Ivan Pavlov
(1849–1936)
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B. F. Skinner
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Joseph Wolpe
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7 BEHAVIOR THERAPY

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OVERVIEW

Behavior therapy is a relative newcomer on the psychotherapy scene. Not until the late 1950s did it emerge as a systematic approach to the assessment and treatment of psychological disorders. In its early stages, behavior therapy was defined as the application of modern learning theory to the treatment of clinical problems. The phrase *modern learning theory* referred to the principles and procedures of classical and operant conditioning. Behavior therapy was seen as the logical extension of behaviorism to complex forms of human activities.

Behavior therapy has undergone significant changes in both nature and scope, and it has been responsive to advances in experimental psychology and innovations in clinical practice. It has grown more complex and sophisticated. Behavior therapy can no longer be defined simply as the clinical application of classical and operant conditioning theory.

Behavior therapy today is marked by a diversity of views. It now comprises a broad range of heterogeneous procedures with different theoretical rationales and open debate about conceptual bases, methodological requirements, and evidence of efficacy. As behavior therapy expands, it increasingly overlaps with other psychotherapeutic approaches. Nevertheless, the basic concepts characteristic of the behavioral approach are clear and its commonalities with and differences from nonbehavioral therapeutic systems can be readily identified.

Basic Concepts

Traditionally, three main approaches in contemporary behavior therapy have been identified: (1) *applied behavior analysis,* (2) a *neobehavioristic mediational stimulus–response model,* and (3) *social–cognitive theory.* These three approaches differ in the extent to which they use cognitive concepts and procedures. At one end of this continuum is *applied behavior analysis,* which focuses exclusively on observable behavior and rejects all cognitive mediating processes. At the other end is *social–cognitive theory,* which relies heavily on cognitive theories.

Applied Behavior Analysis

This approach is a direct extension of Skinner's (1953) radical behaviorism. It relies on operant conditioning, the fundamental assumption being that behavior is a function of its consequences. Accordingly, treatment procedures are based on altering relationships between overt behaviors and their consequences. Applied behavior analysis makes use of reinforcement, punishment, extinction, stimulus control, and other procedures derived from laboratory research. Cognitive processes are considered private events and are not regarded as proper subjects of scientific analysis.

The Neobehavioristic Mediational Stimulus–Response (S–R) Model

This approach features the application of the principles of classical conditioning, and it derives from the learning theories of Ivan Pavlov, E. R. Guthrie, Clark Hull, O. H. Mowrer, and N. E. Miller. Unlike the operant approach, the S–R model is mediational, with intervening variables and hypothetical constructs prominently featured. S–R theorists have been particularly interested in the study of anxiety; the techniques of systematic desensitization and flooding, both closely associated with this model, are directed toward the extinction of the underlying anxiety assumed to maintain phobic disorders.

Private events, especially imagery, have been an integral part of this approach, including systematic desensitization. The rationale is that covert processes follow the laws of learning that govern overt behaviors.

Social–Cognitive Theory

The social–cognitive approach depends on the theory that behavior is based on three separate but interacting regulatory systems (Bandura, 1986). They are (1) external stimulus events, (2) external reinforcement, and (3) cognitive mediational processes.

In the social–cognitive approach, the influence of environmental events on behavior is largely determined by cognitive processes governing how environmental influences are perceived and how the individual interprets them. Psychological functioning, according to this view, involves a reciprocal interaction among three interlocking sets of influences: behavior, cognitive processes, and environmental factors. Bandura put it as follows:

> Personal and environmental factors do not function as independent determinants; rather, they determine each other. Nor can "persons" be considered causes independent of their behavior. It is largely through their actions that people produce the environmental conditions that affect their behavior in a reciprocal fashion. The experiences generated by behavior also partly determine what individuals think, expect, and can do, which in turn affect their subsequent behavior. (1977, p. 345)

