiore, Novotny, Hatzidandreu, & Davis, 1989). Physiological factors, social factors, and behavioral conditioning factors all maintain the addiction of smoking. Physiologically, nicotine is one of the most addictive drugs. Its addiction potential has been estimated to exceed that of nearly every other drug, including cocaine. In addition to the positive physio-

logical arousal that is associated with nicotine use, cessation of use results in a craving for the drug and other unpleasant withdrawal symptoms.

Social factors are also largely involved in the continued widespread use of nicotine. One of these social factors includes the enormous amount of advertising money spent by cigarette manufacturing companies—as much as 3 billion dollars per year (Federal Trade Commission, 1989). Such advertisements often portray the smoker as having fun with many friends and being around attractive, successful, and influential individuals. These are qualities that most individuals desire. Finally, although smoking is becoming less acceptable in the United States, it is still associated with many social activities, such as going out drinking and dancing, going to dinner, or socializing during a work break.

The behavioral factors associated with smoking are many and serve to strengthen the physiological and social factors. First, because smoking is possible in many different settings, numerous situations become conditioned to smoking behavior. Thus, each of the different settings and behaviors (e.g., bar, dinner, driving, socializing) becomes a cue for smoking. In addition, given the number of settings and the frequency of the smoking behaviors, practice effects increase the strength of the smoking habit. Thus, physiological, social, and behavioral factors associated with smoking make it an extremely difficult behavior to stop.

Although there are a number of pharmacological treatments for smoking, this brief review will focus mainly on the behavioral techniques. One of the primary behavioral strategies for smoking cessation is the use of **self-monitoring** and administration of rewards, similar to the procedures described in the exercise section. With this strategy, patients set a criterion number of cigarettes to smoke and a reward that they will receive for meeting that criterion. Patients generally reduce the number of permitted cigarettes until they achieve total abstinence. An alternative to this procedure is for patients to set the criterion at zero cigarettes (i.e., total abstinence) and to reward for each day they do not smoke. Clinicians often recommend the use of social support (e.g., encouragement by family and friends) to increase the likelihood of change as well as maintenance of cessation if patients achieve abstinence. To combat the physiological arousal that may result from the cravings for cigarettes, clinicians often incorporate some form of relaxation training into the overall treatment package. Still another strategy is to attempt to slowly eliminate the settings associated with smoking. This stimulus control paradigm often has patients eliminating smoking from one setting (e.g., while driving the car) or behavior (e.g., while eating) at a time. Once the patient is successful with one setting or behavior, an additional setting or behavior is added. This continues until smoking has been eliminated.

Most programs now use several of the above techniques, including pharmacological assistance. The **nicotine patch** and nicotine gum are used to combat the physiological craving associated with nicotine use. Long-term studies using the nicotine patch are currently underway. Unfortunately, most of the techniques, even when successful, produce short-term cessation, with many successful quitters relapsing within as short a time as 3 months.

OBESITY. **Obesity** is considered to be a risk factor for many physical problems including diabetes, cardiovascular diseases, hypertension, and some forms

of cancer. Physiological, genetic, psychological, and social factors are all contributory. **Genetic factors** are those associated with heredity (i.e., the biological combination of natural parents). Genetic factors may contribute as much as 70% to the classification of obese/nonobese (Stunkard, Harris, Pedersen, & McClearn, 1990). **Physiological factors** are those that, with respect to obesity, relate to energy expenditure and intake. Our resting metabolic rate accounts for the amount of calories consumed when the body is at rest. A low resting metabolic rate, thought to be genetically influenced, puts an individual at risk for obesity. Other physiological factors include the number and distribution of fat cells. **Medical factors** that contribute to obesity include endocrine disorders and several rare genetic conditions. These genetic and physiological factors are beyond our control at present. However, the psychological and social factors may be altered, thereby enabling us to lose weight and maintain a lower weight.

One of the primary psychological or behavioral factors associated with obesity is **binge-eating** (the consumption of a relatively large amount of food in a short period of time). Binge-eaters tend to experience more psychological distress and subsequently have more difficulty losing weight. Another behavioral factor contributing to obesity, discussed earlier in the chapter, involves lack of regular physical exercise. Psychologically, some obese individuals set unreasonably low weight goals. Part of the reason for this is their own negative body images and the sociocultural influences recognizing thinness as ideal. Thus, individuals' perception both of the ideal body image and of their own body image needs to be assessed. In some cases, this may need to be targeted directly by the treatment team. Social factors that contribute to obesity include family pressures and the large number of social activities that are oriented around food consumption.

STRESS MANAGEMENT. Although still very much debated, there is a significant amount of research that supports a **stress-illness relation** (Brown & Harris, 1989). Theoretically, increased stress results in illness via at least two mechanisms: (1) directly, by the effect of stress on the immune system and other physiological functions; and (2) indirectly, by reducing the likelihood of engaging in healthy behaviors (e.g., exercise, relaxation) and increasing the likelihood of engaging in unhealthy behaviors (e.g., skipping meals, sleeping less, smoking). While early stress research focused on **major life events** (e.g., marriage, divorce, job loss) as significant predictors of illness, recent research efforts have focused on the role of **daily stressors** or **hassles** (e.g., arguments with others, not completing planned work) and our ability to cope with such stressors (Brantley, Waggoner, Jones, & Rappaport, 1987).

Stress management thus aims to teach individuals to cope with life's daily demands in an effective manner. Given that stress has its effects on different systems of an individual (e.g., physiological changes, changes in thinking or behavior), several therapeutic modalities have been developed. To help cope with the physiological effects of stress, individuals are often taught some method of **physical relaxation**. These include progressive muscle relaxation, yoga, meditation, or biofeedback-assisted relaxation. **Cognitive therapies** have been aimed at teaching individuals to reduce the relative importance attributed to potentially negative situations. By reducing the importance ascribed to a

given situation, we can theoretically diminish the associated physiological arousal and make more reasoned decisions about how to respond to the situation. A second component of the cognitive therapies is to teach skills in areas that may have been deficient. For instance, some individuals have difficulties dealing with others. These individuals would be given training in social skills. Other individuals have difficulties making decisions and resolving normal daily life challenges. These individuals would be taught effective problem-solving strategies.

Human beings seek constancy; thus, any change is stressful. When behavior change is taking place (such as in treatment), we are creating more stress on ourselves, even if such behavior change will result in long-term benefits. The changes that we make also create stress for those who are close to us, such as our children, spouses, friends, co-workers, and neighbors. They have been used to us behaving in a certain way and must learn to adapt to a new set of behaviors. Therefore, it is recommended that patients, spouses, and families learn techniques of stress management (and other behavior change treatments) together so that all individuals closely involved will be better prepared for the changes.

Case Example: When my nurse and I first began teaching stress management to our patients, we included only the military veterans. About 8 weeks into a 10-week stress management program, one of the veterans expressed his concern to us that the treatment was not working but was instead creating more problems. He noted that he had been attempting to apply the techniques at home, but it was creating more problems between him and his wife. He indicated that his wife became very suspicious and questioned him about why he was being so much nicer to her than before. She asked him what it was he wanted from her. Thus, the man in this case was successfully changing his behavior, but because his wife was not aware of what was being taught, she had to attempt to adjust to changes without knowledge of the reasons behind them. This created stress for her, causing her to become suspicious of the motives behind her husband's changed behavior.

MEDICATION ADHERENCE. A major problem for health care providers is patient adherence to a prescribed treatment regimen. Behavioral medicine practitioners are often consulted to address a physician's concern about a patient's nonadherence to prescribed medication. The behavioral medicine practitioner in this case has the opportunity to work with both the physician and the patient. One of the primary reasons for patient nonadherence is a lack of understanding about the medication, the need for medication, what the potential side effects might be, and the benefits of adhering to the treatment regimen. Thus, the focus of treatment for the behavioral medicine specialist is (1) to aid in the patient's understanding about the need for and benefit of the medication and (2) to help physicians by teaching them strategies that will increase patient adherence.

To accomplish these goals, an appointment is often scheduled that will include the behavioral medicine specialist, the physician provider, and the patient consumer. The behavioral medicine specialist will spend some time modeling for the physician effective communication patterns that will enhance treatment adherence. Several important issues need to be addressed in order to

maximize the likelihood of patient adherence. First, patients must be told of the physical (or psychological) problem that they have. This needs to be explained to them in language that they understand. Patients might not understand what a health care provider is saying for many reasons. These include a brain dysfunction causing comprehension difficulties, a language barrier, the patient's inattention, or a dislike for the health care provider. Each of these requires a different intervention strategy.

Next, patients must accept that they have real problems that require treatment. Patients might not accept that they have a problem (such as cancer) because of fear, denial, or cultural or religious convictions that override a belief in the health professions.

After patients accept that they do indeed have problems requiring treatment, the specific treatment strategies need to be explained in clear terms. All of the issues about the treatment (i.e., side effects, intended effects, benefits of adhering, and possible complications of not adhering) need to be explained. The individual patient then needs to agree with the treatment and accept that it is necessary.

Finally, the patient needs to adhere to the treatment in the prescribed format. If the patient understands and accepts the problem and the need for treatment, this does not necessarily ensure that he or she will adhere to it. Several factors could still interfere, including those associated with the patient, the illness, the treatment itself, or any secondary gain.

One important patient factor is whether there is an internal or external locus of control. If patients have an external locus of control, they are likely to believe that no matter what they do, they will not be able to affect the outcome. In addition, socioeconomic factors may prevent them from paying for treatment, taking time off work to obtain treatment, or finding transportation to get to treatment. Priorities of the patient may interfere with adherence. A diabetic patient who is a lawyer may not make it a priority to eat at regular intervals because it interferes with the work schedule on a given day.

Factors associated with the illness itself or with the treatment can often affect patient adherence. An illness, such as hypertension, that causes limited immediate negative consequences is likely to have a high rate of nonadherence associated with it. Also, because of the side effects of hypertension medications (e.g., impotence in men), an extremely high rate of nonadherence can be expected. Treatments that are complex, that interfere with the patient's lifestyle, or that require a significant amount of behavioral change decrease the likelihood of patient adherence. The issue of secondary gain must also be addressed by the behavioral medicine specialist. A child who obtains attention from parents only when sick is less likely to want to be well, and hence less likely to adhere to treatment. Patients who receive monetary awards for being sick (e.g., disability insurance) have less incentive to get well because of the potential loss of income.

Thus, to increase adherence, health care providers need to clearly state the problem and precisely describe the treatment, ensure that the patient understands and accepts the problem and treatment, and provide reinforcement for the patient when he or she complies. The behavior of the health care provider is

essential to this process. He or she can increase the likelihood of adherence by having the patient repeat the information about the problem and treatment in his or her own words. Also, specific information should be written so that patients have a greater chance of remembering precisely what is required.

It is essential to create an atmosphere where the patient feels it is acceptable to disagree with treatment recommendations. Most patients will not disagree with the physician or other health care provider unless the provider openly states a willingness to listen to such disagreements. A compromise or workable solution can sometimes be arranged when disagreements are acknowledged. If problems are not openly acknowledged and discussed, it is likely that the patient will continue to be nonadherent.

Although this all sounds formalistic, putting it into practice is much more difficult. Health care providers are not used to having their recommendations questioned and may respond defensively, whether approached by the patient or a behavioral medicine specialist colleague. Dealing with the politically sensitive issue of control over treatment can be extremely difficult. In addition, health care providers are under extreme pressure to produce more revenue, thus allowing less time for the type of personal interaction required. Also, patients are often socialized to believe that they are not to question their doctors' orders or to openly disagree with them. Changing this overlearned behavior is often difficult, even with health care providers who are willing to take the time and accept patient disagreements.

AIDS PREVENTION. More than any other illness, **acquired immunodeficiency syndrome (AIDS)** requires that behavior change experts, such as behavioral medicine specialists, serve as primary health care professionals involved in prevention. The reason for this is that the virus responsible for the spread of AIDS (**human immunodeficiency virus [HIV]**) is transmitted via certain lifestyle behaviors, primarily involvement in unsafe sexual practices and the use of infected needles for intravenous drug use. Although the homosexual population and intravenous drug users have been the individuals most affected by AIDS, the spread of the AIDS virus to heterosexual and non-drug-using populations has increased dramatically, placing nearly everyone at risk.

AIDS prevention efforts include the use of educational programs emphasizing the importance of not engaging in risky behaviors. Although these programs have shown relatively little short-term change, they do appear to have a limited positive long-term effect in the prevention of HIV transmission (Kaplan & Abramson, 1989). Treatments based on behavioral learning theories have emphasized the importance of identifying situations that serve as cues to engage in high-risk behaviors and making attempts to avoid these situations.

Probably the most effective strategies to date have been those that have used commercial marketing methods and mass media campaigns to highlight the dangers of high-risk behaviors. The at-risk groups are identified and targeted for massive educational campaigns and strategies aimed at changing their behaviors and attitudes. One specific method is enlisting the assistance of individuals within the at-risk population who are highly influential for that target group. These individuals are taught ways to reduce their risk of HIV infection, and they then distribute such information to the members of their community. Use of

community members rather than medical personnel or individuals from government agencies appears to increase trust in the message being distributed. From a behavioral perspective, having a model who is perceived to be similar to oneself will also increase the likelihood of engaging in similar behaviors.

TYPE A BEHAVIOR AND HOSTILITY REDUCTION. **Type A behavior** was originally described as consisting of competitiveness, achievement orientation, impatience, and hostility (Friedman & Rosenman, 1959). It was initially shown that this pattern places individuals at risk for coronary heart disease. Subsequent studies have shown that while the Type A behavior pattern is indeed a risk factor for heart disease in healthy individuals, one primary dangerous component of the pattern is **hostility** (Smith, 1992). More recent research has also focused on **interpersonal dominance** and control, another possible component of the Type A pattern (Houston, Chesney, Black, Cates, & Hecker, 1992). Initial research on interpersonal dominance and control reveals that it may be significantly related to heart disease. Thus, while the globally defined Type A behavior pattern was initially identified as a risk factor for heart disease, current research has specified more precise components: hostility and a tendency toward interpersonal dominance and control.

How these variables contribute to development of heart disease has been a matter of much debate and empirical research. Two specific mechanisms have been hypothesized. First, it has been suggested that hostility and the Type A behavior pattern contribute to heart disease by increasing an individual's **cardiovascular reactivity** in response to a stressor. In particular, it has been hypothesized that individuals who are Type A- and hostility-prone or who are interpersonally dominant and controlling react to stressors with excessive increases in blood pressure and heart rate, as well as other stress-mediated physiological changes. Second, such individuals are hypothesized to have a higher frequency and intensity of stressors and more interpersonal conflict with subsequently lower levels of social support, relative to other individuals. Each of these factors is then hypothesized to make one more susceptible to heart disease. Recent research lends partial support to this notion (Smith, in press).

Combining these hypothesized mechanisms provides a potentially lethal mixture, increasing the likelihood of developing heart disease. **Coronary-prone** individuals could display heightened hostility in response to relatively minor issues, creating more stress responses in themselves and alienating others. Such alienation then results in a lower level of social support, thus preventing positive social interactions from having their buffering effect against future, more meaningful stressors. In addition, Type A individuals create an environment that responds with hostility, confirming their negative expectations and thereby perpetuating the cycle.

Behavioral medicine researchers and clinicians have been at the forefront of identifying the behavioral risk factors for heart disease. They are also the primary health professionals attempting to modify Type A behavior among individuals. Treatment usually involves some type of relaxation strategy to combat the physiological effects of cardiac hyperreactivity. However, other treatments often include marital therapy, time management, other stress management techniques, or individual therapy aimed at reducing the negative attributions made

toward events. Research has shown that Type A and hostile behavior can be changed (Nunes, Frank, & Kornfield, 1987). What is not yet fully known is whether these changes will affect an individual's susceptibility to cardiac problems.

PSYCHOPHYSIOLOGICAL DISORDERS

Psychophysiological disorders are physical problems that have a known or suspected pathophysiological mechanism and may be influenced by psychological factors. Headaches and temporomandibular problems (described earlier in the pain section) are considered psychophysiological disorders. Other psychophysiological disorders include asthma, insomnia, Raynaud's disease, and gastrointestinal problems (e.g., ulcers).

Asthma

Asthma is a complex disorder of the bronchial tubes caused by hyperreactivity to various stimuli and an inflammation of the airways. The result is that breathing becomes difficult due to bronchospasms and edema of the airways. Most experts agree on very few things when it comes to defining asthma. Part of the reason for this is the extreme variability of the disorder. One patient's attacks may be much more severe than another patient's attacks. Also, the same patient may experience very severe attacks one day and milder attacks on subsequent days. In addition, one individual may have an attack every few days, whereas another might have 10 or 12 severe attacks in a week and then go for months without experiencing any other symptoms. The primary feature that distinguishes asthma from other chronic respiratory ailments (e.g., emphysema) is that it may completely remit in some patients.

