One brief way of describing the change which has taken place in me is to say that in my early professional years I was asking the question, How can I treat, cure, or change this person? Now I would phrase the question this way: How can I provide a relationship which this person may use for his own personal growth?
—Carl Rogers, 1961b

PREVIEW AND CHAPTER OBJECTIVES

After an introductory discussion of a fundamental but somewhat artificial division in psychology between scientists and practitioners, this chapter continues where the last one ended—with the practice of clinical psychology. As you will learn, World War II transformed clinical psychologists from psychiatric assistants, engaged mainly in administering psychological tests, into highly trained professionals who diagnose and treat the full range of mental and behavioral disorders. Also after the war, traditional psychotherapy based on a Freudian model came under fire for its questionable effectiveness, spawning alternative approaches. The alternatives to be considered here will be behavior therapy, deriving from behaviorist conditioning principles, and therapies that derived from an approach that called itself the Third Force. This "Humanistic Psychology" created its distinct identity by contrasting itself with psychology's other two forces, psychoanalysis and behaviorism. Its most visible advocates were Abraham Maslow and Carl Rogers, creator of client-centered therapy.

The professional practice of psychology extended beyond clinical psychology, of course. One major focus of application, as you know from Chapter 8, is in the general area of business and industry. Modern industrial/organizational psychology continues the tradition begun by such pioneers as Scott, Münsterberg, and Bingham. The chapter will continue Chapter 8's discussion of psychology as it applied to business and industry, highlighted by an examination of a famous series of studies at a plant that manufactured components for telephone systems in Hawthorne, Illinois. After you finish this chapter, you should be able to:

- Understand the reasons for the historical divide between psychological scientists and those who focus on the professional practice of psychology
- Describe the effect of World War II on the development of clinical psychology
- Compare the Boulder and Vail models of graduate training for clinical psychologists and describe the status of both approaches
- Describe the Eysenck studies of psychotherapy effectiveness and their impact on clinical psychology
RESEARCHERS AND PRACTITIONERS

At the close of the last chapter, you learned about the first hints of a professional identity for clinical psychologists. They formed the short-lived American Association of Clinical Psychologists in 1917, then had a “section” created for them in the APA, and then joined other applied psychologists in forming a vigorous association, the American Association for Applied Psychology (AAAP), in 1937. Near the end of World War II, they played a major role in the reorganization (recreation, actually) of the APA. The new APA would no longer be devoted only to the pursuit of science; it would now also have the additional stated goals of advancing psychology as a profession and promoting human welfare (Hilgard, 1987). Prior to World War II, academic psychology had dominated the APA, but after the war, the power began to shift, and a turning point occurred in 1962, when psychologists working in nonacademic jobs outnumbered those working in colleges and universities for the first time (Tryon, 1963).

For psychologists working in the academic environment, the shift was not a welcome one. Of course, this was not the first time that academic/research psychologists had been unhappy with the APA. As early as 1898, none other than Lightner Witmer (Chapter 12), at that time more interested in experimental research than in his fledgling clinic, had proposed that researchers split from APA to form their own organization. G. Stanley Hall described the idea to E. B. Titchener this way:

A line from Witmer says that he wants to join you, me, and others in forming a new Psychological organization which shall put the lab on a proper basis and exclude half-breeds and extremists. Do you want to consider it? (quoted in Goodwin, 1985, p. 386)

Witmer’s revolt went nowhere, but as you know from Chapter 7, Titchener formed his “Experimentalists” group soon thereafter (1904). It evolved into the Society of Experimental Psychologists after Titchener’s death in 1927, and continues to this day as an honorary society for distinguished researchers (Goodwin, 2005).

Even before practitioners outnumbered academic/researchers in 1962, the latter group had become distressed about the direction the reorganized APA was taking. They
were especially concerned about the makeup of the annual meeting, which, after the war, seemed to be more and more devoted to practice issues, and was structured in a way that made presentation of research difficult. As one small example, in 1959 the APA decided not to allow slides to be shown during any of the presentations, a move that infuriated experimentalists, who were accustomed to using slides to present their data (Dewsbury & Bolles, 1995). The incident helped bring about a major defection of experimental psychologists, who formed the Psychonomic Society near the end of the 1950s. It held its first meeting in 1960, devoted to the presentation of research (including slides), and it continues today as an important organization for experimental psychologists.

Most members of the Psychonomic Society remained members of APA as well, and continued to agitate for conditions favorable to the researcher/academician. APA, however, kept shifting its resources toward the practice of psychology, and focused much of its energy on issues of relevance to practitioners (e.g., whether clinical psychologists should gain the legal right to prescribe medication). Researchers agitated for a new reorganization of APA in the mid-1980s that would restore some of their status, and when the effort failed, a group of prominent experimental psychologists banded together and formed the American Psychological Society (APS). Membership reached more than 5000 within the first six months, indicating that the group had struck a chord, and APS quickly became a strong advocate for psychological research, created a group of high quality journals (e.g., *Psychological Science*), and developed an annual convention entirely devoted to research. When it celebrated its fifteenth anniversary in 2003, it had reached a membership of just over 13,500. In 2006, the group retained its acronym, but brought its mission into clearer focus by changing its name to the Association for Psychological Science.

This researcher–practitioner split, reflected in the histories of APA and APS, can easily be overstated. Most APS members also belong to APA, APA has a vigorous “Science Directorate,” most of the APA journals are devoted to research, and in 2001, APS launched a new journal, *Psychological Science in the Public Interest*, that includes research-based articles on topics of relevance for the practice of psychology, as you can see from the following sample article titles:

- Psychological Science Can Improve Diagnostic Decisions
- Treatment and Prevention of Depression
- Eyewitness Evidence: Improving Its Probative Value

Yet the division between researcher/academicians and practitioners is a real one, representing different value systems and different interests. The next two chapters will be organized with reference to these two ways of looking at the world of psychology. This chapter will pick up where Chapter 12 finished, and focus on the professional practice of psychology, especially clinical and industrial psychology; Chapter 14 will examine post–World War II developments on the research side of psychology.

**THE EMERGENCE OF MODERN CLINICAL PSYCHOLOGY**

As you recall from the close of the last chapter, prior to World War II, clinical psychologists struggled to establish their status as independent professionals. In the 1930s, for
example, they tended to be employed in mental hospitals or clinics, under the supervision of psychiatrists; their "practice" was limited primarily to administering mental and other forms of tests; and, because there was virtually nothing in the way of formal clinical training available to them, they developed their skills on the job or in internship-like arrangements (Capshew, 1999). The cruel circumstances of the war, however, created a permanent place for clinicians, who were among those providing professional services to the mentally wounded. Organized psychiatry, which had controlled the delivery of therapeutic services to the mentally ill prior to the war, was overwhelmed by the need for therapy. As in the first world conflict, applied psychologists continued to contribute their services through various testing programs, but in the second war they also gained experience treating those who were damaged psychologically by their war experiences. And the need was great. During the vicious Pacific battle for Guadalcanal in 1942, for example, 40 percent of the casualties that were serious enough to require evacuation were psychological breakdowns (Herman, 1995). Furthermore, of the first 1.5 million soldiers given medical discharges, about 675,000 (45 percent) were for psychiatric reasons (Vandenbos, Cummings, & DeLeon, 1992). When the war ended, there were approximately 44,000 veterans who were in Veterans Administration hospitals suffering from various mental disorders resulting from the war, compared with 30,000 hospitalized with physical wounds (Sexton, 1965). Psychiatry simply could not cope with the caseload and was forced to abandon its therapeutic monopoly. In addition, the federal government, perceiving the increased need, launched an aggressive program to support the training of graduate students in clinical psychology. In the academic year 1946–1947, for instance, the VA funded training programs in twenty-two universities that enrolled two hundred students (Capshew, 1999).