In social–cognitive theory, the person is the agent of change. The theory emphasizes the human capacity for self-directed behavior change. Strongly influenced by the

social–cognitive model, the clinical practice of behavior therapy has increasingly included cognitive methods, especially those described by Aaron Beck (see Chapter 8). A primary focus of both cognitive and behavioral techniques is to change the cognitive processes viewed as essential to therapeutic success. The basic assumption is that it is not so much experience itself but rather the person's interpretation of that experience that produces psychological disturbance. This position is also reflected in the work of Albert Ellis (see Chapter 6). Both cognitive and behavioral methods are used to modify faulty perceptions and interpretations of important life events. For these reasons, it is now common to refer to "cognitive behavior therapy" (CBT) instead of "behavior therapy." As Jacobson (1987) pointed out, "incorporation of cognitive theory and therapy into behavior therapy has been so total that it is difficult to find pure behavior therapists working with outpatients" (pp. 4–5). The term "behavior therapy" is used throughout this chapter, although it could just as easily be replaced with "CBT." Behavior therapy, in a broad sense, refers to practice based primarily on social–cognitive theory and encompassing a range of cognitive principles and procedures.

Common Characteristics

Although the three preceding behavior therapy approaches involve conceptual differences, behavior therapists subscribe to a common core of basic concepts. The two foundations of behavior therapy are (1) a psychological model of human behavior that differs fundamentally from the traditional psychodynamic model, and (2) a commitment to the scientific method.

The emphasis on a psychological model of abnormal behavior and the commitment to a scientific approach have the following consequences:

1. Many types of abnormal behavior formerly regarded as illnesses or as signs and symptoms of illness are better construed as nonpathological "problems of living" (key examples include anxiety reactions, as well as sexual and conduct disorders). This position is similar to that of Alfred Adler.
2. Most abnormal behavior is assumed to be acquired and maintained in the same manner as normal behavior. It can be treated through the application of behavioral procedures.
3. Behavioral assessment focuses on the current determinants of behavior rather than on the analysis of possible historical antecedents. Specificity is the hallmark of behavioral assessment and treatment, and it is assumed that the person is best understood and described by what the person does in a particular situation.
4. Treatment requires a prior analysis of the problem into components or subparts. Procedures are then systematically targeted at specific components.
5. Treatment strategies are individually tailored to different problems in different individuals.
6. Understanding the origins of a psychological problem is not essential for producing behavior change. Conversely, success in changing a problem behavior does not imply knowledge about its etiology.
7. Behavior therapy involves a commitment to the scientific method. This includes an explicit, testable conceptual framework; treatment derived from or at least consistent with the content and method of experimental–clinical psychology; therapeutic techniques that have measurable outcomes and can be replicated; the experimental evaluation of treatment methods and concepts; and emphasis on innovative research strategies that allow rigorous evaluation of specific methods applied to particular problems instead of global assessment of ill-defined procedures applied to heterogeneous problems.

The "Third Wave" of Behavior Therapy

Behavior therapy continues to evolve. The most recent developments, emerging in the 1990s and gathering momentum in the new century, have been labeled the "third wave" of behavior therapy by Hayes, Follette, and Linehan (2004). According to this view, the first wave of behavior therapy focused primarily on modifying overt behavior. The second wave was the emphasis on cognitive factors, resulting in what is known as cognitive behavior therapy (CBT). Hayes et al. (2004) and others, however, have argued that the cognitive revolution in behavior therapy did not adequately address the problems of people's private experience—their thoughts and feelings. Hayes has argued that cognitive theories in CBT have owed more to common-sense notions than to scientific analyses. The third wave comprises a group of therapeutic approaches with overlapping conceptual and technical foundations. The two most prominent forms of these developments are dialectical behavior therapy (DBT) (Linehan, 1993) and acceptance and commitment therapy (ACT) (Hayes, Luoma, Bond, Masuda, & Lillis, 2006).

Dialectical Behavior Therapy (DBT)

Acceptance and Change. A defining feature of DBT is the focus on balancing the traditional emphasis on behavior change with the value of acceptance and the importance of the relationship between the two—which Linehan sees as the central dialectic of therapy. The following clinical example may clarify this point. Patients with an eating disorder typically define their self-worth in terms of body shape and weight in part because appearance and weight seem more controllable to them than other aspects of life. In reality, however, they have less control over changing body shape and weight than they wish. Nevertheless, these individuals resort to extreme and self-destructive behaviors in an effort to lose more weight than is healthy or even possible, such as starving themselves and self-inducing vomiting. The result is that they develop an eating disorder. By trying to change what cannot be changed, or what cannot be changed except by extreme measures that undermine health and psychological well-being, these individuals avoid making other important life changes. The solution would be to make nutritionally sound and psychologically adaptive lifestyle changes and then accept whatever shape and weight results. It is more feasible for these patients to make other changes in their lives, such as improving interpersonal relationships and coping more effectively with negative emotions.