An asthma attack is precipitated by exposure to a stimulus that triggers **bronchospasm**. Certain stimuli, such as exercise, cold air, and respiratory infections, affect nearly all asthmatics. The interesting part of asthma for behavioral scientists is that emotions and certain situations have been reported to trigger asthma attacks in some individuals. Of additional interest is that asthma attacks appear to be conditionable. That is, having an asthma attack in a given situation may predispose that individual to have another attack when exposed again to that particular situation.

Behavioral treatment of asthma has included EMG biofeedback and relaxation training to help patients overcome the fear and panic they feel surrounding attacks. However, relaxation may actually precipitate an asthma attack in some cases. Deconditioning of stimuli thought to produce an asthma attack has also been attempted. However, the range of stimuli that may precipitate attacks varies widely from one person to another, and for some individuals the specific stimuli may not be identified.

Most recent treatment strategies have been aimed at teaching asthmatics self-management. This includes gathering information about their attacks and what prompts their occurrence along with performance of specific self-man-

agement skills. These self-management skills require that the patient avoid triggering stimuli, adhere to medication regimens, ensure that inhaler medications are available, and use positive coping strategies. Relaxation techniques may also be included for patients who benefit. Although some small advances have been made in our understanding of asthma and its treatment, a significant amount of work remains.

Insomnia

Insomnia, like asthma, has also proven to be difficult to define, but it is generally used to describe a subjective feeling of not having obtained enough sleep along with objective verification of sleeping difficulties and/or daytime fatigue. Complaints of insomnia can include difficulty falling asleep, frequent awakenings during the night, or awakening much earlier in the morning than intended with an inability to return to sleep.

Etiological theories of insomnia suggest that it is due to increased physiological activity or to an increase in thoughts (especially problems, worries, and other negative thoughts) as one retires for the evening. Assessment of insomnia complaints includes a medical and psychological history, psychological testing, and an objective sleep laboratory study.

An assessment of insomnia needs to rule out other sleeping disorders, such as **narcolepsy** and **sleep apnea**. Narcolepsy is a disorder in which an individual spontaneously falls asleep and loses muscle tone. This may occur in response to overstimulation and emotional excitement. Sleep apnea is a condition in which the patient stops breathing while asleep. The buildup of carbon dioxide in the body triggers limb movements and jerking, causing the body to awaken slightly, and the patient again begins breathing. Once asleep, the patient may again stop breathing. This cycle sometimes is repeated hundreds of times a night. Night-time snoring and daytime sleepiness are commonly associated symptoms.

Case Example: A patient was referred to my clinic with complaints of muscle twitching. An evaluation of his twitching complaints indicated that they generally occurred only in the evening while he was “relaxing” and watching TV. He also complained of some daytime fatigue and sleepiness. To rule out a sleep disorder, he was referred to the sleep laboratory, where it was ascertained that he indeed suffered from sleep apnea. Apparently, “relaxation” in the evening led to him doze off, which activated the apnea process. The twitching of which he complained was the body jerking him out of his sleep, awakening him.

Treatment of narcolepsy usually involves prescription of an antidepressant or stimulant medication, while apnea is often treated by use of a forced-oxygen tank that the individual wears while sleeping. Insomnia is often associated with other medical and psychological (e.g., severe depression) difficulties. If these are identified, they need to be treated by the appropriate therapies (i.e., medical referral, psychiatric referral for possible antidepressant therapy). Behavioral medicine specialists intervene by teaching appropriate **sleep hygiene behaviors**. These include avoidance of caffeine, nicotine, and alcohol prior to sleep; avoidance of daytime napping; and maintenance of a regular sleep schedule

(including weekends). Stimulus control theories of treatment postulate that if the bed becomes associated with other activities (e.g., reading, watching TV), insomnia may occur. Thus, patients are instructed to reserve the bed for sleeping (and sexual activity) only. Relaxation and biofeedback have also been used in insomnia treatment in an effort to reduce any heightened physiological arousal that may be present. Finally, patients are sometimes instructed to reduce the amount of time they spend in bed, suggesting that the patient's physiological need for sleep is less than he or she expects.

Raynaud's Disease

Raynaud's disease is characterized by episodic attacks of vasospasm in the fingers and/or toes. The tips of the digits become cold because of lack of blood flowing to the periphery. Attacks are generally brought on by exposure to cold temperatures and stress. Severe cases of Raynaud's disease may result in **necrosis** (i.e., death of tissue) of the digits secondary to lack of available blood flow. Several medications are available to assist in the treatment of this disorder, but these drugs often are associated with significant negative side effects. Behavioral treatments have included relaxation therapy and thermal biofeedback. Both of these treatments are carried out in an effort to increase blood flow to the periphery, and have been used with some success.

Gastrointestinal Disorders

Gastrointestinal disorders include problems associated with the stomach and intestines. Three frequently diagnosed disorders include peptic ulcer disease, irritable bowel syndrome, and Crohn's disease. **Peptic ulcer** disease is characterized by lesions of the **duodenum** (duodenal ulcers) or stomach (gastric ulcers). While duodenal ulcers have been shown to be related to stress, the role of psychological factors in gastric ulcers is less clear. Symptomatic of duodenal ulcers are nausea, vomiting, and epigastric pain associated with ingestion of food. **Irritable bowel syndrome** is characterized by an unknown physical etiology with presenting symptoms of abdominal pain, diarrhea or constipation, and fecal incontinence. **Crohn's disease** is a chronic disorder of the bowel characterized by inflammation, ulceration, and in some cases, breakdown of the intestinal mucosa and bowel. Although there are many theories about its cause, it currently has an unknown etiology.

Behavioral medicine interventions aimed at patients with gastrointestinal disease have included stress management, anxiety management, assertiveness training, relaxation, and biofeedback. These interventions appear to be effective in the treatment of duodenal ulcers and irritable bowel syndrome, but their effectiveness in the treatment of Crohn's disease is inconclusive. However, Crohn's disease has been successfully treated by the use of bowel movement biofeedback. In the absence of a specific prescriptive treatment, additional research in this area is warranted.

The area of **rehabilitation** deals with helping people who are already affected by an illness, disease, or other physical problem. In efforts to rehabilitate such individuals, the goal is to increase the quality of their lives. Behavioral medicine specialists can work as part of a team with rehabilitation psychologists, neuropsychologists, and other specialists. Rehabilitation efforts may be needed when an individual has had a stroke, spinal cord injury, or closed head injury. Although not often considered areas for rehabilitation, oncology, multiple sclerosis, and muscular dystrophy may also benefit from treatment by behavioral medicine specialists.

Behavioral medicine specialists are involved in helping the affected individual and family members to adapt to their new situation. This includes helping patients to accept realistic expectations for their behavior, to evaluate themselves based on their own assets rather than in comparison to the abilities of others, and to adjust to physical disabilities that may be present. The issue of dependency may become prominent, as once healthy, independent individuals may now have to rely on assistance from family members. The extra pressure placed on family members needs to be addressed by the health care professional in a caring, sympathetic fashion. Helping the family and the patient can be extremely difficult if members were having significant problems interacting before the physical problem developed. Behavioral medicine practitioners also aid the patient and the family to overcome associated depression and other psychological distress that may be present, as well as any substance abuse problems.

A relatively new field has emerged to deal with rehabilitation issues that involve brain dysfunction (referred to as **behavioral neuropsychology**). This field combines neuropsychological assessment techniques with behavioral assessment and treatment methodology. Numerous problem areas have been addressed, including attention, speech fluency, aggressive behavior, social skill deficits, deficient execution of activities of daily living, memory impairment, and organizational abilities. Each of these areas has been addressed in brain-impaired individuals using single-case design methodology (Franzen, 1991). However, because of the idiosyncratic nature of neuropsychological assessment, little work using controlled group outcome studies has been performed.

ADDITIONAL AREAS OF PRACTICE

Sexual Dysfunction

The primary physical contributors to **sexual dysfunction** include diabetes, cardiovascular disease, physical trauma or surgery, endocrine system problems, and multiple sclerosis. Health psychologists and other behavioral medicine specialists are often called on to determine if male sexual dysfunction (termed impotence) is caused by **biogenic** or **psychogenic** factors. This is a very difficult, if not impossible, determination, and a more appropriate question addresses presence of psychosocial contraindications to undergoing penile implant surgery.

For many men with sexual dysfunction that is purely biogenic, one way to enable the man to engage in sexual intercourse is through surgical implantation. However, because psychological factors are often associated with sexual dysfunction, and given the permanence and elective nature of the surgery, a psychological evaluation is recommended before such surgery is performed. Factors to be evaluated are the nature of the patient's marital relationship, presence or absence of depression, stress and/or anxiety interfering with sexual dysfunction, and alcohol abuse. Also of importance to consider, and a potential contraindication to the surgery, is the presence of a significant trauma that may be related to such sexual dysfunction. If any of these factors is present, it is best to treat it first to ensure that it is not the etiological element. The rationale for this is that once the surgery is performed, it is not reversible. Although the implant can be removed, a man's sexual ability is likely to be adversely affected.

Case Example: Mr. A. is a 54-year-old Hispanic male who was referred for evaluation of his sexual dysfunction. He had no physical risk factors for impotence. He reported having been widowed and raising two sons by himself. A further assessment of his situation revealed that his wife had committed suicide by pouring gasoline on herself and then setting herself on fire. The patient witnessed the fire and could still, after about 15 years, recall the smell of her burning flesh. He also experienced significant nightmares about the experience. His impotence was clearly related to this event.

Diabetes

Diabetes mellitus is a condition characterized by abnormally low **insulin** levels. Insulin serves to promote metabolization of glucose in the body. Therefore, too little insulin will result in elevated blood glucose levels with potentially life-threatening complications. Two different types of diabetes are currently classified (Goetsch & Wiebe, in press). The first (**Type I, juvenile-onset, or insulin-dependent diabetes mellitus**) is due to an inability to produce enough insulin to meet the body's demands and usually begins before age 30. The second (**Type II, adult-onset, or non-insulin-dependent diabetes mellitus**) is due to an inability to use or secrete available insulin. Type II diabetes mellitus accounts for about 80% of the cases and generally occurs after age 40. The goal of treatment is to control the level of blood glucose and prevent complications from developing.

Most of the behavioral medicine research in this area has focused on weight reduction and exercise to aid in diabetic control. Indeed, it has been well established that weight reduction and exercise are beneficial for diabetic patients (Wing et al., 1991). A relatively new line of research with diabetics has been to examine the role of stress and the efficacy of stress management techniques to control blood glucose. Stress is hypothesized to directly increase the amount of glucose in the blood. Thus, a diabetic patient with already high levels of blood glucose who encounters a stressor is likely to have even higher, and more dangerous, levels of glucose. Management of stress becomes a prominent goal of treatment. Biofeedback and relaxation strategies have shown promise in helping some diabetic patients to control their blood glucose more effectively

(Surwit, Ross, & Feinglos, 1991). However, control group outcome studies are needed in this field.

Case Example: Mr. D. is a diabetic male who was referred for assessment of erectile dysfunction. At the initial evaluation, he reported high levels of stress due to financial and vocational concerns. He had lost his job, was near the end of his financial resources, and had no job prospects in sight. His self-monitored blood glucose levels were about 300. He then obtained a job that led to decreased stress by giving him a sense of purpose and providing him with a source of income. Self-monitored blood glucose levels dropped to an average of 123 for the week following the beginning of his new job.

EMPIRICAL CONSIDERATIONS

Traditional Concepts

Behavioral medicine researchers and clinicians have followed the behavioral framework of conceptualization. As part of that framework, assessment and treatment have focused on principles of learning, with little consideration for traditional psychoanalytic concepts. Defenses such as denial, reaction formation, rationalization, intellectualization, and projection are rarely mentioned in dealing with clients. Issues such as transference and resistance are rarely addressed in treatment outcome studies. These issues and defenses clearly are evinced in therapy sessions, however.

Case Example: Mr. T. was referred to me for evaluation and potential treatment of his chronic low back pain. He reported significant pain, complained of pain-related impairment, and demonstrated significant emotional distress. In addition, his wife was willing to attend therapy sessions with him. However, he refused to give up the notion of finding a “cure” for his pain despite having had it for many years and having tried nearly every available treatment. I performed the initial evaluation, discussing treatment options and potential benefits. As an alternative to the chronic pain treatment program, this patient opted for participation in a stress management group conducted by me, the clinic nurse, and a psychology intern. Despite relatively limited interaction with this patient, I became the therapist by whom all others were measured; I was the gold standard. Subsequent to completion of the stress management group, this patient and his wife were seen for marital therapy by another psychology intern whom I supervised. His wife was also seeing an individual therapist at another hospital. The wife reported that her therapist told her something about the marital relationship that angered Mr. T. Not only did Mr. T. misinterpret what the other therapist had said, but he now attributed that statement to me, and I became “worse than Saddam Hussein.”

Overrideation, misinterpretation, wrongful attribution, and subsequent negative transference (devaluation) indicative of borderline personality functioning are rarely addressed in the behavioral medicine literature, but these reactions do exist, and they play an important role in treatment outcome.

The behavioral medicine literature addresses concerns of treatment failures, treatment dropouts, characteristics of those in treatment, and identification of those who successfully treat themselves. Unfortunately, demographic

data and even psychological testing data often cannot differentiate between successful treatment cases, treatment dropouts, and treatment failures.

Measurement and Publication of Treatment Results

Behavioral medicine practitioners are now present in nearly every major medical center. However, much of their time is spent in direct clinical contact, and little time is devoted to measurement of treatment effectiveness. Thus, practitioners are performing therapies without accurate identification of target behaviors and only a subjective impression of whether therapy is effective. Part of the reason for this is the health care crisis that exists in our country and the push for increased client contact hours in order for medical facilities to remain financially viable.

Case Example: I recently spoke with a colleague at an inpatient rehabilitation facility who indicated that he takes the time to identify target behaviors and has ward staff (e.g., nurses, nursing assistants) monitor the select target behaviors. These behaviors were even plotted on a graph, and the target behaviors had been changed as necessary. When asked why he had not published the information, he replied that the demands of the position were so great that he worked an average of 60 to 65 hours per week just to complete the clinical work. Unfortunately, he was unable to take the time to write the articles and submit them.

Despite these clinical pressures, it is important, for both scientific and clinical purposes, for behavioral medicine practitioners to document efficacy of their treatments. Documentation allows behavioral medicine practitioners to verify accountability for the procedures used.

FUTURE DIRECTIONS

Traditional Concepts

Future behavioral medicine work needs to focus on identifying ways to reliably and validly measure the traditional concepts of denial, transference, resistance, and others, so that these concepts can be incorporated into a more complete yet testable theory of human behavior as it relates to health. Psychology must continue to pursue the scientific method, but it is *not* good science if we ignore as yet unidentified variables that affect human behavior.

Sociopolitical Involvement

Scientists have traditionally remained relatively uninvolved in sociopolitical activity. However, one of the ways that behavioral medicine practitioners can most markedly affect the health of this country and of the global community is to become more involved in the policy-making aspects of government. By using scientifically collected data, scientist-practitioners must begin to extend

their influence on lawmakers and other important figures in the area of public health. Psychologists and other behavioral medicine advocates have undoubtedly made some inroads in this arena, but we must continue to be active in matters of scientific interest.

SUMMARY

The field of behavioral medicine draws together practitioners and researchers from a diverse array of specialties, including psychology, medicine, nursing, audiology, pharmacy, and social work. The behavioral medicine specialist works to prevent illness from developing in healthy individuals, aids in the prevention of more serious complications once an individual has been diagnosed with a physical problem, and treats or rehabilitates individuals with disabilities or other physical problems. This chapter reviewed the areas of pain, health promotion, disorders that may be exacerbated by psychological factors such as stress, and rehabilitation. Empirical considerations and future directions were discussed. Behavioral medicine remains an exciting field of study. Because the primary causes of death in the United States are related to lifestyle behavioral factors, researchers and clinicians in this field can have a major impact on society. As we move toward the future and the population of the United States includes a larger proportion of older adults, more research will be required to determine effectiveness of treatments with senior citizens. Indeed, behavioral medicine techniques need to be extended to the unique problems faced by older individuals.