Out of these circumstances the modern clinical psychologist emerged—no longer limited to testing, but gradually recognized as an expert diagnostician and therapist; no longer limited to children and juveniles in school settings, but now capable of delivering services to anyone in need of them; no longer restricted to a clinic setting, but now more likely to develop a private practice; no longer under the supervision of psychiatrists, but increasingly on a par with them. As this new clinician emerged, however, it quickly became clear that standardized training and some form of accreditation were needed.

**The Boulder Model**

In 1947, with the financial support of the federal government, through the Veterans Administration and the U.S. Public Health Service, the APA formed a Committee on Training in Clinical Psychology (CTCP). It was chaired by David Shakow (1901–1981), who already had been quite active in promoting his ideas about the training of clinical psychologists. As chief psychologist at Worcester State Hospital (refer to Figure 12.2), Shakow had been an active member of the original American Association of Applied Psychologists, and, just before World War II, had served on their committee for the training of clinicians. Shakow’s influence on the CTCP is evident from the fact that the committee report is usually referred to as the “Shakow Report” (Baker & Benjamin, 2000). It formed the backbone for deliberations about clinical training held during a 15-day
intensive conference that attracted 71 clinical psychologists and other professionals to
the University of Colorado in Boulder the late summer of 1949 (Figure 13.1).

Out of the Boulder conference came a blueprint for clinical training that was ideally
designed to balance what Shakow saw as the three primary forms of expertise
that any clinical psychologist should have—they should be experts in the diagnosis of
mental disorders, they should be skilled psychotherapists, and they should be able to
complete high quality empirical research. The “Boulder model,” because it ideally com-
bined training in the science and in the practice of psychology, came to be known as the
scientist-practitioner model of clinical training. The training was to include a thorough
grounding in basic knowledge of the principles of psychology and in the research methods
for generating these principles; a thorough understanding of psychometrics (psycholog-
ical testing), psychopathology, and psychotherapy; a doctoral dissertation that involved
empirical research; and a year-long internship at a professional clinic, VA hospital, or
similar setting. Total preparation would take four to five years and lead to a Ph.D. in
clinical psychology. With a training model in place and a strong need for their services,
clinical psychologists rapidly increased their numbers and, as mentioned earlier, their
influence in the APA.
The Eysenck Study: Problems for Traditional Psychotherapy

The conference at Boulder provided a new ideal for the training of clinical psychologists. At about the same time, the ability of clinicians to deliver effective therapy was enhanced by the development of new forms of psychotherapy. Two of these approaches, behavior therapy and client-centered therapy, will be featured here. They developed and prospered in the context of a time when traditional psychoanalytic and related “insight” therapies were being questioned as to whether they really worked. The doubts were magnified by a brief (six pages) article that appeared in 1952, written by a British psychologist, Hans Eysenck, and with the title: “The Effects of Psychotherapy: An Evaluation.” In the article, Eysenck examined the efficacy of traditional insight approaches to psychotherapy by combining the results reported in nineteen other studies—five of them evaluating psychoanalytic therapy and the remaining fourteen evaluating what was called “eclectic” therapy. In the absence of a control group not receiving therapy, Eysenck combined the results of two other studies that examined improvement among “neurotics” in the absence of formal psychotherapy (e.g., from insurance claims of disability). While recognizing problems with this comparison group, Eysenck claimed an improvement rate of about 72 percent in the absence of therapy (over the course of two years). When he looked at the recovery rates for patients undergoing psychotherapy, however, he found that the reported percentage improved in Freudian psychoanalysis was paltry 44 percent. A recovery rate of 64 percent for the eclectic therapy was better, but still less than the rate for those receiving no therapy at all. Eysenck concluded that no evidence existed to support the effectiveness of psychotherapy, as it was then being practiced. Later
research (e.g., Bergin, 1971) uncovered a number of methodological problems that made Eysenck's conclusions questionable, but the damage was done. Throughout the 1950s and 1960s, psychologists proposing alternatives to traditional psychoanalysis often pointed to Eysenck's work as evidence that new strategies were needed. Two of those new approaches were therapies deriving from behaviorism and those coming from what was called "humanistic" psychology. Before examining these therapeutic strategies, however, consider this chapter's Close-Up, which describes an unfortunate chapter in the history of medical procedures for the treatment of mental illness.

**CLOSE-UP**

**THE MEDICAL STRATEGY—LOBOTOMIES, TRANSORBITAL AND OTHERWISE**

In the late nineteenth century, the practice of psychiatry was centered on the asylum and the treatment of patients who were seriously mentally ill. Little could be done for them beyond custodial care, and "treatment" often amounted to restraint and sedation. With the advent of Freudian psychoanalysis, psychiatrists began to start private practices and to treat patients with less serious disorders (Shorter, 1997), shifting from medical treatment to a psychological analysis. Yet the seriously disturbed, their numbers steadily increasing in the twentieth century, remained in asylums and hospitals, with little hope for improvement. In the 1920s and 1930s, however, several new medical treatments appeared on the scene, with the promise of providing some help for the desperate. As another lesson in the dangers of presentism, it is easy to dismiss some of these therapies as the misguided ideas of quack doctors. It is important to keep in mind, however, that the psychiatric community was honestly attempting to provide some relief to patients, at the time when nothing else seemed to work and patients were clearly suffering. Also, especially during the Depression era of the 1930s, psychiatrists felt some pressure to justify their fees by showing that their procedures had some measurable effect (Grob, 1983). Nonetheless, some techniques seemed to come into fairly widespread practice even though there was a surprising lack of scientific basis for their implementation, and little if any evidence for their effectiveness. Consider, for example, the lobotomy.

The story begins with a paper presented at the Second International Congress on Neurology, held in London in 1935. It reported some interesting research by two American scientists, Carlyle Jacobsen and John Fulton. They reported that surgical damage to the frontal lobes of chimpanzees could have a beneficial effect. Prior to the surgery, the animals had been quite aggressive, but the aggression seemed to disappear after the surgery and the animals' mental functions seemed otherwise unimpared. By severing the connections between frontal lobes and lower brain centers involved with emotional behaviors, the researchers seemed to have found a way to calm the easily agitated chimps. In the audience that day was a Portuguese neuropsychiatrist, Egas Moniz. He was already well known and highly respected, having been nominated for a Nobel Prize for his discovery of methods to create images of cerebral blood flow. It occurred to Moniz that the Jacobsen/Fulton procedure could be applied to seriously disturbed (and agitated) psychotic patients (Grob, 1983).

With no science other than the Jacobsen and Fulton primate study for support, Moniz developed a procedure that he called a prefrontal leucotomy (roughly means a cutting of white matter in the prefrontal area of the cortex), carried out with a device he created called a leucotome. After a series of small holes were drilled in both sides of the skull, just above and in front of the temples, the thin leucotome would be inserted successively into each hole to a fixed depth and moved side to side, thereby severing brain tissue that connected the frontal and prefrontal lobes with lower brain centers. By early 1936, Moniz had tried the procedure on twenty patients, primarily with manic-depression or obsessive-compulsive disorders that were severe enough that they were suicidal or showed signs of being dangerous. Moniz reported (without any substantial supporting data) that the procedure was mostly successful (fourteen of twenty "improved") (Shorter, 1997). Although many of the
patients later became surprisingly listless, apathetic, and emotionally passive after recovering from the surgery. Moniz believed it was a small price to pay for the relief from their severe, even life-threatening symptoms. To his credit, Moniz urged that the procedure not be used except in extreme cases and only after all alternative methods of helping a patient had failed. For this work he was awarded the Nobel Prize in 1949.

If Moniz was careful about the use of his new procedure, two American neurologists were not. Walter Freeman and James Watts thought that the Moniz procedure was a major breakthrough in the treatment of a wide range of psychiatric disorders, and they set about to spread the good news far and wide, while at the same time completing as many of these surgeries as they could. They renamed the procedure a lobotomy, and in 1946, Freeman invented a new technique called a transorbital lobotomy. It involved inserting a device similar in design to an ice pick through the eye sockets and into the prefrontal and frontal lobes. Compared with the Moniz technique, the new procedure could be completed more quickly, and it enabled a greater number of fibers to be cut, but it also increased the risk of severing a major artery. Freeman was undeterred by the occasional death (about 2.5 percent of patients), however, and vigorously promoted the new procedure, partly because of how quickly it could be done, and the fact that it could be completed on an outpatient basis (i.e., more lobotomy income per unit of time). Freeman’s enthusiasm caused a split with Watt, who appeared increasingly nervous about Freeman’s crusading zeal for the procedure. Freeman soldiered on, even traveling around the country doing “demonstrations” like the one pictured in Figure 13.2, in which he can be seen tapping his transorbital leucotome into the eye of a patient, while nurses hold on and onlookers carefully observe (and don’t sneeze, one hopes).

By 1951, more than 18,000 patients had undergone lobotomies, according to one estimate (Grob, 1991), despite growing uneasiness about the procedure. A lobotomy was certainly effective in calming agitated patients, but it often resulted in permanent changes in personality, sometimes creating virtual zombies. Also, the procedure was occasionally used simply to manage unruly or disagreeable patients, a situation portrayed disturbingly well in *One Flew Over the Cuckoo’s Nest*, a 1962 novel by Ken Kesey that was made into a movie in 1975 that swept the Oscars the following year. Lobotomies quickly went out of fashion in the mid-1950s, with the advent of a number of effective antipsychotic drugs.
Behavior Therapy

We learned in Chapter 10 that one reason for the popularity of the behaviorist ideas of promoters like Watson was the promise of application to daily life, through such things as the improvement of child-rearing practices. If behaviors are primarily the result of learning, then presumably dysfunctional behaviors could be unlearned and replaced with more adaptive ones. This rationale was part of Watson’s thinking as he formulated the Little Albert study. As you recall from Chapter 10, although he and Rayner made no attempt to remove Albert’s fear of rats, they had several proposals about how to do so, based on their beliefs about conditioning. Furthermore, some of these ideas were tested in the 1920s, especially by Mary Cover Jones, who is often credited with pioneering behavior therapy. She tried all of Watson’s suggestions and several of her own ideas on a number of different children, and is remembered for one particular case (Jones, 1924b) in which she removed a young boy’s fear of rabbits by gradually moving the rabbit closer to the child while he was eating, using a procedure that she called “direct conditioning.”

During the 1920s and 1930s, there were several other demonstrations of how conditioning principles could be applied to alter behavior in a clinical setting. In Russia, for example, researchers applied Pavlovian principles to treat alcoholism by pairing alcohol (CS) with electric shock (UCS), and hysteria by conditioning movement in limbs that appeared initially to be paralyzed (Kazdin, 1978). In the United States, O. Hobart and Willie M. Mowrer developed a treatment program for bed-wetting based on conditioning principles by creating a crib pad that rang a bell as soon as it became wet. The Mowrers used the success of their procedure to attack psychoanalytic concepts of bed-wetting, which relied on the usual deep-seated unconscious conflicts to explain the problem. Instead, the Mowrers argued, it is much simpler to assume that the problem results from a failure to recognize the stimulus cues connected with bladder tension. If conditioning is the problem, they believed, then it is also the solution (Mowrer & Mowrer, 1938).

Behavior therapy gained impetus in the 1950s through (a) the work of Eysenck and his colleagues in London, and (b) the development of an effective therapy technique descended from the work of Mary Cover Jones. At Maudsley Hospital in London, Eysenck followed his 1952 critique of traditional psychotherapy by assembling a team of colleagues to examine the possibility of developing a new therapy approach, one based on the conditioning principles of Pavlov and Hull. By 1960, he and his group had assembled a sufficient number of applications of conditioning principles to justify producing a book (Eysenck, 1960) that was the first to include the term “behavior therapy” in the title (Glass & Arnow, 1992). Three years later, Eysenck launched behavior therapy’s first journal, Behaviour Research and Therapy, with a title that made clear Eysenck’s belief that therapies should not be used unless they can be shown effective.

In the 1950s, Joseph Wolpe, a South African at the University of Witwatersrand, created a procedure based on Jones’s work and called it systematic desensitization (Wolpe, 1958). It remains one of the best known and most effective behavior therapy techniques. Wolpe, a medical doctor, was trained in traditional psychoanalytic procedures but became dissatisfied with them. He began studying learning theory, especially Hull’s, and benefited from the presence in South Africa of an American psychologist who had studied with Kenneth Spence, Hull’s alter ego.
Wolpe began exploring behavioral techniques by studying the phobic reactions of cats. After creating fears by shocking the animals whenever they reached for food, he tried to eliminate the fear. Like Jones, he assumed that fear and eating were incompatible responses, so he tried to replace the fear responses by substituting eating responses. Wolpe accomplished this by feeding the animal first in a room that vaguely resembled the original room where the shock occurred, then in a room that more closely resembled the original room, and so on. That is, the fear response was gradually weakened, replaced by the approach to food (Kazdin, 1978).

Wolpe discovered a way to apply this procedure to phobic humans after reading a book by the Chicago physiologist Edmund Jacobson, which described a technique called progressive relaxation (Jacobson, 1929). Jacobson had been using relaxation to treat patients with nervous disorders; Wolpe viewed the procedure as a substitute for the eating response he had used with cats. In essence, Wolpe’s systematic desensitization procedure involved relaxation training, then the creation of an “anxiety hierarchy,” a list of situations that created increasingly greater levels of anxiety. Patients would become relaxed and imagine the situation of least anxiety, then gradually ascend the hierarchy. Wolpe found that after just a few sessions, patients could remain relaxed in the presence of their most feared objects.

With additional modifications over the years, Wolpe’s procedure has been shown to be highly effective with certain types of anxiety problems (Paul, 1966). A number of other behavior therapy techniques evolved over the years, ranging from token economy/reinforcement systems based on a Skinnerian model, to cognitive-behavior therapy, which synthesizes learning theory and the insights from cognitive psychology. A good summary can be found in Kazdin (1978).

The Humanistic Approach to Psychotherapy

Humanistic psychology started as a revolt. It came to be known as psychology’s “Third Force,” rejecting what it believed to be the “mechanistic, impersonal, hierarchical, elitist psychoanalytic establishment and [the] overly scientific, cold, removed behaviorism” (Cushman, 1992, p. 55). Humanistic psychologists criticized the ideas that human behavior could be reduced to repressed biological instincts or simple conditioning processes, rejected the idea that individuals’ past histories inevitably limited what their futures could be, and denied the deterministic assumptions of the other two “forces” in psychology, psychoanalysis and behaviorism. Instead, they proposed that the qualities best characterizing humans are free will and a sense of responsibility and purpose, a forward-looking lifelong search for meaning in one’s life, and an innate tendency to grow toward what was called self-actualization. To become self-actualized meant to reach one’s full potential in life.