STUDY QUESTIONS

1. Define the term *behavioral medicine*. Which professions are represented in this field?
2. Describe the various components of a behavioral medicine assessment. Address the importance of each.
3. What are the two types of chronic headache? What are their symptoms? Which type of headache is most common?
4. Differentiate between symptoms of a classical migraine and symptoms of a common migraine headache.
5. Where is the temporomandibular joint (TMJ) located? What is the significance of this joint in the occurrence of headaches? Who should evaluate a patient to rule out TMJ etiology?
6. What commonalities do relaxation training and biofeedback share? How does each treatment work in reducing headache pain?
7. Describe the various components of biofeedback. What is EMG biofeedback? How does it work?
8. What is thermal biofeedback? What is the goal of this procedure?
9. Define the term *chronic*. How does treatment of chronic pain differ from treatment of migraines? In which population is treatment most successful?
10. It is essential to conduct a comprehensive assessment prior to treatment of a chronic headache patient. What should be included in this assessment?
11. Define the term *iatrogenic effects*. How might iatrogenic effects exacerbate existing pain?

12. What is adherence? How can behavioral medicine practitioners help increase adherence to prescribed regimens?
13. What is the approximate number of smokers in the United States? Discuss how social factors contribute to smoking. How do behavioral factors influence smoking behavior?
14. Describe behavioral techniques for smoking cessation. Discuss how behavioral and pharmacological treatments can enhance treatment success.
15. Obesity is a risk factor for which medical problems? What factors contribute to this disease? What is binge-eating, and how is it related to obesity?
16. Describe two primary mechanisms by which stress may result in illness. Does research support the stress-illness relationship? What techniques can be used to ameliorate stress?
17. What are some of the reasons a patient may not follow instructions for taking prescribed medications? How can the behavioral medicine practitioner intervene successfully?
18. Which strategy has been most effective in reducing the spread of AIDS? What has led to its relative success?
19. Type A behavior has been associated with increased risk for heart disease. Which components of Type A have been identified as most significant to this relationship?
20. Define and provide examples of four psychophysiological disorders. Describe possible treatments for each disorder.
21. Define biogenic and psychogenic factors. How do they relate to treatment of sexual dysfunction?
22. Why are measurement and publication of treatment results important?

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CHAPTER 15

Neuropsychology

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INTRODUCTION

From psychology and psychiatry to immunology and endocrinology, the entire health care field is experiencing an increasing interest in the neurosciences. Because of psychology's traditional interest in the brain and mind, it sits squarely in the midst of this increased activity. Although **neuropsychology** as an endeavor is rather old, dating at least to the 19th century, it is only recently that a professional field of clinical neuropsychology has begun to acquire its identity. As we shall see later, as a result of its youth, clinical neuropsychology has a variety of approaches and models. However, there is a fair amount of agreement regarding the realm of activities. Clinical neuropsychologists provide assessment and treatment of people who may have some form of brain impairment as the result of congenital factors (such as Turner's syndrome), acquired factors (such as head injury, stroke, or brain tumor), psychiatric disorders (such as schizophrenia or depression), neurological disorders (such as Parkinson's or Alzheimer's), or medical disorders (such as diabetes or liver disease).

Role of a Clinical Neuropsychologist

Typically the **clinical neuropsychologist** provides an extensive evaluation of a patient using tests of neurobehavioral functions. These neurobehavioral functions include **motor activity, perception, memory, attention, language skills, and abstraction**. Additionally, assessing emotional and behavioral factors is a very important part of a neuropsychological evaluation. The evaluation also includes taking a clinical history and conducting an interview in which

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

environmental factors are investigated. Trained and supervised technicians may be involved in administering the standardized tests, but the clinical neuropsychologist is responsible for interpreting the results and writing the report.

Clinical neuropsychology has evolved from the role of a consultant to neurologists to the role of an independent practitioner responsible for the assessment and treatment of individuals with brain impairment. Perhaps more so than other psychologists, clinical neuropsychologists tend to work in the context of an **interdisciplinary team** of professionals, including physicians, who cooperate in providing care for the patient. Clinical neuropsychologists also tend to work in medical settings.

Development of Clinical Neuropsychology

There are multiple influences on the development of clinical neuropsychology as a science and a profession. Clinical practice has changed as result of influences from advances in the basic neurosciences, influences in general psychological assessment, influences from neuropsychological theory, and influences from the types of questions that are asked of clinical neuropsychologists by the referring clinician. An example of the influence of advances in the basic neurosciences, studies revealing the impact of medical drugs on neurotransmitter systems have resulted in the inclusion of neuropsychological assessment for people being administered these drugs. As neuropsychological theory has incorporated the stages model of information processing in the understanding of memory, clinical assessment instruments have begun to include delayed recall and recognition procedures. When other professions change the types of referral questions, clinical neuropsychology develops new methods of assessment. For example, when the major question facing clinical neuropsychologists was whether there was **organic impairment**, assessment instruments involved cutoffs on single tests to indicate the presence of brain impairment. When other professions asked about the localization of the brain lesions, battery approaches such as the **Halstead-Reitan** were developed. Currently, a wide variety of assessment instruments are available, reflecting the broad range of referral questions.

HISTORY

Examination of Western thought goes back to the ancient Greeks. There is some disagreement about who invented the idea of examining brain function on the basis of investigating the psychological capacities of brain-injured patients. However, early examples include **Hippocrates's** notion that the brain was the seat of intellect, an idea shared by Herophilus (Heilman & Valenstein, 1985). Early ideas held that cognitive functions were performed in the ventricles, consistent with the prevailing conceptualization of humors or body fluids being responsible for health and illness. Although **Erasistratus** promulgated a theory of cognitive function localized to brain substance, the ventricular ideas of **Galen** in the second century were more influential. **Huarte** developed a theory of cognitive functions served by both ventricles and brain matter in the 16th

century. Finally, **Willis** in the 17th century relied entirely on brain substance, but he was most probably interested in finding a single area of the brain responsible for all psychological operations (Hartlage & DeFilippis, 1983).

The Deficit Measurement Approach

All of these ideas were examined by evaluating individuals who had experienced some form of localized brain damage and who were showing some form of cognitive or behavioral anomaly. This approach, sometimes known as **deficit measurement**, is still an important part of the science of neuropsychology as can be seen by the publication of recent books such as *Lesion Analysis in Neuropsychology* by Damasio and Damasio (1989). The general idea is to uncover some psychological deficit, usually a **cognitive deficit** such as a memory impairment in a patient. Then after the patient dies, an autopsy is performed in order to locate the lesion that is associated with the psychological deficit. In this way the importance of different brain structures for successful completion of psychological functions can be evaluated. In fact, the advances in surgical methods in the 19th and 20th centuries provided a large impetus for the field of neuropsychology by making physical **localization** of the lesion a more common phenomenon. There were, however, problems in using this method. The patient might live a significant period following the injury and appearance of the deficit, during which time there might be partial recovery of the lesion or the deficit. Alternately, the patient may develop new lesions prior to the postmortem examination, clouding interpretation of the results. However, in the early days, this was one of the few methods available.

Localizationism versus Equipotentialism

Early Greeks had localized the cognitive functions and control over the motor functions to the brain. Although the exact mechanism by which these conclusions were drawn is not known, it is likely that the conclusions were based on the examination of nature's experiments, that is, brain damage acquired through accident. Repeated observations that head injuries resulted in diminished memory or unilateral motor deficits or difficulties in language probably formed the basis of early neuropsychological hypotheses. Later, more detailed observations provided evidence that specific brain lesions may be associated with circumscribed cognitive or behavioral deficits. For example, left-hemisphere damage may be more highly associated with language disturbances.

These more specific observations fueled what was to become a continuing argument in clinical neurosciences—**localizationism versus equipotentialism**. Proponents of localizationism stated that certain cognitive skills were localized in certain areas of the brain. Proponents of equipotentialism argued that different areas of the brain were able to perform more than one function. Even though a single area may be associated with a certain function, it has equal potential for performing other functions. Under certain conditions, such as localized damage, area A may fill in for area B. The theories of localizationism derive support

from the occurrence of circumscribed cognitive deficits following localized brain lesions. On the other hand, the partial recovery of cognitive functions following brain damage seems to support equipotentialism.

The thesis of localizationism and the antithesis of equipotentialism can be found throughout the history of clinical neuropsychology. The localizationism of Antonio Damasio and Kenneth Heilman can be seen to trace from the early localization theories of **Paul Broca**. The equipotentialism of **Karl Lashley** can be traced to Flourens. Although this issue has never been resolved completely to the satisfaction of both parties, the controversy created by the argument has furthered the development of neuropsychological theory and, subsequently, of clinical neuropsychological practice. Clearly, psychological functions such as perception and language can be significantly affected by localized damage. However, it also appears to be true that under certain conditions, disrupted cognitive functions may resume operation following functional reorganization of brain areas.

Localization of Language

Language is an area that has received large amounts of attention from neuropsychologists. Perhaps because language deficits were easily noticed by relatives and brought to the attention of medical professionals, and perhaps because language was thought to be a skill that separated humans from other animals, individuals who had lost some form of language skills were studied intensively in 19th-century Europe. Even today, experimental work in classifying language deficits continues to influence clinical practice (Benton, 1988).

Paul Broca presented one of the first localizationist studies of language functions at the European Neurological Congress in 1869. In his presentation, Broca described a patient who had significant expressive **aphasia** (a deficit in language function). The patient could only repeat the word *tan* and was nicknamed “Tan” by his physician. Following the death of Tan, a postmortem examination of his brain uncovered lesions of the third inferior convolution of the posterior left frontal lobe, an area that is now known as **Broca’s area**. Shortly thereafter, Karl Wernicke presented cases of receptive language deficits associated with lesions of the left temporal lobe. The whole endeavor of associating psychological deficits with surgically demonstrated lesions became popular as a way of investigating brain function. Currently, this method is conducted using the data from **computed tomography** (CT) and **magnetic resonance imaging** (MRI) scans of the brain rather than using surgical examination. The brain-imaging method has the advantage of being able to localize lesions when the psychological symptoms occur rather than waiting until death when other lesion areas may appear.

Systems Theories—The Third Approach

Earlier we referred to the thesis of localization and the antithesis of equipotentialism. Recently, there has developed a third school of thought, namely, the **systems theories**. The earliest systems theories were probably contained in

the writings of **John Hughlings Jackson**, a British neurologist (Reynolds, 1988). Hughlings Jackson posited different levels of control over psychological functions, which then allowed for production of a cognitive skill even though the putative area thought to be associated with the skills had been damaged. For example, even though the brain area associated with voluntary speech may have been damaged, the patient could still communicate if the area associated with emotional speech was intact. To support his claims, Hughlings Jackson used observations on patients who could no longer converse, but who could still curse like sailors.

Hughlings had a disciple of sorts in **Alexander Luria**, the eminent Russian neuropsychologist. Even though they never met, separated by time and a continent, Luria continued to develop the notion of systems. Luria refers to Hughlings Jackson in his own writings, and the intellectual debt is obvious. Luria held that observable behaviors were too complex to be represented by a single brain area (Luria, 1980). A complete presentation of Luria's most important ideas is impossible in this context, but some of these hypotheses are relevant here. Luria wrote about functional systems that were collections of unobservable molecular neurobehavioral skills. Although the molecular skills were unobservable, the functional systems were observable. The functional systems had referents in cooperative groups of discrete brain areas. Because the clinician could not observe or examine the molecular skills, he or she instead had to observe different behaviors whose functional systems differed only slightly in terms of the component molecular skills in order to determine where in the functional system the breakdown occurred. For example, it would not be sufficient to observe that an individual could not read aloud. The examiner would want to observe whether the individual could read and follow instructions, whether he could copy printed words, whether he could identify individual letters, and whether he could associate **graphemes** (written symbols) with **phonemes** (spoken sounds). By comparing across these various tasks, the qualification of the syndrome could occur, identifying the nature of the deficit.

More modern systems theories include ideas of parallel distributed processing. The models of parallel distributed processing are still fairly theoretical; however, recent publications have pointed out their applicability for clinical neuropsychological practice. In general, parallel distributed processing involves notions that cognitive processing of information requires that separate features of stimuli be analyzed separately but then be combined in order for meaningful cognitive operations to occur. For example, to process the information from a traffic sign, an individual must independently process the shape of the sign, the color of the sign, and the words written on the sign. The meanings of each of these types of information have been learned through separate associations, and the representation of the traffic sign is based on a pattern of brain activity in different areas (Parks et al., 1992). In this way, separate, discrete cognitive activities are combined to form recognizable psychological operations such as reading and interpreting a traffic sign.

Another model is the idea of **neural circuitry** proposed by **D. O. Hebb** and extensively investigated by **M. Mishkin**. Mishkin has devoted the past several years to an investigation of the effects of injuries to separate parts of a system that engenders cognitive impairment. For example, by examining the neural connection between different structures, Mishkin has hypothesized a system for

visual memory involving initial processing, perceptual encoding, and storage simultaneous with activation of the **hippocampus** and **amygdaloid structures** and their feedback loop with the area storing the visual information. Combined lesions in the hippocampal and amygdaloid areas will result in impaired performance on a delayed nonmatching to sample task. Single lesions in either the amygdaloid or hippocampal regions will result in no impairment on this task (Schacter, 1989). Therefore, it isn't just damage to a brain area that results in a deficit, but damage to a system of brain structures that results in faulty performance of a psychological task.

RESEARCH METHODS

The brain is a very complicated organ. Studying the brain is therefore a complicated endeavor. Frequently, we cannot engage in direct observation of the processes that interest us most. As a result, we have to rely on somewhat indirect methods that require some level of hypothetical interpretation. The closer we get to actual observation, the more invasive and dangerous the procedure may be. The clinical neuropsychologist has several research methods available and may engage in any combination of these methods. (See Table 15-1 for a list of different methodologies.)

Neuropsychological Testing

The most frequent method is that of psychological testing. Some test of psychological function is administered in such a way that the results provide interesting information. For example, a test of explicit memory and a test of recognition memory may be administered to a group of individuals with right temporal lobe lesions, a group of individuals with left temporal lobe lesions, and a group of individuals who don't have brain lesions. In this way, the researcher hopes to see if the temporal lobe plays a differential role in explicit recall versus recognition.

Animal Models

Animal models provide the benefit that it is easier to control various factors that may be impinging on neuropsychological functions; however, these models

Table 15-1. Methods of Investigating Neuropsychological Function

Invasive	Noninvasive
rCBF	EEG
PET	Electrical brain mapping
Depth electrode	Dichotic listening
WADA	Psychological testing
Animal surgery	

have the unwanted effect of limited generalizability to human neurobehavioral function. In a way, the study of brain-damaged people also has limitations in generalizability to what may actually be normal brain function in uninjured people. Yet, both models do have something to offer in the way of allowing close examination of variables that would be difficult or impossible to study otherwise.

Noninvasive Techniques

There are multiple noninvasive methods that allow investigation of brain function and eventual comparison to cognitive operations. For example, the CT scan allows multiple exposures of low-intensity x-rays to be concatenated into fairly high-resolution images of brain structures by use of a complex computer algorithm. The MRI scan allows even greater resolution by examining the characteristic magnetic resonance of materials of different densities. Both of these methods (CT and MRI) provide pictures of structures. Other methods such as regional cerebral blood flow (rCBF) and positron emission tomography (PET) scans allow investigation of functions. The rCBF and PET differ in their methodology, but each attempts to index the amount of metabolic activity in different regions of the brain. The rCBF works by having the subject inhale minute levels of radioactive-labeled oxygen. The PET scan works by having the subject ingest minute levels of radioactive-labeled glucose. In both cases, the radioactive material is used in greater amounts in the areas of the brain that are engaged in greater metabolic activity, allowing us to localize functions and to investigate low or high levels of activation in different clinical populations.

Electrical Brain Monitoring

The **electroencephalogram (EEG)** allows us to examine whether abnormal electromagnetic activity accompanies different disorders. An enhancement of this method involves the use of computer algorithms to combine the information from different monitoring sites in order to determine relative activation. This second EEG technique is known as **brain mapping**. There are clinical applications of the EEG, as seizure activity may result in abnormal EEG records. There may be clinical applications of brain mapping in the future, as certain clinical disorders, for example dementia and schizophrenia, may have characteristic “maps.” Depth electrode recording allows us to examine the electrical activity of smaller brain regions, giving us more specific information; however, this method requires surgical invasion of the brain.

Methods to Investigate Laterality

There are also methods for investigating **laterality effects**. The **dichotic listening technique** involves having a subject listen to information through stereo headphones. Each ear receives different information, and the subject is required to answer questions based on the information that he or she receives.