The two American psychologists most closely associated with humanistic psychology were Abraham Maslow and Carl Rogers. Maslow (1908–1970; Figure 13.3) was trained as an experimental psychologist and researched dominance behavior in primates, but later exchanged what he saw as a sterile and reductionist scientific approach for the more wholistic humanistic strategy. After completing a doctorate in 1934, he came to New York and eventually settled into a faculty position at Brooklyn College, where he stayed until 1951, when he moved to Brandeis University (near Boston) and completed
his career. Maslow is known to all students in general psychology for his hierarchy of needs, a model that proposed a series of need systems, arranged in a pyramid, with lower level and more primitive needs at the bottom and self-actualization at the top. Achieving self-actualization required satisfying all the needs below it—physiological needs, safety needs, the need for love and belonging, and the need for self-esteem, in that order. As he once wrote,

healthy people have sufficiently gratified their basic needs for safety, belongingness, love, respect, and self-esteem, so that they are motivated primarily by... self-actualization, defined as ongoing actualization of potentials, capacities and talents, as fulfillment of mission..., as a fuller knowledge of, and acceptance of, the person’s own intrinsic nature, as an unceasing trend toward unity, integration or synergy within the person. (Maslow, 1971, p. 25)

Maslow argued that studying self-actualization, in contrast with a strategy that examines psychological disorders (e.g., as Freud did), would produce a healthier psychology. As he put it in a famous quote, “the study of crippled, stunted, immature, and unhealthy specimens can yield only a cripple psychology... The study of self-actualizing people must be the basis for a more universal science of psychology” (Maslow, 1954, p. 234). Maslow followed his own advice and examined the concept of self-actualization more closely, identifying real historical individuals who seemed to be actualized, then looking for commonalities among them. The work began informally, with his reflections about two people that he had come to know in New York—the anthropologist Ruth Benedict and the gestalt psychologist Max Wertheimer. He later reported that when studying Benedict and Wertheimer, he realized “their two patterns could be generalized.

1Maslow influenced a number of students. One whose career he definitely affected was Elliot Aronson, a prominent social psychologist who was a doctoral student of Leon Festinger (featured in the next chapter). As an undergraduate at Brandeis University, Aronson wandered into an introductory psychology lecture on prejudice being given by Maslow. The topic caught the attention of Aronson, who had been on the receiving end of the behavioral products of prejudice while growing up as a Jewish child in the tough working-class town of Revere, Massachusetts. Aronson immediately changed his major to psychology and developed a close and lasting friendship with Maslow. Aronson earned the APA’s Award for Distinguished Scientific Contribution to psychology in 1999.
I was talking about a kind of person, not about two incomparable individuals... I tried to see whether this pattern could be found elsewhere" (Maslow, 1971, pp. 41–42). It could. Through a variety of techniques, Maslow identified a number of people who seemed to share some of the attributes of Benedict and Wertheimer. Maslow found that self-actualizers perceived reality accurately, were highly independent and creative, were spontaneous and natural around others, thought of their work as a career or a calling rather than a job, had a strong moral code, and would occasionally have moments of intense enjoyment or satisfaction that Maslow called peak experiences. Maslow's work, and his unceasing optimism about the possibilities for human existence, foreshadowed today's positive psychology, a movement that emphasizes mental health rather than mental illness, and examines such topics as happiness, optimism, and creativity.

**Carl Rogers and Client-Centered Therapy** Humanistic psychology's second major figure was Carl Rogers (1902–1987), the creator of client-centered therapy, an approach that appealed to a large number of clinicians in the 1960s and 1970s. Rogers (Figure 13.4) was the product of a highly controlled environment, but managed to build a career of his own despite his early experiences. The fourth of six children, he was raised in a Chicago suburb in an extremely conservative Protestant family that valued hard work and considered all pleasures sinful. As Rogers (1961a) later recalled: "[E]ven carbonated beverages had a faintly sinful aroma, and I remember my slight feeling of wickedness when I had my first bottle of 'pop'" (p. 5). When Rogers was twelve, his father moved the family to a large farm in Wisconsin, partly to remove his children from the evils of suburbia. He was determined to run the farm according to the principles of "scientific agriculture," and Carl developed a keen appreciation for science out of the experience.
It led him to enroll in the college of agriculture at the University of Wisconsin, but the enthusiasm soon faded as the sheltered young man discovered a bright new world of people and ideas. He switched to studying history and, determined to be a minister, entered New York's Union Theological Seminary after graduating from Wisconsin in 1924. The theology students at Union were encouraged to think for themselves in this liberal environment, and Rogers (1961a) “thought [himself] right out of religious work” (p. 8) and into psychology.

Rogers began taking courses across the street from Union at Columbia's Teachers College, where he came under the influence of Leta Hollingworth (Chapter 8’s Close-Up). She sparked his interest in doing child guidance work, and he began for the first time to think that he might like to be a clinical psychologist. He completed an internship at the Freudian-based Institute for Child Guidance in New York, where he gained some insights about unconscious processes but developed considerable distaste for psychoanalysis, and earned a doctorate from Columbia in 1931. Rogers then took a position as a staff psychologist at a child guidance clinic in Rochester, New York, where he remained for a dozen years. It was there that he began developing his unique brand of therapy. Professionally, he attended APA meetings, but found them “full of papers on the learning processes of rats and laboratory experiments which seemed . . . to have no relation to what [he] was doing” (Rogers, 1961a, p. 12). When the American Association for Applied Psychology (AAAP) formed in 1937, however, he became an active member, and in 1939 he advocated a training model for clinicians that reduced the heavy emphasis on research and enhanced the opportunities for supervised practice in the craft of diagnosis and therapy. Academia ignored his proposal, but the idea was in essence identical to the one that emerged thirty years later at the University of Illinois in the form of the Psy.D. degree (Napoli, 1981).

Rogers entered academia himself in 1940, accepting a position at Ohio State University. There the stimulus provided by critically thinking, assertive graduate students sharpened his ideas about therapy and the nature of personality, and resulted in his first book, Counseling and Psychotherapy, in 1942. Three years later he went to the University of Chicago as a professor of psychology and director of the counseling center. In 1946 he was elected president of the APA, the second president following the big postwar reorganization, and a clear sign to research-oriented academicians that the APA had begun to shift in the practitioner direction. Rogers spent twelve years at Chicago, and then four back at Wisconsin, where he had a joint appointment in psychology and psychiatry. The Wisconsin years were not happy ones—his client-centered therapy had come under attack as being relevant only for articulate people with mild problems, and Rogers wanted to show that more seriously disturbed clients could benefit as well. He launched an ambitious project to apply the therapy to schizophrenic patients at a local hospital, but the results were at best “equivocal” (Lakin, 1996). That outcome, combined with a generally cool reception from the experimentally oriented psychology department at Wisconsin, led Rogers to look for greener pastures. He found them in California in 1961, where he accepted the invitation of a former student to join the staff at the Western Behavioral Sciences Institute at La Jolla. Several years later, he founded the Center for the Study of the Person in La Jolla, where he extended his client-centered therapy to a group setting.

The essence of Rogers’ client-centered therapy is not difficult to grasp. Consistent with one of humanistic psychology’s cornerstone ideas, Rogers rejected the notion that it
was important to delve into the client's past history in order for therapy to be effective. Rather, the formula for success was for the therapist create the right kind of therapeutic environment; this, in turn, would allow the client to be able to take control of his or her life and begin to grow in the direction of self-actualization. This ideal therapeutic atmosphere included three fundamental components. First, the therapist must be "genuine" and honest with the client (Rogers avoided the word "patient," with its medical overtones). As Rogers put it,

This means that I need to be aware of my own feelings... rather than presenting an outward facade of one attitude, while actually holding another attitude at a deeper... level. Being genuine also involves the willingness to be and to express, in my words and my behavior, the various feelings and attitudes which exist in me. (Rogers, 1961b, p. 33)

Although Rogers didn't say it here, this genuineness also enables the therapist to act as a model for the kind of emotional health being sought in the client. Second, Rogers believed it was essential for the therapist to be accepting of the client as a person, meaning "a warm regard for him as a person of unconditional worth—of value no matter what his condition, his behavior, or his feelings" (p. 34). This means accepting a person as having value by virtue of simply being a human being. In practical terms, it can mean avoiding labels. For example, I once heard a recording of Rogers talking with a teenager who had been in various kinds of trouble. The boy, very defensively, opened the conversation by saying that he imagined Rogers must have had a lot of experience dealing with delinquents like him. Rogers, very calmly, simply responded that he would prefer to think of the boy as "Mike." The message—the boy was a person, not the label "delinquent."

The third component of an effective therapist-client relationship is empathy, and it follows from the humanistic philosophy proposing that reality is the reality as perceived and experienced by a person. Hence, understanding someone else requires trying to understand how that person views things. Rogers recognized that a complete understanding of another person was impossible, but it was the effort that counted. This effort included the major therapeutic technique used by Rogers, called reflection. It meant taking something said by the client and rephrasing it in a way that leads the client to think "this therapist understands what I'm saying." To illustrate, consider this exchange from a transcript of a therapy session with Rogers:

C: I suppose from the practical point of view it could be said that what I ought to be doing is solving some... day-to-day problems. And yet, what I'm trying to do is solve... something else that's a great... deal more important than little day-to-day problems.

T: I wonder if this will distort your meaning, that from a hard headed point of view you ought to be spending time thinking through some specific problems. But you wonder if perhaps maybe you aren't on a quest for this whole you and perhaps that's more important than a solution to the day-to-day problems.

C: I think that's it. I think that's it. That's probably what I mean. (Rogers, 1961c, p. 90)

If the therapist succeeds in establishing the proper therapeutic environment, good things will happen, according to Rogers. That is, the client "shows fewer of the characteristics
which are usually termed neurotic or psychotic, and more of the characteristics of a healthy, well-functioning person” (Rogers, 1961b, p. 36). One final point is that Rogers believed that what he had to say about the therapeutic environment applied to all human relationships.

Thus it seems reasonable to hypothesize that if the parent creates with his child a psychological climate such as we have described, then the child will become more self-directing, socialized, and mature. To the extent that the teacher creates such a relationship with his class, the student will become a self-initiated learner, more original, more self-disciplined, less anxious and other-directed. If the administrator, or military or industrial leader, creates such a climate within his organization, then his staff will become more self-responsible, more creative, better able to adapt to new problems, more . . . cooperative. (p. 37)

As an alternative to Freudian-based insight therapies, in which the therapist played the controlling role, client-centered therapy (first called nondirective therapy) and a number of similar humanistic therapies, quickly became popular among clinical psychologists. In contrast with analytic approaches, it was easier to grasp conceptually and it actually seemed to help people. It was also based on a more optimistic assessment of human potential for change, reflecting Rogers’s own ability to take control of his life and a general midwestern faith that things can be improved if one works hard enough. Also, Rogers was able to demonstrate the therapy’s effectiveness on the basis of a program of research that he and his students developed. Perhaps stemming from his earlier experiences with scientific agriculture, Rogers took great pleasure in completing empirical research on therapy outcomes, complete with comparisons between those in treatment and those in waiting list control groups. He was able to show that his approach brought about measurable positive changes in people’s lives (e.g., Rogers, 1954).

Humanistic psychology enjoyed a period of great popularity in the 1960s and 1970s. A Journal of Humanistic Psychology was started in 1961, largely through Maslow’s efforts; the American Association of Humanistic Psychologists was created a year later; Maslow was elected APA President in 1968; and the APA created a division for humanistic psychology (Division 32) in 1972. That it was popular during this period of American history is no surprise. As a rebellion against the forces of psychoanalysis and behaviorism, it fit well into the context of a time marked by numerous challenges to existing authority. And as a philosophy centered on the individual person (e.g., SELF-actualization), it was consistent with some of the values of the 1970s, a decade sometimes referred to as the “Me Decade” (Schulman, 2001). Despite its popularity, however, the humanistic movement has been on the fringe of psychology. It has been faulted for overemphasizing the self at the expense of the importance of the community and for being clearer about what it was against than what it proposed as an alternative (e.g., Farson, 1978; Wertheimer, 1978). Nonetheless, it has had an important impact on the clinical practice of psychology, especially through the work of Rogers.

The Vail Conference and the Psy.D. Degree

Before leaving this section of the chapter on clinical psychology, it is worth noting how the Boulder model fared over the years and how a significant alternative to it developed.
As you recall, the Boulder model was designed to provide the ideal synthesis of scientist and practitioner, someone able to conduct high quality research and also able to provide effective clinical services. Although the model continues to be the main approach to the training of clinicians, it is not clear that it always reached its ideal. In their analysis of Boulder’s first fifty years, for example, Benjamin and Baker (2000) reported that it “is a model that has been much praised, much maligned, and according to some, rarely if ever tried” (p. 233). What were the problems?

First, because academic departments of psychology controlled the clinical training programs, in many cases the scientist side of the training received much greater emphasis than the practitioner side, despite Shakow’s vision of a 50–50 split between research and practice training (Cautin, 2006). By the late 1950s, many Ph.D. clinicians were complaining that they were unprepared for the actual practice of psychology and, because they were working in clinical settings for the most part, and not in academia, they were not getting much use out of their research skills. A second and related problem was that professors of clinical psychology, according to the Boulder recommendations, were expected to “maintain their clinical skills by continuing some clinical practice” (Rainey, 1950, p. 130). Most did so, but only to a limited extent. In the academic environment, professors of clinical psychology were under the usual pressure to publish extensively, and that made it very difficult for them to maintain their clinical skills. As a result, graduate students did not always get the best training in how to do clinical work. Many departments took the attitude that students would develop all the needed clinical skills when they did their year-long internship, but the original Boulder model made it clear that training in clinical practice should occur throughout the four- to five-year program and that the internship should not be seen as a “repair shop” for a prior lack of experience (Stricker & Cummings, 1992).

Criticisms of the Boulder model led to considerations of an alternative, one that emphasized the practice of clinical psychology more than research. It was an idea that preceded Boulder. For example, in the mid-1920s, Crane (1925) wrote an article called “A Plea for the Training of Psychologists.” Written at a time when there were no doctoral training programs for clinical psychologists (Capshaw, 1999), he argued that the typical Ph.D. training in psychology, with its emphasis on basic research in traditional topic areas (e.g., perception, learning), was inappropriate. Instead, aspiring clinicians ought to be given much more instruction in the actual practice of psychology and he suggested the creation of a new kind of degree that he called a “Doctor of Psychology” degree (Peterson, 1992). At a time when clinical psychologists had little status, however, the proposal went nowhere. The same was true for a similar idea, mentioned earlier, floated by Carl Rogers in 1939.