The ear with the lateral advantage for processing a certain type of information will be associated with greater accuracy in answering the questions. There is also an invasive surgical way to investigate laterality effects. This method, known as the **WADA technique**, requires that a sedative-hypnotic drug be administered to one hemisphere at a time. In the 5 minutes prior to perfusion of the drug to the other hemisphere, the subject is tested to see what psychological functions may be impaired. This technique is rarely used outside of preparation for surgery to treat intractable epilepsy because of the dangers associated with the technique.

MODERN DEVELOPMENTS IN THE FIELD OF CLINICAL NEUROPSYCHOLOGY

Recently, neuropsychology has developed as a profession as well as a science. There are two major organizations devoted to the field, the **International Neuropsychological Society (INS)** and the **National Academy of Neuropsychology (NAN)**, as well as Division 40, a highly populated section of the American Psychological Association (APA). INS has a number of professions represented in its ranks, including neurologists, speech pathologists, and occupational therapists; however, the majority of individuals are psychologists by profession, and many are also clinical psychologists. On the other hand, membership in NAN is limited to psychologists. Both organizations have yearly meetings with workshops and research presentations, and both organizations publish scientific journals, although NAN is somewhat more practice-oriented.

Division 40 of the APA represents neuropsychology to other psychologists. Membership is limited to APA members. Division 40 has been active in establishing training and credentialing standards. It also publishes a newsletter and supports the scientist-practitioner model in discussions with other psychologists.

Definition of a Clinical Neuropsychologist

Clinical neuropsychology has developed with influences from multiple other disciplines. As a result, many different individuals with varying backgrounds may refer to themselves as clinical neuropsychologists. A neuropsychologist is a person with a professional interest in brain-behavior relations. This definition can include certain physicians and some occupational therapists. What then distinguishes a clinical neuropsychologist? This question raises considerable debate. Is a clinical neuropsychologist a neuropsychologist who practices in a clinical setting, or is he or she a clinical psychologist who has training in neuropsychology? Division 40 of the APA has adopted a statement that defines a clinical neuropsychologist in general terms: a doctoral-level psychologist who provides assessment of behavior and intervention as related to central nervous system function. Furthermore, the clinical neuropsychologist has completed didactic and experiential training in neuropsychology and neurosciences at a regionally accredited university and has received 2 years of super-

vised clinical training in the application of this knowledge. Finally, a clinical neuropsychologist is licensed to provide psychological services and has received review by his or her peers (APA Division 40, 1989).

Training

Traditionally, training in clinical neuropsychology took place following completion of doctoral training in clinical psychology. That individual would then seek out learning experiences with medical neurologists in order to supplement his or her knowledge of the brain. Alternately, an individual may have completed graduate training in experimental psychology involving brain-behavior relations and then received some form of clinical-experiential training. As a result, there was much variability in the type and quality of services these individuals offered. As more people entered the field and the demand for services grew, the need for greater standardization of training became apparent.

An early discussion of appropriate methods of training clinical neuropsychologists was presented in Meier (1984). A number of models were presented, including a model in which subspecialty training in clinical neuropsychology was offered in the context of a training program in clinical psychology. Other models included interdepartmental training programs involving faculty from the basic and clinical neurosciences, and independent scientist-practitioner training programs housed in departments of psychology.

The most typical method of preparing for a career in clinical neuropsychology involves attending graduate school in clinical psychology at a school where there is a clinical neuropsychologist on the faculty. Some training programs in counseling psychology and school psychology have begun offering training in neuropsychology. It would be preferable to attend graduate school where neuropsychology is amply represented in both the experimental and clinical areas and where a diverse faculty is available to students, but such institutions are the exception rather than the rule (Bornstein, 1988a). To help training institutions to develop programs, several professional organizations have provided guidelines for specialty training in clinical neuropsychology at the graduate, internship, and postdoctoral levels (INS/APA, 1987). The number of graduate psychology programs that offer training in clinical neuropsychology has increased as a result.

If the student attends an APA-approved clinical training program, the program requirements will ensure sufficient training in personality theory, behavior pathology, clinical interviewing, research design and statistics, psychotherapeutic interventions, and traditional psychological assessment. The graduate student interested in a career in clinical neuropsychology should additionally complete coursework in neuroanatomy, neurophysiology or pharmacology, and clinical neuropsychological assessment. Optimally, clinical practica experiences will include working with individuals with central nervous system dysfunction, and the student will complete a thesis and a dissertation on a neuropsychological topic.

After obtaining coursework in basic neuroanatomy and neuropsychology and completing clinical practica in neuropsychology, as well as the usual

coursework and practica in general clinical psychology, the graduate student can apply to an internship site where supervised experiences in clinical neuropsychology are available. These experiences should be fairly broad based with patients referred from psychiatric, neurological, neurosurgical, trauma, or rehabilitation services. It is best if at least 50% of the clinical year is spent in neuropsychology. Next, a minimum of 1 year of postdoctoral training in clinical neuropsychology is completed, although a 2-year fellowship is optimal.

Because many clinical psychologists were trained prior to today's availability of training experiences, some individuals attempt to obtain neuropsychology training through continuing education experiences. Bornstein (1988b) warns about the inadvisability of such an approach and suggests that instead the interested individual should seek training within the APA guidelines on respecialization. On the other hand, Meier (1987) has suggested the formation of a Learning and Assessment Center to facilitate continuing education experiences for individuals who wish to respecialize in clinical neuropsychology after practicing general clinical psychology. His suggestion involves the use of competency-based assessment and a consortium of training sites and trainers with centrally devised standards. Unfortunately, this particular model requires a commitment of resources that would be difficult to achieve across institutions.

Employment Opportunities

Originally, most clinical neuropsychologists were employed at university medical centers, usually associated with the Department of Psychiatry, the Department of Neurology, or the Department of Neurosurgery. In their work, clinical neuropsychologists were consulted to evaluate patients for whom there was a suspicion of organic brain impairment resulting in cognitive or emotional deficits. These clinical neuropsychologists would also conduct research involving the central nervous system consequences of different psychiatric or neurological disorders. Sometimes clinical neuropsychologists would be employed in individual private practices or in group private practices in conjunction with physicians or other psychologists. Recently, there has been diversification in the settings in which clinical neuropsychologists work.

As an indication of the expansion of employment sites, it is useful to review the results of a recent survey of members of Division 40 of the APA (Putnam & DeLuca, 1990). In this survey, a total of 828 psychologists returned their questionnaires with usable information regarding employment setting (there were a total of 2,402 questionnaires mailed out and 872 questionnaires returned). As can be seen in Table 15-2, the largest percentage of respondents (34%) worked in a private practice setting. However, as also can be seen in Table 15-2, a multitude of employment sites are available.

There have also been changes in the types of clinical activities performed by clinical neuropsychologists. Over the past few years, clinical neuropsychologists have extended beyond assessment and consultation and have become involved in the treatment of brain-impaired individuals. Treatment may involve providing rehabilitation to help ameliorate cognitive deficits and psychotherapy to help the person adjust to the life changes secondary to the effects of

the brain impairment. The clinical assessment work of neuropsychologists has also expanded to include patients with other medical disorders, including diabetes and hypertension.

CLINICAL AND RESEARCH AREAS

In the early days of clinical neuropsychology, the most frequently seen patients were individuals who had experienced strokes, brain tumors, or injury to the brain. Even today, the most common form of brain injury is the result of motor vehicle accidents, although sports accidents and gunshot wounds also play a role. Another group frequently seen by clinical neuropsychologists were psychiatric patients, especially schizophrenic patients and depressed patients (Levin, Yurgelun-Todd, & Craft, 1989; Newman & Sweet, 1992). There have been remarkable advances in the basic neurosciences as well as in the other clinical neurosciences (neurology, neuropsychiatry, neuroendocrinology, etc.) with the result that clinical neuropsychologists have seen their realm of clinical and research activities increase dramatically. Additionally, increased public interest in the problems of aging has provided the impetus to study and provide clinical services to this group of individuals. The federal government and private agencies have provided funding to study individuals with Alzheimer's disease and other disorders associated with aging.

Furthermore, clinical research indicates that neuropsychological evaluations may be useful in the overall treatment planning for patients with various medical disorders not traditionally associated with central nervous system impairment (Tarter, Van Thiel, & Edwards, 1988). These medical disorders include liver disease, endocrinological disorders, pulmonary disorders, kidney diseases, and cardiovascular disorders. The modern problem of acquired immunodeficiency syndrome (AIDS) also sees the involvement of clinical neuropsychologists as it becomes obvious that patients with AIDS frequently have cognitive impairment. Additionally, some individuals are exposed to solvents or other potentially harmful substances in the workplace, resulting in cognitive

Table 15-2. Primary Employment Settings of Clinical Neuropsychologists

Employment setting	Percentage of respondents
Private practice	34%
University hospital/medical center	23%
Nonuniversity medical center	13%
Government agency/facility	9%
Independent rehabilitation center	8%
Psychological, psychiatric, or medical group practice	5%
Other setting—generic	4%
Community mental health center	2%
School system	2%

Adapted from Putnam, S. H., & DeLuca, J. W. (1990). The TCN professional practice survey: Part I. General practices of neuropsychologists in primary employment and private practice settings. *The Clinical Neuropsychologist*, 4, 199–244.

or emotional problems, or they may voluntarily expose themselves to harmful substances in order to become intoxicated. Although clinical neuropsychology is not essential in all of these cases, the presence of these factors raises the risk that central nervous system effects may be present (see Table 15-3 for lists of traditional and nontraditional subjects for clinical neuropsychological evaluation).

CASE EXAMPLES

To have some understanding of the actual clinical activities of a neuropsychologist, it may be helpful to briefly consider some referral questions that may be put to a clinical neuropsychologist and see how the data are interpreted. We will consider both the differential diagnostic question of dementia versus depression and the treatment planning for a person who has suffered a closed head injury.

Case Example 1

Our understanding of the effects of **depression** on neuropsychological function has increased in recent years. Depression may result in cognitive inefficiency, poor memory, and deficits in attention. In elderly individuals, the effects of depression may mimic the effects of **dementia**. Therefore, a careful neuropsychological evaluation can help determine the correct diagnosis and the appropriate treatment. In this example, Mr. Miller, age 68, is referred by his family physician because of complaints of decreasing memory, low energy, and occasional tearfulness. The family reports that Mr. Miller, who was usually a methodical workman, has misplaced many of his tools and has not been able to finish recent projects around the home. He states that he loses track of what he is doing and can't seem to get organized. Previous medical workup has revealed no problems. The CT scan, EEG, and neurological exam were all normal. Following an interview, the neuropsychologist chooses to administer a memory test and a test of verbal relations and confrontation naming. He also administers tests of

Table 15-3. Reasons for Clinical Neuropsychological Assessments

Traditional	Nontraditional
Brain tumor	Chronic obstructive pulmonary disease
Stroke	Endocrine disorders
Seizure disorders	Anxiety disorders
Schizophrenia	Personality disorders
Major depression	Minor head injury
Closed head injury	Liver disease
Penetrating head wounds	Kidney disease
	Solvent exposure

cognitive efficiency, motor speed, visual spatial construction, and abstract problem solving, and a questionnaire regarding emotional functioning.

The results of the test indicate that Mr. Miller's memory is at the 10th percentile for people his age. His immediate recall memory and his delayed recall are both impaired. He has adequate recognition memory. He can recognize and name objects well, and he doesn't substitute different words from the same category (e.g., say the word *coat* when he means *shirt*). He has poor abstraction skills, and he demonstrates cognitive inefficiency. His motor speed is low. He has no trouble drawing simple designs, although he is quite slow. All of these results point to depression rather than dementia. People with depression are slow, have cognitive inefficiency, and demonstrate memory problems. His memory is only mildly impaired. Additionally, he doesn't show two of the symptoms of Alzheimer's dementia: naming difficulty with **semantic paraphasia** and **constructional apraxia**. Finally, the questionnaire indicates significant depression, and the interview reveals that the symptoms first appeared following the death of Mr. Miller's wife last year. After evaluation, Mr. Miller was referred to a psychiatrist for antidepressant medication, and he chose to see a social worker for counseling.

Case Example 2

Ms. Jones has suffered a closed head injury as the result of an automobile accident. She was unconscious for about 45 minutes and subsequently spent 5 weeks in the hospital receiving treatment for her orthopedic injuries. It is now 2 months after the accident, and she wishes to return to work as an electrician at a construction site. She refused inpatient rehabilitation, although such rehabilitation was recommended at the time of her discharge from the acute care hospital. Her family is concerned that she will injure herself at work. They report that she has continuing problems with memory, planning, and judgment. Her physician has referred her for an evaluation in order to make a decision about releasing her to return to work.

During the interview, Ms. Jones admits to having minor problems with memory, but insists that she can return to work. She reports sleeping an increased amount since the accident and frequently needs a nap in the afternoon, but she feels this will change once she starts back to work. Testing reveals that her immediate recall memory is at the 20th percentile for an individual her age. After a 30-minute delay, she can recall almost none of the material. Recognition in a multiple-choice format only improves her memory to about 75% of the material. She is extremely slow on all timed procedures. She has trouble with cognitive flexibility, and when asked to alternate between two different activities (sequencing numbers and sequencing letters), she "gets stuck" on one or the other sequence. She has marked difficulty on tasks that require problem-solving skills. On the test of nonverbal abstract problem solving, she became distraught and the procedure was discontinued. The test results were used to help her accept the difficulties she was having. A feedback session was conducted with her and members of her family. She agreed to participate in out-

patient rehabilitation with a plan to receive vocational rehabilitation when her cognitive deficits improved sufficiently.

A DAY IN THE LIFE OF AN ACADEMIC CLINICAL NEUROPSYCHOLOGIST

As a way of understanding the variety of professional activities in which a clinical neuropsychologist may engage, let's follow a clinical neuropsychologist working as a faculty member at a medical school as she completes her day. Dr. A was hired in the Department of Psychiatry, but she provides consultation to faculty-clinicians in various other departments of the medical center.

Her first item of business on arriving at work is to conduct rounds on the trauma patients in the hospital. The clinical neuropsychologist is accompanied by a postdoctoral fellow in clinical neuropsychology, and together they conduct short bedside evaluations of the patients in order to chart their current status and document any changes in the level of confusion or orientation. They ask questions of the patients in order to chart the patients' awareness of surrounding and circumstances.

One of the patients was involved in a serious automobile accident 8 days ago. Today, the patient is alert enough to allow a more comprehensive evaluation of memory and cognitive skills. Later in the day, the postdoctoral fellow will return to this patient with some short standardized tests of cognitive function. Then the clinical neuropsychologist and the postdoctoral fellow will meet to discuss the results and write a note in the chart detailing the interpretation and suggesting options for treatment. While completing rounds, the clinical neuropsychologist is stopped by a neurologist who asks for advice on the behavioral management of a confused patient.

Following the completion of rounds, the clinical neuropsychologist returns to her office to pick up audiovisual aids for a lecture that she will give to residents in psychiatry, neurology, and neurosurgery. The lecture provides information regarding bedside evaluation techniques that will give information on the patient's mental condition. The residents already know how to conduct the standard mental status exam, and the techniques they learn in this lecture will help them to obtain a more detailed assessment of memory and attention.

Next, the clinical neuropsychologist goes to the outpatient clinic. Her first patient is there with his wife. The patient has been experiencing declines in memory. He and his wife feared that he might be developing Alzheimer's disease, and they discussed these fears with their family physician who then referred the patient for this evaluation. The clinical neuropsychologist interviews both the patient and his wife, obtaining information about his medical history, family history, and psychiatric history. She obtains information regarding his education, work experience, and hobbies in order to estimate his **pre-morbid level of functioning**. She inquires about any changes in emotional status. Finally, the clinical neuropsychologist performs a few short tests of cognitive function.

As the result of the hour and a half spent with the patient, the clinical neuropsychologist selects a variety of standardized tests to be administered by

the technician. She confers with the technician, and explains what signs to be especially attentive to and what the patient's special needs may be. After introducing the patient to the technician, the clinical neuropsychologist gives the patient's wife a questionnaire regarding the patient's daily activities and emotional status. From time to time, the clinical neuropsychologist will check with the patient and the technician, and with the patient's permission, she will observe some of the testing behind a one-way mirror.

The next patient in the clinic is seen in conjunction with a psychology intern (who has not yet received his Ph.D.). The patient suffered a closed head injury 2 months ago. Although he was released from the hospital after 3 weeks, he and his family report that he is different. The interview uncovers that the patient is more easily irritated and is having memory difficulties. Additionally, the patient is reported to have difficulty in organizing and planning his daily activities. The clinical neuropsychologist and the intern decide which tests to use, and the intern and the patient get to work while the clinical neuropsychologist obtains a more detailed interview with the patient's family.

At lunch, the clinical neuropsychologist meets informally with a group of colleagues who share similar research interests. In between bites and swallows, they discuss the treatment and rehabilitation needs of patients with seizure disorders.