By the 1960s, however, dissatisfaction with the Boulder model was beginning to produce new proposals for the way in which clinicians ought to learn their craft. And the general atmosphere of dissent that permeated the 1960s led to several attempts to create a new direction for training. First, an APA committee on training recommended, in 1967, that alternatives to the scientist-practitioner model be explored, including one that would accentuate clinical practice and lead to a new degree, a Doctorate of Psychology, or Psy.D. degree. Second, in an academic context, the University of Illinois decided to implement the recommendation, thereby creating, in 1968, the first university-based Psy.D. program in the United States. The prestige of the University of Illinois immediately
gave the Psy.D. some respectability, and other universities soon began developing similar programs. Third, Psy.D. programs began developing as free-standing schools of professional psychology, not affiliated with universities. The first one was created in California—the California School of Professional Psychology or CSPP. It opened with two campuses (San Francisco and Los Angeles) in 1970, and added two more (San Diego and Fresno) two years later.

Just as the strong need for clear training guidelines for the new post-war clinical psychologist led to the Boulder conference in 1949, the need for some degree of standardization in the training of the new Psy.D. clinician led to its own conference, held at Vail, Colorado, in 1973. The goal of the Vail conference was to legitimize the Psy.D. degree and provide a clear distinction between it and programs yielding a Ph.D. in psychology. In essence, the Ph.D. was designed to produce the traditional scientist-practitioner, while the Psy.D. would produce a practitioner-scientist, knowledgeable about research, but primarily trained to deliver psychological services. Although it took some time for Psy.D. programs to attain perceived legitimacy, the APA now provides accreditation for both Ph.D. Boulder model programs and Psy.D. Vail model programs.

A major part of the postwar story of clinical psychology has been its increased status in the community of mental health care providers. As you recall from Chapter 12, clinical psychologists prior to World War II had relatively low standing among health care professionals and were often under the direct supervision of psychiatrists. Since the war, however, organized psychiatry's hegemony has gradually diminished. Over the past half century, sometimes after intense legal battles, clinical psychologists have gained the rights to (a) admit and release patients from mental hospitals, (b) serve as expert witnesses in court (e.g., in insanity cases), and (c) receive third-party payments from insurance companies. At present, organized psychology and psychiatry are skirmishing over prescription privileges, with a few states (e.g., New Mexico) already allowing clinicians to prescribe. There is every indication that before too long, this major distinction between psychiatrists and clinical psychologists will disappear (Wiggins, 1994).

**PSYCHOLOGY AND THE WORLD OF BUSINESS AND INDUSTRY**

We have already seen (Chapter 8) that it did not take psychology long to become involved in the world of business and industry. Soon after the turn of the twentieth century, Walter Dill Scott was writing on the application of psychology to advertising and how business could be made more efficient (Scott, 1903; 1910); Hugo Münsterberg was doing the consulting work that would produce *Psychology and Industrial Efficiency* (1913); Walter Bingham was creating his Division of Applied Psychology at the Carnegie Institute in Pittsburgh and consulting with local businesses; the Gilbreths were establishing their successful industrial consulting business; and the Hollingworths were doing their caffeine research for Coca-Cola.

During the 1920s, a period of growth and prosperity in America (after a period of recession in 1921–1922), these kinds of activities increased significantly. Following the highly visible Army testing program in World War I (Chapter 8), psychologists began developing tests as fast as they could be printed, for applications in education as well
as business, and many businesses and industries hired psychologists to revamp their personnel departments, primarily by developing tests for the selection and evaluation of workers. Many of these efforts produced tests of questionable quality, prompting Anne Anastasi, author of a legendary textbook on psychological testing, to conclude that the “testing boom of the 1920s probably did more to retard than to advance the progress of testing” (1993, p. 17). Problems with reliability and validity didn’t slow the momentum of the testing “boom” until the late 1920s, and the apparent success of the enterprise spawned a new development in the 1920s—companies designed to provide psychological consulting services.

Walter Dill Scott created the first one, the Scott Company (see Figure 13.5), shortly after the end of World War I, but it only lasted for a few years, partly because Scott’s leadership disappeared when he was named president of Northwestern University in 1920. A second attempt, although it floundered initially, was the Psychological Corporation, which still exists and is highly successful today. It was the brainchild of James McKeen Cattell, who, as you recall from earlier chapters (4 and 8), was a doctoral student of Wundt, the promoter of the failed Galtonian approach to mental testing, and chair of the psychology department at Columbia during a time when it became a leading graduate school in psychology (two of his students were Thorndike and Woodworth). In the early 1920s, Cattell no longer worked in academia, having been fired from Columbia for his antiwar views. He continued as editor-in-chief of the journal Science, but he was looking

\[\text{FIGURE 13.5 Announcement of the formation of the Scott Company, the first consulting company for business organized by psychologists.}\]

\[\text{The first edition of this remarkable text appeared in 1954, and it went through seven editions in Anastasi’s lifetime (1908–2001). The seventh edition, which appeared in 1997, is still in print and widely used as a text.}\]
for a way to return to prominence among fellow psychologists. He was also concerned about the growing number of people fraudulently claiming expertise in psychology and cashing in on the widespread interest in psychological testing (Sokal, 1981a). His idea for the company was to create a nationwide network of Ph.D. psychologists with recognized expertise in testing and experimental methodology. The Corporation would be a central clearing house—a business in St. Louis, for instance, in need of psychological assessment in its personnel department, would contact the Psychological Corporation in New York (or one of its planned branch offices), and would be referred to local expert psychologists who had signed on with the Corporation. The psychologists would perform the service and collect their fee, half of which went back to the Corporation.

The Psychological Corporation began in 1921, with Cattell as its first president. It was a fine idea in principle, but almost immediately it ran into difficulty, primarily because of Cattell’s leadership style. He was never very clear about precisely what services would be offered, making businesses hesitant to sign contracts, and he did not have a good head for business. As late as 1925, for instance, the Corporation’s net income was $51,75, while it was renting offices in prime New York real estate and paying $2,500 to the person in charge of day-to-day operations. To keep the operation afloat, Cattell had to contribute $5,000 of his own money (Sokal, 1981a). This wouldn’t do, and by 1926 Cattell was ousted by his Board of Directors. Walter Van Dyke Bingham, with better connections in the business world because of his experiences running the applied psychology operation at the Carnegie Institute in Pittsburgh (Chapter 8) replaced him. Although the Psychological Corporation suffered during the Great Depression of the 1930s, as most businesses did, it survived, and then flourished, especially after World War II. In the year that a publishing house purchased the corporation, 1969, it was worth $2.5 million in total assets and was selling about $5 million in psychological tests per year (Sokal, 1981a).

The field of industrial psychology achieved an increase in perceived legitimacy with the publication of a large and important textbook in 1932 with the simple title of Industrial Psychology. Morris Viteles, Lightner Witmer’s best-known doctoral student, wrote it. Viteles completed his degree with Witmer at the University of Pennsylvania in 1921, a study (reminiscent of Münsterberg) on competency testing for streetcar employees (McReynolds, 1997). Two years later, Witmer named Viteles director of a new branch of the Psychological Clinic, named the Vocational Guidance Clinic. It offered testing and consulting services to businesses, but it was primarily for the purpose of helping high school and college students prepare for and enter the world of work. Viteles spent the rest of his career at the Clinic, while also working as a consultant to various businesses and industries in the Philadelphia area. His consulting work went far beyond the typical employee selection realm—Viteles conducted valuable studies on safety and accident prevention for the Yellow Cab Company, and, for the Bell Telephone Company, he developed a program to help managers develop leadership skills and participate more effectively in corporate decision making (Hilgard, 1987).

The Hawthorne Studies

A major event in the 1920s was the start of a series of applied research experiments that stretched into the 1930s. The research led to the naming of an effect that was supposedly
demonstrated over and over in the studies, and today appears regularly in textbooks in industrial psychology, social psychology, and research methodology—the so-called Hawthorne effect. The name derives from the city in Illinois where the research took place, the home of the Western Electric Plant. The plant manufactured equipment for the American Telephone and Telegraph Company (AT&T).

The experiments at Hawthorne began in 1924 with a series of studies, extending over three years, to examine the effects of lighting on worker productivity. Although they appeared to be well-designed and objective, they were in fact sponsored in part by the electrical industry, which hoped to find evidence for its belief that there was a simple correlation between lighting and productivity—the more light in the work space, the higher the productivity (Gillespie, 1991). Evidence for this, of course, would help sell light bulbs. Unfortunately for the industry, however, the research failed to show any consistent relationship between lighting and work output. Productivity remained about the same, regardless of lighting level, even when the lighting was poor. We now know that productivity is highly complex, influenced by a variety of factors. But at Hawthorne the outcome of the lighting study was the conclusion that the physical environment was not as important for productivity as the “human factor.” Workers knew they were in a study and that the results were important, so their productivity remained high because they felt valued. At least that is the standard interpretation. What was not mentioned was that several other factors surely contributed to the high level of productivity—for instance, the level of direct supervision was increased during the lighting experiments (Gillespie, 1991).

The findings of the illumination experiments were confirmed and then some, or at least that is the standard line, in the most famous of the Hawthorne studies, the Relay Assembly Test Room (RATR) study. In this experiment, six female workers were selected from a larger group in the plant. Their job was to assemble electrical relays for telephones. Five workers did the actual assembly, and the sixth kept them supplied with parts. Figure 13.6 shows the workroom from two angles. The assembly was a time-consuming, labor-intensive, repetitive job, requiring the assembly of some thirty-five parts per relay. Western Electric produced about seven million relays a year (Gillespie, 1988), so naturally they were interested in making workers as productive as possible.

The first series of relay studies extended from May 1927 through September 1928. During that time, several workplace variables were studied (and confounded with each other, actually). At various times there were changes in the scheduling of rest periods, total hours of work, and bonuses paid for certain levels of production. The standard account, similar to the outcome for the lighting studies, has it that productivity for this small group quickly reached high levels and stayed there even when working conditions were worsened. The example always mentioned concerned the infamous “12th test period” when workers were informed that the work week would increase from 42 to 48 hours per week, and that rest periods and free lunches would be discontinued (Gillespie, 1988). Virtually all research methods textbooks describe the results somewhat like this:

With few exceptions, no matter what changes were made—whether there were many or few rest periods, whether the workday was made longer or shorter, and so on—the women tended to produce more and more telephone relays. (Elmes, Kantowitz, & Roediger, 2003, p. 138)
Supposedly, the workers remained productive because they believed they were a special group and the focus of attention—they were part of an experiment. This, along with the similar outcome of the lighting studies, is the origin of the concept called the Hawthorne Effect, the tendency for performance to be affected because people know they are being studied in a research project. The effect may be genuine in a research context, but whether it truly happened at Western Electric is uncertain.

A close look at what actually happened in the RATR study reveals some interesting alternative explanations. First, although accounts of the study typically emphasize how delighted the women were to be in this special testing room, the fact is that of the five original assemblers, two had to be removed from the room for insubordination and low output. One was said to have “gone Bolshevik” (Bramel & Friend, 1981). Remember, the Soviet Union was brand new in the 1920s and the “red menace” was a threat to industrial America, resulting in things like a fear of labor unions. Of the two replacements, one was especially talented and enthusiastic and quickly became the group leader. She apparently was selected because she “held the record as the fastest relay-assembler in the regular department” (Gillespie, 1988, p. 122). Her efforts contributed greatly to the high level of productivity.

A second problem with interpreting the relay data is a simple statistical problem. In the famous 12th period, productivity was recorded as output per week rather than output per hour, yet workers were putting in an extra six hours per week compared to the previous test period. If the more appropriate output per hour is used, productivity actually declined slightly (Bramel & Friend, 1981). Also, the women were apparently angry about the change, but afraid to complain lest they be removed from the test room, thereby losing bonus money (there were not-so-subtle hints to them that such an outcome could occur if they messed up). Last, it could have been that in the RATR, as well as in some of the other Hawthorne experiments, increased worker productivity could have been simply the result of feedback about performance, along with concrete rewards for productivity (Parsons, 1974).
As you know by now, historical events must be understood within their entire political, economic, and institutional context, and the Hawthorne studies are no exception. Painting a glossy picture of workers unaffected by specific working conditions and more concerned with being considered special ushered in the human relations movement in industry and led corporations to emphasize the humane management of employees in order to create the impression of one big happy family of labor and management. Paying attention to the well-being of workers was a significant advance, in the context of the long history of workers’ needs being ignored by management. However, such a picture also helps to maintain power at the level of management and impede efforts at unionization, which some historians (e.g., Bramel & Friend, 1981) believe were among the true motives behind the studies completed at Western Electric.

IN PERSPECTIVE: PSYCHOLOGISTS AS PRACTITIONERS

We have seen that World War II was responsible for the creation of modern clinical psychology. The war also provided an impetus to other areas of applied psychology as well. As was the case during the first world conflict, psychologists were heavily involved in developing tests for such tasks as the selection of officers and the placement of soldiers into military jobs that suited them. The first war produced Army Alpha and Beta; the second war produced a much more sophisticated test, the Army General Classification Test (AGCT). It graded soldiers into five ability levels, had adequate reliability as a test, and had a degree of validity in that it correlated reasonably well with educational level (Capshew, 1999). The war also gave a boost to applied psychologists whose work examined the relationship between humans and machines, and the war produced a new subdiscipline in psychology—engineering psychology. This field had as its goals the creation of machines that were designed for efficient human use. A well-engineered airplane cockpit, for example, would have seats that reduced fatigue and instruments that avoided perceptual errors. As you recall from Chapter 8, an important pioneer was Lillian Gilbreth.

The focus of this chapter has been on the application of psychology to the diagnosis and treatment of those with mental and behavioral disorders (clinical psychology) and the use of psychological principles to improve business (industrial psychology). It is important to note that applied psychology extends to other areas that have not been a part of this chapter, however. These include counseling, school, forensic, and educational psychology.