After lunch, the clinical neuropsychologist returns phone calls that have accumulated while she was in the clinic. An insurance company wants information regarding the amount of time spent with a certain patient. A patient's husband is asking for the telephone number of a peer support group. A lawyer calls to schedule a deposition regarding a patient who had been involved in an automobile accident. Finally, the clinical neuropsychologist calls a colleague in another city to get a reference article on a problem exhibited by one of her treatment patients.

Next, the clinical neuropsychologist will see some of her treatment patients in appointments that will last about 1 hour each. The first patient had a temporal lobe tumor surgically removed, and now the clinical neuropsychologist is helping the patient to improve his memory by using alternate encoding techniques. The next patient is having anger control problems following a closed head injury, and the clinical neuropsychologist is applying cognitive-behavioral methods in the treatment. Another patient is the wife of a man who suffered a stroke, and she is receiving psychotherapy to help her cope with the stressors involved in the couple's life changes.

Finally, the clinical neuropsychologist meets with the intern and the postdoctoral fellow to review the work conducted that day. She provides supervision in the interpretation of the test results and suggests readings related to the problems encountered that day. At the end of the meeting, the three of them review the data collection process in a project in which they are collaborating.

SUMMARY

Clinical neuropsychology is a growing and vibrant field. The changes in clinical practice are influenced by changes in neuropsychological theory, in

basic neurosciences, and in the general field of health care. The interaction of localizationists, equipotentialists, and systems theorists has furthered the development of the field.

The field of professional clinical neuropsychology developed out of a hybrid of psychology and medical neurological sciences. Therefore, there has been great variety in the type of training and the type of activities engaged in by clinical neuropsychologists. Recently, standards for training in clinical neuropsychology have been proposed, and students today can take advantage of these standards when planning their education.

Traditionally, the clinical neuropsychologist would evaluate patients with brain tumors, strokes, or traumatic brain injuries. However, many different disorders are being found to have some relation to cognitive or emotional/behavioral functioning. The range of patient diagnoses has increased greatly. Today, clinical neuropsychologists not only assess for brain impairment but also treat individuals who may have suffered brain impairment.

STUDY QUESTIONS

1. List potential sources of brain impairment. What neurobehavioral functions of brain-impaired patients do clinical neuropsychologists evaluate?
2. How do clinical neuropsychologists assess emotional and behavioral factors in brain-impaired patients?
3. What is the treatment context for most clinical neuropsychologists (i.e., setting)?
4. Discuss the development of clinical neuropsychology. How have other disciplines influenced its development?
5. Explain the deficit measurement approach. What type of deficits are evaluated in this approach?
6. What contributions did Hippocrates, Erasistratus, and Willis make to the eventual development of neuropsychology?
7. Differentiate between localization and equipotentialism. Who are the key contributors to each view? Which view has greater support?
8. Define aphasia. What is the significance of Broca's area? Where is it located?
9. Who is Alexander Luria? Describe his theory of brain function.
10. Define the terms *grapheme* and *phoneme*.
11. Describe parallel distributed processing.
12. Describe D. O. Hebb's idea of neural circuitry. How has Mishkin extended this idea? How do lesions in the hippocampus and amygdaloid structures affect performance?
13. A number of different research methodologies are available to the clinical neuropsychologist. Outline the key components of each methodology, including a description of procedures and the type of function or dysfunction identified. Discuss the strengths and liabilities inherent in each method.
14. What are the major organizations devoted to neuropsychology? Which professions are represented in these organizations?
15. What are the difficulties in defining the profession of clinical neuropsychologist?
16. Describe the different avenues of training available to those interested in this field. What coursework is essential? What type of clinical experience and supervision is needed?
17. What is the employment outlook for neuropsychologists?

18. Clinical and research areas continue to evolve. Describe some of the recent changes occurring in each area. How might these changes influence future training needs?
19. What is the most common source of brain injury?
20. Discuss the description of "a day in the life of a clinical neuropsychologist." What activities would you most enjoy? Least enjoy? Why?

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CHAPTER 16

Pediatric Psychology

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INTRODUCTION

When children have problems, where do their parents take them? Often they go to the pediatrician, no matter what the problem. Many of the questions parents ask pediatricians during checkups are about nonmedical problems (Wissow, Roter, & Wilson, 1994), such as questions about a child's behavior. Visits to the doctor, diseases, disabilities, and hospitalization all affect children's psychological well-being. However, physicians usually do not have the time or training to provide psychological services to their patients (Roberts & Wright, 1982). This creates a need for mental health services and consultation in medical settings. Although **pediatric psychologists** address health issues more and are more likely to use a consultation–liaison model, pediatric and clinical child psychology overlap in their coverage of behavioral and emotional problems of children, and both require specialized training *in vivo* (Roberts & Walker, 1989).

In addition to meeting the acute needs of children, there are several other reasons for psychologists working closely with the health care profession. First, close contact between mental health professionals and other health care professionals allows children to be helped before emotional or behavioral problems become serious or difficult (Roberts, Maddux, Wurtele, & Wright, 1982). Second, children's health care visits provide a unique opportunity to promote healthy and safe behaviors by children and their families, as well as to teach parenting skills. Consider, for example, that preventable injuries are the primary cause of death among children (Peterson & Roberts, 1992), that dietary and exercise habits of children are a factor in their lifelong health (Millstein, 1989), and that during childhood potentially long-standing patterns of behavior develop. Fur-

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

ther, when mental health care professionals are routinely considered part of the medical team, families may make more use of psychological services and feel less stigmatized by the need for them.

Additionally, the competencies of the physician and the psychologist are complementary. Many of the problems discussed in this chapter necessitate a physical workup in order to determine an appropriate intervention, which may well be a behavioral one. Psychologists then implement interventions or, in some cases, have passed these skills on to the pediatrician (Drabman & Rosenbaum, 1980). Similarly, psychologists have developed rigorous assessments of children's response to **pharmacological treatments** (Pelham & Milich, 1991) and behavioral/pharmacological combinations (Pelham et al., 1993).

Pediatric medicine and child psychology have had long-standing ties (Roberts, 1993). Considerable thought has gone into the best ways that psychologists and physicians might work together (e.g., Roberts & Lyman, 1990; Stabler, 1988) as well as how best to train psychologists to accomplish this collaborative relationship (e.g., Drabman, 1987). However, this chapter focuses on children and their well-being, rather than on history and professional issues. We believe that this is the best way to give you a sense of the exciting and expanding role of psychologists in children's health care: pediatric psychology.

HERE'S LOOKING AT YOU, KID

One issue that psychologists have traditionally been called on to address concerns children's strengths and weaknesses, and descriptions of the types of problems that children have. In pediatric psychology, assessment strategies include some of the same tests, questionnaires, observations, and interviews generally used in child clinical psychology. There have also been a number of specialized measures developed to address particular pediatric areas.

Methods of Assessment

Depending on the child's problems and needs, an assessment might involve intelligence and achievement tests to evaluate intellectual functioning, learning problems, and changes associated with disease or treatments. Even when children are too young or otherwise unable to undergo a standard intellectual evaluation, estimates can be made of their **developmental level**. That is, what chronological age generally corresponds to their behaviors in certain standardized testing situations? How do they use certain toys and objects? Adaptive functioning in daily living can be ascertained with standardized interviews with caregivers. In brain-injured children a neuropsychological battery may help identify dysfunction. Children's emotional adjustment and behavior are often evaluated using symptom checklists and personality inventories.

Although the best way to choose the most appropriate assessment tools still needs further exploration, the choices should involve sensitivity to both the unique characteristics of the child and the impact of any medical condition (Mash & Terdal, 1990). There are instruments designed specifically for use with

children who have particular illnesses or somatic problems. There are questionnaires regarding the knowledge necessary for the management of diabetes and other illnesses, checklists of adherence and preventive behaviors, systems to record distress and coping during medical procedures, pain diaries, picture scales to show pain intensity, and medication side effects questionnaires. For example, a measure of psychosocial factors associated with chronic illnesses is currently in development (Adams, 1995). This scale, called the **Social Scale for Chronic Illness** (see Box 16-1), is administered to parents to determine if further assessment of the ill children needs to be done.

Because of the need for quick, effective interventions in medical settings, the assessment techniques most often used in pediatric psychology are interviews and behavioral assessment. A brief behavioral assessment examining the antecedents and consequences of problem behaviors is sometimes referred to as a **functional analysis** (see Box 16-2).

CASE EXAMPLE. Dan, a 12-year-old boy with a disease causing very fragile skin (epidermolysis bullosa), was referred for an inpatient evaluation by our hospital's pediatric rehabilitation service. He had been hospitalized in order to try to increase his level of self-care. Baths and dressing changes were painful and difficult. We were called when his stalling had extended the bath procedure from its usual 2 hours to 5 hours each day.

Interviews and observation indicated that Dan had become very dependent on others, and that he felt his situation was hopeless. He seemed to have found that the little control he could exercise in his life was to disobey his caregivers and delay his care. His refusals forced them to do everything for him, and thus delayed the procedures. He received more attention for delaying than by evincing positive behaviors.

Intervention often involves changing the aspects of the child's environment that lead to difficulty. Observation continues as treatment is administered, and changes in treatment can be made until improvement is observed. In working with Dan, the rehabilitation team and the family collaborated to increase his cooperation and participation in his bathing and dressing changes.

Guidelines were placed in the medical chart that showed how staff were to reward Dan's cooperation using stickers, games with staff, extra phone time, or special movie requests. A flowchart indicated when he would receive a reward, a reminder, or a short period of being ignored, or lose phone privileges. Specifically, the time Dan could take in the bath and bandage procedures was reduced by 15 minutes each day until the bath times had returned to their usual length, and by meeting the daily goal Dan was able to obtain the stickers, games, phone time, and movies. If Dan was noncompliant during the procedures, he would be ignored for 1 to 2 minutes. Dan monitored his own progress on a wall chart. He enjoyed the self-monitoring and public posting of his improvement, as well as his meetings with the therapist, during which he received support and encouragement. He discussed his frustrations with the therapist and practiced self-statements to encourage himself and to remind himself of the fun activities to come. Dan's bath time returned to only 2 hours per day, and he began to have much more positive interactions with his caregivers.

The backbone of this intervention and many others is the use of **operant**

Box 16-1
Social Scale for Chronic Illness: Parent Report

Child's Name: _____ Age: _____ Sex: M F

Parent: Mother Father Other: _____

Number of my child's brothers and sisters in our household and their ages:

The type of school setting and classroom my child is in: _____

My child's medical diagnosis: _____

DIRECTIONS: For each question, please indicate how much difficulty your child has in the situation listed. Circle the appropriate number to indicate your response: 0 = not at all; 1 = just a little; 2 = pretty much; 3 = very much. Please circle only one number for each question. If you circled an answer other than 0 (zero), indicate whether the social difficulties are caused by your child's chronic illness or disease (Y = yes; N = no).

	Not at all	Just a little	Pretty much	Very much	Because of illness?
1. My child misses many school days.	0	1	2	3	Y N
2. My child cannot participate in many school activities (Examples: gym, social groups) that he or she wants to do.	0	1	2	3	Y N
3. My child is left out of or excluded from peer activities or games.	0	1	2	3	Y N
4. My child cannot play in team sports that he or she would like.	0	1	2	3	Y N
5. My child has problems making or keeping friends.	0	1	2	3	Y N
6. Other children tease my child about his or her appearance.	0	1	2	3	Y N
7. My child cannot participate in recreational activities (Examples: swimming, bicycling) that he or she wants to do.	0	1	2	3	Y N
8. Teachers treat my child differently from his or her classmates.	0	1	2	3	Y N

	Not at all	Just a little	Pretty much	Very much	Because of illness? Y N
9. My child is not as independent as he or she should be.	0	1	2	3	Y N
10. My child cannot participate in social activities (Examples: overnight stays, dances) that he or she would like to do.	0	1	2	3	Y N
11. My child cannot participate in social clubs or organizations (Example: scouts, youth groups) as he or she would like.	0	1	2	3	Y N
12. My child's school performance is below average.	0	1	2	3	Y N
13. My child has problems in his or her relationship(s) with parent(s).	0	1	2	3	Y N
14. My child has problems in his or her relationships with brother(s) and/or sister(s).	0	1	2	3	Y N
15. My child feels different from other children his or her age.	0	1	2	3	Y N
16. My child feels uncomfortable in social situations, such as parties or getting together with family friends.	0	1	2	3	Y N
17. My child is embarrassed about having to manage his or her illness (diet, medication, etc.).	0	1	2	3	Y N
18. My child is bothered because he or she cannot do as many things as his or her brother(s) and/or sister(s) are able to do.	0	1	2	3	Y N
19. My child cannot play outside as often as he or she would like.	0	1	2	3	Y N
20. Other children tease my child because he or she is ill.	0	1	2	3	Y N

Box 16-2**Functional Analysis of Behavior**

The following are some questions that are useful for the therapist (Haynes, 1986):

1. Is intervention warranted?
2. Which behaviors are a concern (excessive or insufficient)? Which of these should be “targeted”?
3. What should be done? By observing the covariation of events, hypotheses are formed regarding possible intervention strategies. If the target behaviors occur in certain situations and are followed by certain events, that information can be used to infer the targets’ possible origins and functions. By changing the environment, the rate of occurrence of the target behavior may change.
4. Is my intervention working? If not, how should it be changed? Should it be discontinued? If so, when?

conditioning. By using rewards that happen to be effective with a particular child, specific desirable behaviors can be encouraged in particular situations. When children would not normally be motivated to engage in the desirable activities, this can be of great initial help. Optimally, the activities will lead to natural rewards such as improvement in functioning and better relationships with others, and it is hoped these natural reinforcers will maintain the behaviors on a longer term basis.

When improvement is observed, it is useful to demonstrate that it was in fact the intervention that caused the improvement, rather than some coincidental event (e.g., a change in hospital staff) or spontaneous improvement. Control over the problem can be demonstrated by undoing the changes that have been made, but sometimes this might not be desirable, ethical, or even possible. Fortunately, successful modification of behavior can also be demonstrated in other ways, such as by showing that the same intervention is effective with other problems the child has, by showing that it works in other settings if improvement has not already occurred in those settings, or by showing that the intervention is also effective with other children. In addition to demonstrating that the intervention can be generalized to other problems, settings, or individuals, it is very important that the observations are reliable—that more than one observer can independently record the same findings. By establishing this **interrater reliability**, credence can be given to the observations. For a discussion of basic **generalizability** and reliability issues, see Gelfand and Hartmann (1984).

Follow-Up

Just because the child has shown improvement in the medical setting does not mean that there will be similar improvement at home and school. Indeed, one important challenge for psychologists is to guide children’s parents and

teachers in how to maintain improvement. Often children are referred on an outpatient basis, and the thrust of an intervention needs to be carried out by psychological consultation to the family or school. **Naturalistic observation** (unobtrusively watching the child) in school and home settings is useful, but may be impractical; therefore, we rely on discussions with parents and teachers, teacher and parent rating scales and questionnaires, or behavioral diaries.

For improvement to be maintained, creative problem solving is needed as the child develops, as any illness progresses, and as the child's environment changes. Follow-up appointments and even phone calls can help to accomplish this. In Dan's case, follow-up included the use of the reward system at home, facilitating Dan's return to school; attempts to increase available peer relationships; and scheduling the family to continue to receive services on an outpatient basis.

YOU CAN LEAD A HORSE TO WATER

You can lead a horse to water, but you can't make it drink, the saying goes. A common problem in health care is how to help people help themselves. For example, it is difficult for many children and adolescents with diabetes, as well as their families, to keep up with the complicated diet, glucose monitoring, medication, and exercise involved in self-care (La Greca & Spetter, 1992). Psychologists attempt to help these families learn how to monitor glucose levels correctly, keep accurate records, work toward specific behavioral goals, overcome practical obstacles, and plan for appropriate management of problem situations.

Communication

Sustaining good levels of self-care is more complicated than just remembering to engage in the recommended behaviors. Whether parents adhere to medical recommendations is affected by their perception of the seriousness of the symptoms, and the benefits of treatment, as well as their attempts to manage the child's problems in their own ways (Mash & Terdal, 1990). Because of this, one of the crucial elements in adherence is facilitating communication between parents and health care providers. This can involve helping children and parents become more assertive about their concerns. It also often involves helping health care providers both elicit patient concerns and provide opportunities for these concerns to be voiced.

CASE EXAMPLES. A 15-year-old boy with a spinal cord injury repeatedly told physicians that he had no questions, but revealed to us that he was deeply concerned about his future sexual functioning. He was too embarrassed to ask questions when there were a number of people in the room, or when there were female interviewers present, including the social worker and nurses that were assigned to him. In another case, the mother of a child in rehabilitation was

believed to be disregarding the team's treatment recommendations, until it was learned that her high anxiety level was interfering with her understanding and remembering instructions. By repeating instructions, having her repeat them back to us, providing instructions in written form, and referring her to individual therapy, the team was able to communicate more effectively with her.

Family Factors

In addition to the benefits from increasing communication between the health care team and the family, health benefits may also result from improved communication *within* the family. There should be family discussions of who is responsible for ensuring that certain events occur, such as which members are to be involved with the many tasks in the management of a child's disorder (Anderson, Auslander, Jung, Miller, & Santiago, 1990).

The nature and quality of the adult-child interactions affect adherence to treatment recommendations. This is apparent, for example, when a child participates in treatment willingly at the request of certain caregivers but not others. Sometimes this can be addressed by improving the relationship between the child and particular caregivers, and other times it can be arranged for the more effective caregiver to be present during treatment.

For example, we know one child with leukemia who tolerates bone marrow aspirations very well in the presence of his mother, but not his father. The family found that the easiest solution to this problem was to arrange the mother's schedule so that she could accompany the child to the medical center. We have worked with several children who had particular favorite hospital personnel they wished present during painful procedures. Favorite staff often do not recognize how important their presence is to the child. Although it is not always feasible, their presence can make things go much more smoothly. Sometimes staff members may be preferred because the initial clinic visits involved contact with them, because the child knows that they will be honest about what is going to occur, or because the staff members communicate understanding to the child. Thus, staff members should be aware of and try to fill this role for a child, especially if the staff member can be present throughout the course of treatment.

Developmental Considerations

Parents and professionals may have inappropriate expectations given a child's level of cognitive development. Expecting a child either to assume too much responsibility or not to assume enough responsibility in treatment may create difficulty. In Dan's case, discussed earlier, he was not assuming enough responsibility, given his age and level of cognitive functioning. A 12-year-old of average intelligence is generally able to perform the duties that were expected of Dan, but he had become frustrated with the demands involved, and had learned that he could get more attention from his caregivers by delaying the procedures. In other cases, parents' attitudes must be adjusted so that they do not

expect very young or developmentally delayed children to assume an inordinate amount of responsibility.

THIS IS GOING TO HURT

Helping children cope with the distress that goes along with medical problems and their treatment is one of the toughest challenges facing pediatric psychologists. Children undergoing a medical procedure can benefit from practice in coping strategies (Blount et al., 1992). If they are participating for the first time, they may also benefit from information about what the experience will involve, and from seeing another child successfully learn to cope with the distress (Klorman, Hilpert, Michael, LaGana, & Sveen, 1980).

Skills to Teach

Two key coping strategies are **relaxation** and **distraction**. These techniques have been employed in a number of different ways. In the use of distraction, children have been coached to blow party blowers, focus on something else (such as counting, looking at an object in the room, or engaging in a discussion with an adult), imagine themselves having special abilities or being in a different situation, and watch videos during the event. Relaxation strategies have involved deep breathing and progressive muscle relaxation (a step-by-step procedure in which the child tries to relax each major muscle group). Often the child will practice for several sessions how to handle an upcoming medical procedure, and sometimes be encouraged with rewards to use the coping strategies (see Dahlquist, 1992). However, we have a lot to learn about how to help these children and their families cope with the many problems that may be associated with painful medical conditions (Tarnowski, Rasnake, & Drabman, 1987). For example, we need to know more about the specific factors that predict early on how well families will adjust to the situation, and which families may need more specialized services (Tarnowski, Rasnake, Gavaghan-Jones, & Smith, 1991). Communicating our findings to the health care community is going to require more attention as well (Allen, Stanley, & McPherson, 1990).

How to Interact with the Child

Increasing attention has been given to the role of adults, especially parents, in the child's medical procedure. Among the emerging findings are that adults should avoid ignoring the child, being critical, or even being overly-sympathetic. Instead, they should be honest about what is going on while distracting and coaching the child. We have often seen experienced nurses and physicians intuitively use a variety of distraction strategies such as engaging the child in a conversation about a hobby, using humor, or allowing the child to play with and learn about some of the medical equipment. Psychologists have been research-

ing the degree to which children tend to seek or avoid information about stressful events. It appears that children do have differing needs for information, and that seeking and obtaining information is in general associated with better coping (Blount, Davis, Powers, & Roberts, 1991).

A TOUGH ROW TO HOE

Helping children and their families adjust to chronic diseases and disabilities may involve **supportive therapy**. This may include help in locating resources, as well as skills training in how to deal with peers, lifestyle restrictions, and negative emotions.

Social Support

Children with chronic diseases can be vulnerable to emotional problems such as anxiety. This may be related to the adequacy of social support available to the family (Hamlett, Pellegrini, & Katz, 1992). Do the chronically ill children and their families have good relationships with people in whom they can confide? Are there friends who can give practical help and advice when needed? The therapist and parents can also provide direct support to ill children by engaging in discussions and activities with the child that allow expression of the child's concerns.

Although children with cancer, for example, may be as well accepted as other children, often they have a reputation for being more socially isolated, and may miss out on school days and other opportunities for peer contact (Noll, LeRoy, Bukowski, Rogosch, & Kulkarni, 1991). Many children's hospitals have education programs and play rooms that allow peer interaction during hospitalizations. They also encourage children to begin attending their regular school as soon as possible after discharge.

Stress Management

As discussed earlier in regard to **adherence**, stressful events can interfere with attempts to manage a disease, make it to appointments, and follow treatment recommendations. In some diseases, such as diabetes, it is possible that emotional stress may also upset the body's balance in ways other than by influencing adherence (Hanson, Henggeler, & Burghen, 1987). In combination with child temperament and characteristics of the family, stress can affect the amount of health services needed by children (Wertlieb, Weigel, & Feldstein, 1988). Teaching children with chronic conditions how to manage stressful events is important because of both direct and indirect effects of stress. However, stress management alone does not appear to be a silver bullet; other approaches, such as those we discussed in relation to adherence, are needed (Boardway, Delamater, Tomakowsy, & Gutai, 1993). Sometimes choices must be

Box 16-3**Can—and Should—Shortness Be Treated with Drugs?**

One chronic condition is deficient growth hormones, resulting in very short stature. For the last 25 years it has been possible for children with a deficiency of the hormone needed for normal growth to be treated with replacement growth hormone. This was originally taken from human cadavers, but in 1985 human growth hormone (HGH) treatment was found to be associated with a degenerative neurological disease (Creutzfeldt-Jakob disease). Since then, new biotechnology has allowed pharmaceutical companies to manufacture synthetic growth hormones (Lewis, 1990). The treatments involve injections several times a week for many years, and cost \$10,000 to \$20,000 per year (Adler, 1992).

One of the main reasons for administering the hormones is because of the social and thus psychological problems experienced by very short children. It is believed that if their height were greater, they would be more likely to be treated according to their age and to have good peer relationships, higher self-esteem,

and better academic achievement (Lewis, 1990; Stabler, 1991). A logical question has arisen: Why not try to treat people who are very short but who apparently are not growth-hormone deficient? This use of the drug has been occurring more frequently, but has proven to be controversial for a number of reasons (Adler, 1992).

First, the effects of the drug on non-hormone-deficient children's height is still being determined. Additionally, opponents of this use of the drug argue that being short is not necessarily a problem. When it is, they believe that we should be trying to change society to be more accepting of short people, rather than trying to increase the children's height with expensive and difficult treatments. They worry that this may further undermine the children's self-esteem by communicating to them that they should be different. Several groups of researchers are now trying to determine the physical and psychological effects of the use of growth hormone in children who are short but not growth-hormone deficient.

made between psychological interventions to increase coping abilities and more drastic solutions (see Box 16-3).

THE WHOLE IS GREATER THAN THE SUM OF THE PARTS

Often, pediatric psychologists are given a referral of a physically ill child and asked whether a specific problem is psychological. To reply that it always involves both psychological and physical components is both obvious and confusing. It is obvious when considering that all psychological activities are physical events, and that they interact with many of the *other somatic* (bodily) **processes**. It is confusing, however, because there are many brain-related bodily actions and reactions that are not yet fully understood. It is this lack of understanding that leads to the artificial mind/body dichotomy, even within the

medical community. Although there are a variety of fascinating somatic problems in children (Sturges & Drabman, 1995), we will address only two: recurrent pain and feeding problems.

Recurrent Pain

Sometimes, despite the lack of any detectable medical problems, children develop **recurring pain** complaints and associated behaviors. They may stay home from school, become bedridden for periods of time, even display very realistic symptoms (e.g., seizure-type episodes). Although there are occasions when such children are later found to have difficult-to-detect medical conditions, often it appears that they have imitated the pain behaviors of a family member, or someone they knew, or of their own previous illnesses. They then learned that in certain situations the behaviors resulted in rewarding consequences, or helped them to avoid unpleasant events (such as going to school). Thus they continue to show the “symptoms.”

CASE EXAMPLE. Sometimes relationships within the family can encourage the child to take the sick role (Mullins, Olson, & Chaney, 1992). For example, in a recent referral, we were asked to evaluate a 15-year-old male named Mike. He had been admitted for many diagnostic tests to try to identify the source of his frequent muscle cramps and headaches. He and his mother even had an elaborate vocabulary established to describe his variety of pain complaints, including unique words for gradual pain onset and sudden pain episodes.

Although it was impossible to rule out all physical causes of Mike's problems, we found some possible contributory psychological factors. Mike and his mother considered themselves to be best friends. She was constantly at his side, including during his bathing and dressing. Her husband was handicapped, emotionally distant, and uninvolved with the family. Mike reported being called a “sissy” by his peers, and described his relationships with them as poor. He also related difficulty in coping with stressful situations.

We conceptualized Mike's disabling episodes as possibly having been learned from his father, and then reinforced by serving as a means for both Mike and his mother to find intimacy and as a way to escape stressful situations. Mike and his mother were reluctant to accept psychological explanations for the pain experiences. This is often the case for individuals who tend to express their distress with bodily complaints. However, Mike acknowledged that pain onset was precipitated by stressful situations. It was described to him how his thoughts could affect his painful episodes, and how they could be used to reduce pain. The demonstration to a child that one can influence seemingly automatic responses can be an empowering component of behavior interventions (see Box 16-4).

Mike began to use relaxation techniques effectively and become less dependent on his mother. The family was referred to a therapist in their area for family therapy. However, before therapy began, we learned that Mike's mother had taken him to another medical service with an entirely new set of complaints.

Box 16-4**Biofeedback—Window to the Body**

Everyone has heard of one kind of biofeedback, referred to as lie detectors. Other kinds of biofeedback operate in similar ways, displaying bodily activity that normally we might not be able to detect. Electromyography, for example, allows muscle tension to be displayed. It is especially useful for muscle-tension headache sufferers to be able to observe the forehead's muscles contract as they think stressful thoughts, and relax as they think calming thoughts.

It may not be the case that modifying the body's muscle tension, heart rate, and temperature is the key to changes in clinical problems. However, being able to demonstrate to clients that they can effectively modify their bodily responses can be of great value. On the

other hand, with young children, we have found that they often do not need (or understand) these demonstrations. They are often very willing to try strategies to influence their bodily states such as pain perception. Young children may benefit from concrete analogies, however. For example, they may be able to understand and even reproduce what it is like for body parts to become numb, by remembering how their arm or leg falls asleep sometimes (McGrath, 1990). Many children can become vividly involved in imaginary scenes to distract or relax themselves, learn to "transfer" pain to someone else by hand squeezing, or imagine themselves to have superhuman abilities (McGrath, 1990).

This raised additional questions about the motivating factors behind the complaints. It also illustrated the difficulty in establishing and maintaining a therapeutic relationship with these families. It may also reflect that because therapy may sometimes be more effectively done in the pediatric setting rather than a mental health facility (Mullins et al., 1992), we should have implemented family therapy sessions in the hospital.

Feeding Problems

FOOD REFUSAL. Many sick children develop feeding problems, such as refusing certain or even all foods. This often happens to infants who have negative experiences such as stomach upset or other pain associated with feeding, or become accustomed to hospital feedings by a tube. When an infant refuses food, parents sometimes inadvertently reinforce the refusal with excessive attention, and they may be less willing to make demands and set limits for a child who has been ill (Singer, 1990).

Some children are particularly at risk for feeding problems because of muscular or structural impairments. One toddler that we saw had been born without a complete esophagus. After the reconstructive surgeries were completed, he still reacted to solid food with gagging and vomiting. Gradual changes

to foods of more solid consistencies were rewarded, and his diet was slowly modified. Lots of social praise was given with each swallow. Some children have learned to have temper tantrums to avoid food. Consistently ignoring the child during the tantrums and rewarding appropriate behavior can be helpful. Sometimes it is important to prevent the child from being able to avoid food through misbehavior. In one study, involving two children, this was accomplished by holding the spoons to their mouths until swallows were taken, an approach the researchers dubbed "contingency contacting," because it brought the food-acceptance response into maximum contact with the positive reinforcement contingencies (Hoch, Babbitt, Coe, Krell, & Hackbert, 1994). Each trial, as a training opportunity in an experiment is called, persisted until acceptance of the spoonful, which resulted in praise even if the response was delayed. Eventually only responses that occurred within 5 seconds resulted in praise. The procedure produced more improvement than did reinforcement alone for the two children, and this performance declined when the contingency contacting procedure was removed (showing that the procedure was responsible for the improvement). As children continue training, they sometimes learn that eating can be a pleasant and satisfying behavior, and they develop more normal patterns that persist after treatment.

FAILURE TO THRIVE. When infants gain less weight or are smaller than the vast majority of others their age, they are considered to be **failing to thrive**. Whether a medical cause can be found or not (many illnesses can cause failure to thrive), environmental factors should be examined (Kelley & Heffer, 1990). Sometimes an infant will gain weight only while removed from the home environment and placed in the hospital. Factors in the home environment that can contribute to an infant's lack of growth include neglect, abuse, improper or rushed feedings, parent-child conflict, or even a lack of food due to poverty. An inpatient assessment can pinpoint needs for intervention, when improvement is seen in the hospital and specific problems are observed in the parent-child interaction during feeding or are reported by family members. Parent training can be accomplished in the hospital via the modeling of skills for the parent and coaching the parent, and social services can be coordinated that may help alleviate poor living conditions.

AN OUNCE OF PREVENTION

Experts in pediatric psychology see prevention as the second most important direction for future research, following research into chronic illness (Kaufman, Holden, & Walker, 1989). Although pediatric psychology as originally conceptualized was defined by its location in the medical setting, it is now considered to encompass interdisciplinary approaches to many children's health issues in any setting. To quote from the masthead of the *Journal of Pediatric Psychology*, "Pediatric psychology is an interdisciplinary field addressing physical, cognitive, social, and emotional functioning and development as they relate to health and illness issues in children, adolescents, and

families." It is of great interest to parents, educators, and health care providers how to successfully promote behaviors that will reduce risk of injury and disease.

Unintentional Injuries

Injuries, the major cause of death in children in developed countries (Baker, O'Neill, & Karpf, 1984; Christoffel, 1993), should be a primary concern for pediatric psychology (Finney et al., 1993).

CHILDPROOFING THE HOME AND SUPERVISING THE CHILD. Most deaths in early childhood happen at home, often because of a fall, burn, cut, ingestion of poisonous substances, or unintentional shooting with a household gun (Colver, Hutchinson, & Judson, 1982; Jones, McDonald, & Shinske, 1990; National Safety Council, 1986). Both unintentional injuries and cases of children's victimization by others might be avoided by better parental supervision (Jones et al., 1990). This may be especially true with certain children. Children with histories of unintentional injuries have been found to be more disruptive and overactive, and have greater contact with dangers, than children without histories of injury (Cataldo et al., 1992). The injured children were especially disruptive when their parents were distracted. Modeling and role playing the skills needed to gain compliance from children can ensure that the parent will be able to redirect the child in a dangerous situation, especially when used in combination with consistent guidelines for the child.

Parents of toddlers should be given information on making the home a safe environment, the importance of child restraints in automobiles, how to gain immediate compliance from their children in dangerous situations, and how and what to teach their children concerning safety. Information and reading materials can instruct parents in the typical supervision requirements of children at different ages, and can suggest steps such as covering electrical outlets and keeping medicines, cleaning materials, and other hazards out of the reach of children. Providing parents with written and verbal guidelines can sometimes improve child safety (e.g., Christophersen & Gyulay, 1981). However, additional methods have been helpful, such as rewarding parents with lottery tickets when their children are observed to be restrained in the car, giving stickers to preschoolers for buckling up, providing car seats when needed, and making hospital discharges only when restraint seats are in place (see Roberts, 1986; Roberts, Layfield, & Fanurik, 1992). Stricter enforcement of child restraint laws would also likely be beneficial.