The reorganization of the APA ushered in a period of tremendous growth for psychology in America. Applied psychology was the beneficiary of APA’s new charter, which added advancing psychology as a profession to its original goal of advancing the science of psychology. As we saw at the outset of this chapter, one outcome was a growing feeling of alienation among the scientists in APA. But the scientific side of psychology also prospered in the years after World War II, especially in the form of a major post-war movement called cognitive psychology. The story of cognitive psychology’s post-war ascendance, along with discussion of other important historical landmarks in scientific psychology during this time, will be told in the next chapter.
SUMMARY

Researchers and Practitioners

- One result of the reorganization of the APA in 1945 was increased visibility for professional practitioners of psychology. This did not sit well with academic psychologists, whose primary activities were teaching and research, and who had controlled the APA in the years between the world wars.
- Believing the APA was becoming too focused on professional practice, psychological scientists formed the Psychonomic Society in 1960 and, in 1988, the American Psychological Society (APS—renamed the Association for Psychological Science in 2006).

The Emergence of Modern Clinical Psychology

- Modern clinical psychology emerged from the terrible necessity of World War II. Psychiatry, up to then in control of treatment for mental illness, could not keep up with the caseload. Shortly after the war, a conference on the training of clinical psychologists was held at Boulder, under the leadership of David Shakow. The outcome was a training model featuring a combination of scientific expertise along with expertise in the diagnosis and treatment of mental disorders. The clinical psychologist earned a Ph.D. degree and had to complete a research-based doctoral dissertation.
- A study by Eysenck in 1952 questioning the effectiveness of traditional insight forms of psychotherapy (e.g., Freudian psychoanalysis), focused attention on the need for high quality research on therapy effectiveness, and led to the development of several new approaches to therapy, most notably behavior therapy and a variety of humanistic therapies.
- A controversial medical strategy for treating mental illness, the leucotomy (or lobotomy), was created in the 1930s by Egas Moniz, who won the Nobel Prize for his work, but was cautious in using the procedure. The procedure was based on the idea that by severing the connections between the frontal lobe and lower brain centers, the person would be better able to exert control over emotions. Less cautious was Walter Freeman, who developed a more efficient procedure, the transorbital lobotomy, by entering through the eye socket. The procedure fell out of favor in the 1950s—it was of limited effectiveness, it was sometimes used for questionable reasons, and better forms of treatment (drugs) appeared.
- Behavior therapy is based on the idea that many of life’s problems are the result of learning and that experiences influence the kinds of disorders that develop. Therapies based on behaviorist principles existed well before World War II, but after the war they came into their own, especially with the work of Joseph Wolpe, who developed a form of therapy called systematic desensitization.
- Humanistic psychology is sometimes called psychology’s “third force,” because it rejected the determinism of psychoanalysis and behaviorism and proposed that humans are free to develop and control their own lives, rather than being tied to their past. Humanistic psychologists believe that all humans have the potential for personal growth and self-actualization, a concept investigated by Abraham Maslow, who studied real life exemplars of self-actualized people (e.g., Max Wertheimer). Self-actualizers perceive reality accurately; are independent, creative, spontaneous, moral, and natural; are devoted to a career; and have occasional peak experiences.
- Carl Rogers rejected traditional psychotherapy and developed a humanistic approach to treatment. The emphasis in client-centered therapy is on positive growth in a client, said to occur if the therapeutic atmosphere is healthy. The job of the therapist is to create this atmosphere, which includes being a model of the self-actualized person (“genuine”), showing unconditional positive regard for the client, and displaying empathy. The therapeutic technique of reflection is designed to aid the process.
- In 1973, the Vail conference produced a new training model for clinicians, one that focused more on practice than on research and did not necessarily require a research-based dissertation. It resulted in a Psy.D. degree (doctorate of psychology), rather than the traditional Ph.D. Today, APA accredits programs based on both the Boulder and the Vail model.

Psychology and the World of Business and Industry

- During the 1920s, many psychologists worked as consultants to business and industry, a development fueled in part by the great interest in testing in the 1920s. Psychologists also joined together to form consulting businesses
that would provide a range of services. The Scott Company was the first, but did not survive the 1920s. The Psychological Corporation, under the wayward leadership of James McKeen Cattell, did survive, and eventually prospered, but not until Cattell was ousted.

- The Hawthorne studies, extending from 1924 to 1933, have traditionally been seen as providing evidence that productivity will be high if workers are cared for and given healthy work conditions. Productivity did not seem to be affected by such things as lighting conditions and changes in work breaks; what seemed to matter was that workers felt important because they were part of an experiment (i.e., the traditional Hawthorne effect). Historians have shown, however, that the traditional version of what happened at Hawthorne is questionable, and that the Hawthorne studies had the effect of maintaining management control over the workplace.

- World War II contributed to the creation and growth of engineering psychology—a form of applied experimental psychology that examines the relationship between humans and machines, the goal being the development of machines that humans can use efficiently, comfortably, and safely.

### STUDY QUESTIONS

1. What is the nature of the division between academi-cian/researchers and practitioners? What effect did the reorganization of APA have?

2. Describe the essential problem that led to the creation of the Psychonomic Society and the APS.

3. How did the activities of clinical psychologists after World War II differ from their activities prior to the war? What brought about the change?

4. Compare the two major training models for clinicians—the Boulder model and the Vail model. What were the problems with the former that led to the creation of the latter?

5. What was the scientific basis for the development of the lobotomy and how did Freeman alter the procedure invented by Moniz? Why did lobotomies more or less disappear after the mid-1950s?

6. What did Hans Eysenck find in his analysis of studies that evaluated psychotherapy? What was the impact of the Eysenck study?

7. Describe Wolpe’s systematic desensitization and show how it relates to behaviorist principles.

8. Why is humanistic psychology sometimes referred to as psychology’s “third force”?

9. Briefly summarize the basic beliefs of humanistic psychologists.

10. Describe Maslow’s work with self-actualization. What did he conclude were the attributes of a self-actualized person?

11. Describe the three necessary conditions for therapy to be effective, according to Rogers.

12. Describe the therapy technique of reflection, as used by Rogers, and explain its purpose.

13. In addition to creating client-centered therapy, Rogers is also known for being interested in research on therapy effectiveness. Explain how his personal history might have contributed to that interest.

14. Humanistic psychology was popular in the 1960s and '70s, but then faded. Explain.

15. Describe the origins of the Psychological Corporation, how it was designed to operate, and what happened to it.

16. What did Morris Viteles contribute to industrial psychology in the 1920s and 1930s?

17. What was the original purpose of the lighting studies at Hawthorne, what was the outcome, and what is the traditional interpretation of the results?

18. What was the original purpose of the relay assembly test room at Hawthorne, what was the outcome, and what is the traditional interpretation of the results? What really happened in the relay assembly test room?

19. The Hawthorne studies were said to show that relationships with workers were the key to productivity, but historians have interpreted the Hawthorne studies differently. Explain.
FOR FURTHER READING


A comprehensive description and analysis of all the Hawthorne studies, which extended from 1924 to 1933; shows how the results have been interpreted in ways congenial to the human relations movement in business, but that a close analysis questions the traditional interpretation of the so-called Hawthorne effect; a briefer analysis can be found in Gillespie (1988).


A set of articles commemorating the fiftieth anniversary of the creation of the Boulder scientist-practitioner model for the training of clinical psychologists; includes articles on clinical training prior to Boulder, the impact of the Boulder conference, and a series of brief reflections on Boulder.


A set of articles written by and compiled by Rogers; includes an opening autobiographical essay, several essays on his basic philosophy, articles on therapy outcome research, and articles on client-centered therapy.


Describes the uneasy beginnings of one of psychology’s most successful applied ventures; shows how Catell’s nineteenth century vision of psychology made it impossible for him to lead effectively, and fits the story nicely into the context of America in the 1920s and 1930s.