TEACHING SAFETY. In addition to making children's environments safer, it is important to teach children safe behaviors. Unfortunately, many parents incorrectly assume that their children already know safety rules (Peterson, Mori, & Scissors, 1986). Also, some parents might benefit from a boost in their self-confidence about safety skills (Peterson, Farmer, & Kashani, 1990). As children get older, they should practice traffic and fire safety skills, what to do about

inappropriate behavior of others, and so on. Increases in safe behavior have been shown by programs that train children to engage in these behaviors (e.g., Peterson, 1984a, 1984b).

Health Promotion

Efforts to combat the leading preventable cause of death in this country, cigarette smoking, head the list of challenges for pediatric psychology, especially considering that tobacco use remains at high levels among adolescents (National Institute on Drug Abuse, 1989). Other important goals include the promotion of healthy eating habits and adequate exercise. The value that we place on these goals will determine the health of our children. Theoretical models such as protection motivation theory guide the development of health promotion interventions (Rogers & Prentice-Dunn, in press), and are beginning to be examined across levels of cognitive development (Sturges & Rogers, 1995). In addition to efforts that might be undertaken with individual families (e.g., during routine health care visits or through day care centers), the importance of community-wide dispersion of information about health risks and preventive strategies is becoming more recognized (Finney, Brown, & Syme, 1992).

SUMMARY

Psychologist collaboration with other health care professionals provides an opportunity for early intervention with children and their families to promote the development of adaptive physical, cognitive, emotional, and social functioning. Many of the problems presented to pediatricians, for example, involve children's difficulties in attention, learning, appropriate behavior, or getting along with others. Additionally, important issues being faced by pediatric psychologists in all settings include how to promote the health of children, maximize their levels of functioning, and increase their abilities to cope with acute pain and chronic conditions when they arise. In this time of growing demand by everyone for better ways to combat societal problems, clinical child and pediatric psychologists strive to develop and implement cost-effective primary prevention strategies that will improve children's welfare. For pediatric psychology, there is a particular focus on issues related to health and illness.

STUDY QUESTIONS

1. What are the primary reasons pediatric psychologists work collaboratively with other health professionals?
2. What needs to be considered when choosing assessment instruments?
3. Describe the format and purpose of the Social Scale for Chronic Illness.
4. Define *functional analysis* as it relates to pediatric assessment. Develop a case example that incorporates functional analysis into the evaluation and treatment plan.
5. Define *interrater reliability* and *generalizability*. Why are they important?

6. Identify likely settings for naturalistic observation of pediatric patients.
7. As discussed in Chapter 14, increasing adherence to medical recommendations is a complicated clinical problem. How might this problem differ in children and adults? How can a pediatric psychologist increase adherence? What areas need to be considered if intervention is to be successful?
8. Describe the various coping strategies and interventions used to help children during painful or distressing medical procedures.
9. How can social support help children and their families cope with acute or chronic illness?
10. What are some of the behaviors associated with recurring pain? What interventions might be most effective in helping children cope with this type of problem?
11. Why do some children refuse food? Describe at least one way a pediatric psychologist can help alleviate this type of feeding problem.
12. What is failure to thrive? What are its causes? How can a pediatric psychologist intervene?
13. Prevention is an important component of pediatric psychology. Identify three ways injuries can be prevented and health promoted.

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CHAPTER 17

Forensic Psychology

CHARLES PATRICK EWING

“WHAT DOES PSYCHOLOGY HAVE TO DO WITH DEAD BODIES?”

A psychology professor was once approached by a curious student. The student had heard that the professor was a forensic psychologist and wondered if that were true. When the professor replied in the affirmative, the student hesitated briefly and then asked the question that had been gnawing at him. “Excuse me for asking,” the undergraduate said, “but what does psychology have to do with dead bodies?”

Like most people, the student had heard the word *forensic* only in association with the word *pathologist*—as in *forensic pathologist*. And, like most people, he had always assumed that since forensic pathologists conduct autopsies and frequently testify in court about cause of death, the word *forensic* must have some connection with death or dead bodies. Given that assumption, he had a difficult time figuring out how a forensic psychologist might spend his or her time.

The student’s assumption, though common and perhaps understandable, was erroneous. The term *forensic* actually means “pertaining to or employed in legal proceedings or argumentation” (Morris, 1970). Briefly, *forensic* simply means *legal*. Just as a forensic pathologist applies medical knowledge and skills to legal questions such as cause of death, the forensic psychologist uses psychological principles and expertise in efforts to help resolve other legal problems.

Over the past decade or so, forensic psychology has become a recognized specialty within the profession of psychology. Many psychologists now devote substantial portions of their research and practice to legal questions, and a

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Introduction to Clinical Psychology, edited by Lynda A. Heiden and Michel Hersen. Plenum Press, New York, 1995.

growing number have begun to identify themselves as forensic psychologists and to limit their professional work to legal concerns.

The American Board of Professional Psychology, the organization that certifies professional competence in clinical, counseling, industrial, and school psychology, now also offers “board certification” in forensic psychology. Approximately 150 psychologists have been granted such certification, after completing written and oral tests of their knowledge and experience in applying psychology to a variety of legal issues. Many more psychologists, whose interests and work involve legal issues, are members of the American Psychology–Law Society, which has become a Division of the American Psychological Association. Still other psychologists may not consider themselves “forensic psychologists” but often practice forensic psychology.

The term *forensic psychology* broadly encompasses the work of all psychologists on issues related to the law and our system of justice, and thus includes both psychological research on legal issues and the practical application of psychology in the courts. For the purposes of this chapter, however, discussion of forensic psychology will be generally limited to practical applications of psychology in the courts—primarily the work of psychologists who regularly evaluate litigants and testify in a variety of legal proceedings, including criminal trials, civil lawsuits, juvenile justice hearings, and child custody disputes. After a brief discussion of the history and development of forensic psychology, the professional work of psychologists in one of these fields, criminal law, will be examined in some detail.

THE HISTORICAL ROOTS OF FORENSIC PSYCHOLOGY

Munsterberg versus Wigmore

Although forensic psychology has been recognized as a psychological specialty only for a relatively short time, the field has long and deep historical roots. As early as 1906, Sigmund Freud, the father of psychoanalysis, suggested in a speech to judges that psychology had a great deal to offer the law. Around the same time, John B. Watson, the father of behavioral psychology, suggested much the same thing.

The practice of forensic psychology, however, probably owes its birthright most to Hugo Munsterberg, a Harvard University professor, experimental psychologist, and contemporary of Freud and Watson. In 1908, Munsterberg published the now classic *On the Witness Stand*, a collection of articles in which he recounted many of his own pioneering experiences as an expert witness in a number of celebrated trials. He asserted that the legal process would be well served by greater use of psychological principles and expertise.

Clearly anticipating the development of what today is known as forensic psychology, Munsterberg made numerous optimistic claims for psychology’s value to the courts and justice system as a whole. For example, he wrote that “the chronoscope [an instrument used to measure minute time intervals] of the modern psychologist has become, and will become more and more, for the

student of crime, what the microscope is for the student of disease” (p. 77) and that the psychology of associations (the relationships among thoughts and other mental processes) “has become, indeed, a magnifying-glass for the most subtle mental mechanism, and by it the secrets of the criminal mind may be unveiled” (p. 108).

At the same time, Munsterberg was highly critical of the justice system for its failure to rely more heavily on the developing science of psychology. Munsterberg noted, for example, that “while the court makes the fullest use of all the modern scientific methods when for instance a drop of dried blood is to be examined in a murder case, the same court is completely satisfied with the most unscientific and haphazard methods of common prejudice and ignorance when a mental product . . . is to be examined” (pp. 44–45). Munsterberg found it “astonishing that the work of justice is ever carried out in the courts without ever consulting the psychologist” (p. 194).

Given the existing state of psychology as a science and profession in the early 20th century, Munsterberg’s claims for the benefits of psychology in the courtroom were undoubtedly premature. In any event, the psychologist’s words clearly rankled judges, lawyers, and legal scholars, many of whom complained—not unfairly—that psychology had yet to develop the kind of data needed to back up Munsterberg’s claims.

In a scathing, brutally satirical law review article published in 1908, John Henry Wigmore, a law professor at Northwestern University and the leading evidence law scholar of the time, described an imaginary legal proceeding in which a jury considered Dr. Munsterberg’s assertions about the value of psychology to the legal system (Wigmore, 1908).

In the “trial,” which supposedly took place on April 1, 1908, “April Fool’s Day,” Munsterberg’s views were advanced by an attorney named X. Perry Ment and instantly rejected by the jury in the Superior Court of Wundt County—no doubt named for Wilhelm Wundt, the father of experimental psychology.

In Professor Wigmore’s caricature, Munsterberg is described as the author of *The Psychology of the Wastebasket* (a study relating personality characteristics to “the number of times the letter *M* occurred on the scraps thrown into the basket”), *Studies in Domestic Psy-collar-gy* and *The Psychology of the Collar Button* (“the results of over 9000 observations of the behavior of the ordinary collar button”) (p. 402). In Wigmore’s fictional “cross-examination” of the “defendant,” the examining attorney takes Munsterberg to task for his overly optimistic view of psychology and his unwarranted criticism of the legal system.

After reviewing the works of other psychologists less positive than Munsterberg about what psychology might offer the courts, the mythical plaintiff’s attorney asks the psychologist defendant:

Now then, professor, I want you to be good enough to explain to this jury how anyone could have predicted . . . that precisely you would commit the whimsical mistake of bearing testimony against our innocent profession . . . for neglecting to use new and “exact” methods which were and still are so little “exact” and so incapable of forensic use that even their well-wishers confess that thousands of experiments and years of research will be required before they will be practicable, if ever? (p. 414)

To this as well as to the succeeding series of tough questions put to him, the humiliated “Munsterberg” has “no answer.”

Although Wigmore's biting parody was widely read and well received (at least by judges and lawyers), and probably reflected the sentiments of most knowledgeable legal professionals and scholars of the day, it was Munsterberg who may be said to have had the last laugh.

By 1923, when a second edition of Munsterberg's book was published, it contained a foreword by Charles S. Whitman, Esq., former governor of New York, past district attorney of New York County, and a man of unquestionable stature in the American legal community. Whitman described the Harvard psychologist's volume as "an instructive exposition of what may be termed 'legal psychology'" (p. xii). Although noting that the articles in the book had initially been published some 14 years earlier, Whitman went on to opine that "they have lost none of their timeliness, interest or helpfulness [and] contain lessons in experimental psychology which are invaluable to any one interested in the administration of justice" (p. xii).

FORENSIC PSYCHOLOGY POST-MUNSTERBERG: THE MODERN ERA

Over the next half century or so, as psychology developed as an accepted science, lawyers, judges, and legal scholars gradually, and at times grudgingly, grew to accept the notion that this evolving discipline had much to offer the legal system. Since the 1920s, debate has focused not on whether psychology has anything to offer the law, but rather on how the law can make the best use of psychology's potential contributions.

Today, as we approach the advent of the 21st century, psychology is solidly entrenched in America's legal system, and the administration of justice relies on psychological knowledge and expertise to a degree that would likely surprise even Munsterberg:

[T]oday, psychologists . . . are directly involved in virtually every aspect of the criminal justice system, from arrest and trial to sentencing, corrections and parole. It seems no exaggeration to say that the modern criminal justice system . . . could not function without significant participation by mental health professionals and behavioral scientists.

At the same time, the role of psychologists . . . in other areas of the law has also grown tremendously. For example, civil litigation regarding personal injury, products liability, and other damage claims now routinely includes psychological and/or psychiatric testimony. . . .

Likewise family law has become increasingly receptive to input from psychologists, psychiatrists and other mental health professionals. Today, mental health experts are a standard fixture in divorce, child custody and child/spouse abuse and neglect proceedings. (Ewing, 1985, pp. 1-2)

FORENSIC PSYCHOLOGY AND THE CRIMINAL JUSTICE SYSTEM

Not surprisingly, given Munsterberg's early emphasis on criminal law issues, forensic psychology developed initially as an adjunct to the criminal justice system. The earliest "forensic" psychologists, like Munsterberg, were

called on primarily to educate judges and juries in criminal cases regarding the experimental findings of psychology. Munsterberg, himself, for example, testified many times regarding memory, emotion, hypnosis, and suggestibility as they related to testimony by witnesses in criminal trials.

Today psychologists still provide such testimony, albeit with a much greater base of knowledge. For example, Elizabeth Loftus, a modern experimental psychologist, memory researcher, and leading psychological authority on eyewitness testimony, has testified in hundreds of criminal cases in which a verdict of guilt or innocence rests on the word of a witness who claims to have seen the defendant commit the crime charged (Loftus, 1979; Loftus & Ketcham, 1991). Other forensic psychologists have given similar testimony in countless cases, applying the findings of memory research to the question of the reliability of eyewitness testimony.

For the most part, however, when forensic psychologists appear in criminal court, they are there as clinicians, not researchers, and they are asked to address one or both of two issues: (1) the criminal defendant's state of mind at the time of the offense; and (2) the criminal defendant's competence to stand trial, plead guilty, and/or waive his or her constitutional rights. Although these two issues—state of mind and competency—are often confused, even by lawyers and judges, they are clearly distinct, in both law and psychology.

State of Mind at the Time of the Offense

The criminal law is vitally concerned, for at least two reasons, with a defendant's state of mind at the time he or she committed an offense. First, many criminal statutes require proof of both *actus reus* (criminal act) and *mens rea* (guilty mind)—that is, proof not only that the defendant committed the act in question (e.g., killed the victim) but also that he or she did so with a certain state of mind (e.g., with intent, recklessness, negligence, or “depraved indifference to human life”) (see, generally, LaFave & Scott, 1986). Second, in all but a handful of American states, a defendant is not legally responsible—and may not be punished—for his or her criminal acts if at the time those acts were committed the defendant was insane (Perlin, 1989).

Forensic psychologists occasionally testify regarding *mens rea*, but criminal courts generally do not regard that issue as a proper one for expert testimony. To be admissible in court, expert testimony of any sort, including that given by forensic psychologists, must be what the law calls “beyond the ken” of the lay juror. Such testimony must deal with issues a lay jury could not understand without expert help. With few exceptions, American courts have always held that determinations of *mens rea* are well within the “ken” of lay jurors (Cleary et al., 1984).

Claims of insanity, however, are almost always considered to require the kind of expert testimony that can be given only by psychologists or psychiatrists. Thus, although the insanity defense is rarely asserted, when it is raised, the trial is likely to involve the expert testimony of one or more mental health professionals, including forensic psychologists (Rogers & Ewing, 1989, 1992).

Insanity is a legal term, the definition of which varies among states. In the United States, there are two primary tests of insanity, and most states use one of these tests or some variation thereof.

The **M'Naughten test**—named for a British murder defendant in whose case the test was first established—holds that a defendant is not responsible for a crime if, at the time of the criminal act, he or she (1) suffered from a mental disease or defect; and (2) as a result of that disease or defect, did not know either the nature and quality of the act or that the act was wrong (*M'Naughten's Case*, 1843).

The **American Law Institute test** of insanity—part of the widely influential **Model Penal Code**—specifies that a defendant is not criminally responsible if at the time of his or her criminal act, he or she, by reason of mental disease or defect, lacked the substantial capacity either to appreciate the wrongfulness of the act or to conform his or her behavior to the requirements of the law (American Law Institute, 1955).

Defendants found **not guilty by reason of insanity** (NGRI) are generally committed to secure state inpatient mental health facilities, often referred to as forensic hospitals, where they receive mental health treatment. Much of that treatment is provided by, or under the direction of, forensic psychologists. Although the laws regarding disposition of NGRI defendants vary among the states, most states do not allow such defendants to be released until they have convinced not only mental health professionals but also a judge that they are no longer mentally ill or dangerous. As a result, many NGRI defendants spend a considerable amount of time locked up, sometimes even more time than they would have spent behind bars had they been convicted of the crime charged.

Although in every jurisdiction the ultimate decision regarding a defendant's claim of insanity is made by a judge or jury, such decisions are almost invariably influenced by testimony from expert witnesses, often including forensic psychologists.

Psychologists and others called on to assess a defendant's sanity—that is, his or her state of mind at the time of the offense—face a difficult task. They are asked to look backward in time and try to reconstruct the defendant's mental state weeks, months, sometimes even years after the day in question. They accomplish this task largely by examining (and sometimes psychologically testing) the defendant and interviewing witnesses to the crime and any other individuals who had contact with the defendant at or near the time of the offense. Forensic psychologists also review any documentary evidence that might help shed light on the defendant's state of mind, such as past psychological and psychiatric records, criminal arrest and conviction reports, and confessions.

Some forensic psychologists—most notably Richard Rogers, author of the **Rogers Criminal Responsibility Assessment Scale**—have tried to make these “state of mind” assessments more systematic and standardized, but most experts in the field continue to rely primarily on their own experience, training, and clinical judgment in reaching a conclusion in any given case (Rogers & Ewing, 1992). The result, not surprisingly, is that in many cases, different experts look at the same evidence and reach different conclusions.

In what is sometimes referred to as the “battle of the experts,” the expert retained by the defense testifies that the defendant was insane at the time of the

crime, the prosecution's expert testifies that the defendant was sane, and the jury is left to decide which expert is correct.

In addition to assisting judges and juries in assessing the validity of defendants' claims of insanity, forensic psychologists also often advise courts regarding the release of defendants found not guilty by reason of insanity. In preparation for "retention" hearings in which judges weigh NGRI defendants' needs for continued confinement, forensic psychologists and other mental health professionals routinely interview defendants, review their treatment to date, and make judgments regarding their mental illness and dangerousness.

One of the great controversies in modern forensic psychology concerns the ability of psychologists and others to predict future dangerousness (Grisso & Appelbaum, 1992). Indeed, some maintain that as many as two out of every three predictions of dangerousness prove to be erroneous (see Ewing, 1991). Still, the law in most states considers dangerousness a critical criterion in deciding whether to release a defendant acquitted by reason of insanity. As a result, forensic psychologists and other mental health experts are frequently pressed to make—and do make—such predictions.

Perhaps the best-known modern example of the insanity defense is the trial of John W. Hinckley, Jr., the man who, on March 30, 1981, shot President Ronald Reagan, presidential Press Secretary James Brady, and two other presidential aides as they left the Hilton Hotel in Washington, D.C. The shootings were filmed by nearby camera crews, and the shooter was apprehended on the spot (see, generally, Low, Jeffries, & Bonnie, 1986).

After raising a defense of insanity, Hinckley was examined by more than half a dozen psychiatrists and psychologists. In May and June of 1982, in a 7-week trial, his claim of insanity was presented to a D.C. jury, which heard expert testimony on both sides of the case—a "battle of the experts" that included some of the best minds in the fields of forensic psychology and psychiatry.

All experts called by the defense testified that Hinckley was psychotic when he shot the president and his aides. All experts called by the prosecution testified that Hinckley was not psychotic at the time of the shootings.

The defense experts testified that Hinckley had been delusional, whereas the prosecution experts told the jury that Hinckley was not delusional but simply unrealistic. Defense experts testified that the crime was motivated by Hinckley's delusional belief that shooting the president would win him the love of a movie star, Jodie Foster. Prosecution experts opined that Hinckley's motive was a narcissistic but not delusional desire for fame.

Finally, defense experts told the jury that Hinckley had been desperate and driven when he shot the president; prosecution experts said Hinckley was neither desperate nor driven.

Faced with this conflicting expert testimony, the jury found John Hinckley not guilty by reason of insanity, and Hinckley was committed to St. Elizabeth's Hospital, a federal mental institution, where he has remained since.

Public reaction to the verdict was swift and extremely critical. The shooting had been planned; one of the victims was the president of the United States; millions had seen the attempted assassination via TV videotape. How—many wondered—could John Hinckley, would-be presidential assassin, be found "not guilty"?

Criticism of the Hinckley verdict quickly crystallized around complaints about the insanity defense in general and the expert testimony of psychological and psychiatric experts in particular. In the wake of the Hinckley verdict, legislatures around the country, including the U.S. Congress, were flooded with calls to abolish the insanity defense and greatly limit the scope of expert testimony of psychologists and psychiatrists in criminal proceedings.

When the dust settled, the insanity defense remained on the books in almost every jurisdiction including the federal courts, but approximately half of America's state legislatures responded to the Hinckley verdict by revising then-existing insanity laws (see Perlin, 1989).

In addition, in 1984, the U.S. Congress passed, and President Reagan signed into law, a number of statutes designed to make it more difficult for jurors in federal courts to find defendants not guilty by reason of insanity (Insanity Defense Reform Act of 1984).

First, Congress amended the definition of insanity. The Hinckley case was governed by a statute—derived from the Model Penal Code—providing that a defendant was not guilty by reason of insanity if at the time of the criminal act, he or she, by reason of mental disease or defect, lacked the substantial capacity either to appreciate the wrongfulness of the act or to conform his or her behavior to the requirements of the law. Under the pre-Hinckley law, the prosecution had the burden of proving that the defendant did not suffer from a mental disease or defect or that the defendant lacked neither the substantial capacity to appreciate the wrongfulness of the act nor the capacity to conform his or her behavior to the requirements of law.

In the Insanity Defense Reform Act of 1984, Congress deleted the so-called “volitional prong”—that part of the test referring to substantial capacity to conform conduct to the requirements of law; changed the requirement from mental disease or defect to “severe” mental disease or defect; and specified that the defendant has the burden of proving the defense of insanity by clear and convincing evidence. Finally, Congress amended the **Federal Rules of Evidence**—the laws governing the admissibility of evidence in federal courts—to make it impossible for forensic psychologists, psychiatrists, and others to testify, among other things, that a defendant was, in fact, insane at the time of the alleged offense (see Rogers & Ewing, 1989). Amended Federal Rule of Evidence 704 provides that:

No expert witness testifying with respect to the mental state or condition of a defendant in a criminal case may state an opinion or inference as to whether the defendant did or did not have the mental state or condition constituting an element of the crime charged or of a defense thereto. Such ultimate issues are matters for the trier of fact alone.

Competence to Stand Trial

Although insanity is rarely raised as a defense in criminal cases, many criminal defendants do clearly suffer from mental illnesses. And, in many cases, while these illnesses do not provide a defense to the crime charged, they do raise serious doubts about a defendant's competence to stand trial.

Like insanity, competency is a legal issue. Unlike insanity, however, competence to stand trial is a legal determination based not on what the defendant's

mental functioning was at the time of the crime, but rather on what the defendant's state of mind is at the time of trial. As a matter of federal constitutional law, governing the courts in every state, a criminal defendant may not be tried if, by reason of mental disease or defect, he or she is either unable to understand the nature of the charges against him or her or unable to assist in his or her own defense (*Dusky v. United States*, 1960).

To be lawfully tried, a defendant must be competent at all times during the legal proceedings against him or her. Typically, the issue of competence is raised by the defendant's own attorney, but it may also be raised by the prosecutor or the judge. Indeed, where a judge has reason to question a defendant's competence to stand trial, he or she must raise that issue in court (*Pate v. Robinson*, 1966).

Regardless of who raises the issue of competency, the judge will ultimately decide whether the defendant is or is not competent to stand trial. Defendants found incompetent to stand trial are generally committed to state forensic hospitals for treatment aimed at restoring their competency. If and when a defendant is restored to competency, he or she will ordinarily be tried like any other criminal defendant. Incompetent defendants whose competency is not restored are often retained in forensic hospitals for long periods of time, sometimes years. Although the law provides that such defendants may not be held in secure confinement indefinitely, in many such cases criminal charges are dropped and these defendants are committed to nonsecure civil mental hospitals (*Jackson v. Indiana*, 1972).

Forensic psychologists are frequently involved in the competency process, both evaluating defendants' competence and helping to restore competence to those judged not competent to stand trial.

Other Forms of Competence

While competence to stand trial is the major form of competency addressed by forensic psychologists and others in the criminal justice system, other forms of competence are also often considered. For example, where a defendant wishes to plead guilty to a criminal charge, he or she must be competent to plead guilty, and where a defendant's own statement is used against him or her at trial, there must be a finding that he or she was advised of the right to remain silent and was competent to waive that right before making the statement (see Melton, Petrilla, Poythress, & Slobogin, 1987).

COMPETENCE TO PLEAD GUILTY. Competence to plead guilty, although sometimes confused with competence to stand trial, is really a separate issue. The forensic psychologist or other mental health expert asked to evaluate a defendant's competence to plead guilty must assess not only the defendant's understanding of the charges and his or her capacity to assist in the defense of those charges, but also the defendant's ability to comprehend the consequences of pleading guilty—namely, the forfeiting of rights, including the right to trial, proof of guilt beyond a reasonable doubt, and often the right to appeal.

A well-known case dealing with a defendant's competence to plead guilty is that of Mark David Chapman, who shot and killed former Beatle John Lennon, on December 8, 1980.

Charged with murder, Chapman pleaded not guilty by reason of insanity and was examined by no fewer than nine forensic psychologists and psychiatrists. Six retained by the defense found Chapman to be psychotic and legally insane at the time of the killing. The three prosecution experts concluded that Chapman suffered only from personality disorders and that he was sane at the time he shot John Lennon. Although possibly insane, Chapman was found by the forensic experts to be competent to stand trial.

On June 22, 1981, as jury selection was about to begin in what appeared likely to be an extensive insanity trial, Chapman dropped his insanity plea and pleaded guilty to second-degree murder, against the advice of his lawyer. The lawyer, Jonathan Marks, told the judge that Chapman changed his plea because God had told him to plead guilty. The attorney also stated his own opinion that his client was delusional, and he asked that Chapman be reexamined to determine his competence to plead guilty. The judge refused to order such an examination, citing a report that Chapman had been found competent to stand trial just months earlier. The judge also refused the defense lawyer's request for a hearing on Chapman's competence to change his plea to guilty.

During extended questioning by the judge and the prosecutor about his understanding of the indictment and the implications of pleading guilty, Chapman attributed his guilty plea to himself and God. And while Chapman stated that he was unconcerned about what sentence he might receive since God had ordered him to confess, the court accepted his guilty plea and sentenced him to 20 years to life in prison. Under this plea-bargained sentence, Chapman was eligible for parole in 20 years rather than the 25-year minimum he likely would have faced if he had gone to trial and been convicted.

Years later, Chapman undoubtedly reinforced the defense attorney's belief that the trial judge should have at least ordered him examined for his competence to plead guilty. The man who killed John Lennon explained why he gave up his defense and waived his right to a trial:

God changed something in my heart and He spoke to my heart so that I could hear Him through all the sickness that was in my mind at the time. He told me twice to plead guilty, and for some reason I didn't question that. I was out of my mind and I wanted to go to trial worse than anything in the world. That was my mission, to promote *Catcher in the Rye* [the novel by J. D. Salinger]. So why would I plead guilty and just walk away from the best chance I would ever have to promote the book that had become my life—the book that held all the answers why John Lennon had to die.

Did I feel guilt, did I feel remorse? Did I come out of the psychotic cloud? No! No! No!

I pled guilty because I recognized God's voice through all that—through all the insanity and through a mind that was totally obsessed and centered on the promotion of this book. . . .

My lawyer didn't want me to plead guilty. The psychiatrists didn't want me to plead guilty, and they tried to stop me from doing it. . . . There was no trial because God had changed something in my heart. There's no other explanation. (Jones, 1992, p. 218)

COMPETENCE TO WAIVE *MIRANDA* RIGHTS. In addition to evaluating competence to stand trial or plead guilty, forensic psychologists and other mental health professionals are often called on to assess whether a defendant's incriminating statement was made after a competent waiver of his or her rights. By now,

nearly all are familiar with the so-called **Miranda rights** issued by police to suspects who are in custody and about to be interrogated. Under the U.S. Supreme Court's landmark 1966 decision in *Arizona v. Miranda*, prior to questioning suspects in custody, police officers must advise them that they have the right to remain silent, that anything they say can be held against them in a court of law, that they have the right to the presence of an attorney during any questioning, and that if they cannot afford an attorney, one will be provided free of charge.

Although most police officers faithfully recite this warning before questioning suspects in custody, they rarely make any effort to determine whether a suspect really comprehends the nature of the warning and the consequences of waiving the right to remain silent and/or to the presence of an attorney.

Where a defendant has waived his or her *Miranda* rights and made a statement to the police, that statement may be used against the defendant at trial as long as the court finds that the defendant made a knowing and voluntary waiver of these rights before making the statement. In most cases, that poses no problem, but sometimes defense lawyers challenge the admissibility of a defendant's statement on the grounds that the defendant did not understand or comprehend the rights he or she was waiving. If a judge or jury finds that the defendant did not understand or comprehend these rights, the statement must be suppressed—that is, it cannot be used against the defendant.

A recent burglary prosecution illustrates the problem of assessing a defendant's competency to waive *Miranda* rights. The defendant in this case was a drug abuser in his late twenties with a long history of learning problems and antisocial behavior. He had been tested repeatedly, his IQ was consistently found to be in the range of 40 to 50, and for many years he had been diagnosed as moderately mentally retarded. By his own admission, given to detectives after his arrest, the defendant had broken into one neighbor's apartment, stolen a television set, and then sold the TV to another neighbor to obtain money for crack cocaine.

Prior to confessing to this crime, the defendant had consumed a large quantity of alcohol and crack. Although the interrogating detectives read him the *Miranda* rights prior to taking his statement, they made no effort to determine whether he actually understood his rights. They simply read him his rights, accepted at face value his acknowledgment that he understood these rights, questioned him, put their version of his words on paper, and then asked him to sign the confession. Because the man could not read, the detectives read the statement to him before having him sign it.

A forensic psychologist later examined the defendant and inquired as to his understanding of the terms of the *Miranda* rights. From this examination, it was immediately clear that the defendant did not understand the concept of a "right," the role and function of an "attorney," or even the meaning of the word *silent*.

At a pretrial hearing designed to assess the competence of the defendant to waive his *Miranda* rights, the psychologist described the defendant, detailed the man's mental retardation and drug abuse, explained the results of the forensic examination, and testified that in his opinion the defendant lacked the competency to make a knowing and intelligent waiver of these rights. On the basis of

this testimony, the defense attorney asked the judge to suppress the defendant's confession.

Surprisingly, the judge concluded that the defendant had understood and comprehended his rights and had knowingly and intelligently waived them. When the case went to trial, the defendant's confession was read to the jury and constituted the only evidence against him. The forensic psychologist then repeated essentially the same testimony he had given at the pretrial hearing. Finally, as required by law, the judge then instructed the jury that if they found that the defendant had not made a knowing and intelligent waiver of his *Miranda* rights before making the confession, they were duty-bound to ignore the confession. After a brief period of deliberation, the jury found the defendant not guilty, obviously having concluded that the defendant's confession had to be ignored.

SUMMARY

Forensic psychology—the application of psychological principles and expertise to legal problems—first emerged in the early 20th century, when the science of psychology was in its infancy. At least some critics at the time felt that psychology was too undeveloped to offer much help to the legal system. Although the early skeptics undoubtedly had a point, their criticisms were eventually overcome, in part because of psychology's continued growth as a science but also because over time it became increasingly clear that many of the problems faced by the legal system could be better resolved with input from psychologists.

Today, while the application of psychology to legal issues remains somewhat controversial, and the discipline continues to evolve, there can be no question that forensic psychology has established itself as a major force in the American legal system.

STUDY QUESTIONS

1. Define the terms *forensic* and *forensic psychologist*.
2. Which professional organizations represent forensic psychologists? Which organization certifies the professional competence of forensic psychologists? Approximately how many psychologists have been certified by this board?
3. Trace the historical roots of forensic psychology. Incorporate the contributions of Freud, Watson, Munsterberg, Wigmore, and Whitman into your discussion of history.
4. What are the two primary issues a forensic psychologist addresses in criminal court?
5. Translate *actus reus* and *mens rea*. How do these terms relate to verdicts in criminal court?
6. Describe the M'Naughten and American Law Institute tests of insanity.
7. When a defendant is found not guilty by reason of insanity, what steps are taken to provide treatment for that individual? What does a determination of insanity mean in terms of the defendant's future release?
8. When considering state of mind of the defendant, different experts look at identical

evidence but somehow reach different conclusions. What is likely to influence their conclusions?

9. Define “future dangerousness.” What are the controversies surrounding the prediction of future behavior?
10. What public and legal criticisms were invoked by the John Hinckley case? What impact did this case have on federal and state law?
11. Describe “competence to stand trial” in terms of its legal and social implications. What role does forensic psychology play in determining a defendant’s competence?
12. What is the significance of the *Dusky v. United States*, *Pate v. Robinson*, and *Jackson v. Indiana* rulings in terms of competence to stand trial?
13. In addition to competence to stand trial, there are other forms of competence addressed in criminal courts. Describe each type of competence and how each may affect legal outcome.

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