Wilson (2004) likened this balancing of acceptance with change to the practical wisdom of the Serenity Prayer: "God, give me the serenity to accept the things I cannot change, the courage to change the things I can, and the wisdom to know the difference." It is important to understand that the concept of acceptance does not mean giving up or resigning yourself to life's problems. Rather, Linehan emphasizes that it is an active process of self-affirmation. Similarly, Hayes and Smith (2005) explain that acceptance can be viewed as a willingness to choose to experience negative thoughts or feelings without defense.

Mindfulness. DBT makes use of typical behavior therapy techniques and strategies as summarized above. But a distinctive and seminal therapeutic strategy in DBT is mindfulness training. Mindfulness consists of five core skills:

1. *Observe or attend to emotions without trying to terminate them when painful.* "What the client learns here is to allow herself to experience with awareness, in the moment, whatever is happening, rather than leaving a situation or trying to terminate an emotion. Generally, the ability to attend to events requires a corresponding ability to step back from the event. Observing an event is separate or different from the event itself" (Linehan, 1993, p. 63).

2. *Describe a thought or emotion.* "Learning to describe requires that a person learn not to take emotions and thoughts literally—that is, as literal reflections of environmental events. For example, feeling afraid does not necessarily mean that a situation is threatening . . . thoughts are often taken literally; that is, thoughts ('I feel unloved') are confused with facts ('I am unloved')" (Linehan, 1993, p. 64).
3. *Be nonjudgmental.* The goal here is to take a nonjudgmental stance when observing, describing, and being aware of feelings and events. Judging is evaluating oneself or some experience as good or bad, as worthy or worthless.
4. *Stay in the present.* The principle here is to be aware of and stay in contact with immediate experience while at the same time achieving distance from it. Wiser and Telch (1999) give the example of watching "clouds moving across a sky; they are fully present with experience, but are also outside observing it" (p. 759).
5. *Focus on one thing at a time (one-mindfully).* For example, when eating, attend to the act and experience of eating without distractions such as watching TV or reading a book.

Linehan (1993) developed DBT primarily for treating borderline personality disorder. However, the basic concepts of DBT, such as acceptance and mindfulness, are now being applied to the treatment of a wide range of clinical problems including anxiety disorders, depression, and eating disorders (Hayes, Follette, & Linehan, 2004). Lynch and Cozza (2009) recently examined nonsuicidal self-injury (NSSI) from a behavioral perspective that regards negative emotions as the proximal cause of NSSI. The authors demonstrate how to conduct a functional analysis of NSSI and describe the utility of DBT in the treatment of this recalcitrant disorder.

Acceptance and Commitment Therapy (ACT)

ACT combines grounding in behaviorism with an innovative, post-Skinnerian account of language and cognition and how they are involved in psychopathology (Hayes et al., 2006). The details of the specific theory of language that is behind ACT, called relational frame theory, are beyond the scope of the present chapter. The focus here is on core therapeutic principles.

Experiential Avoidance. Experiential avoidance refers to the process of trying to avoid negative or distressing private experiences, such as thoughts, feelings, memories, and sensations. The basic principle is that experiential avoidance ultimately does not work—in fact, it is more likely to make matters worse. For example, there is evidence showing that attempts to suppress negative or unwanted thoughts will, in due course, produce an increase in the very thoughts you want to avoid. In one study, patients with anxiety and mood disorders were shown a brief, emotion-provoking film (Campbell-Sills, Barlow, Brown, & Hofmann, 2006). One group was instructed to suppress their emotional reactions to the film. The other group were asked to experience their emotions fully and not to struggle to control them in any way. The results showed that the suppression group suffered from greater distress after the film and also showed greater physiological arousal than the acceptance group during the film.

Experiential avoidance is seen to be pervasive across different clinical disorders (Harvey, Watkins, Mansell, & Shafran, 2004). According to Hayes et al. (2006), there are two main reasons. First, in the outside world (outside of the body), it makes sense to avoid or change what is bad. For example, if you are trapped in a dysfunctional relationship, the effective course of action is to end the relationship or to work actively on repairing it. Rational problem solving and thoughtful action are the most effective ways of solving this problem. Second, techniques like distraction or suppression of thoughts or feelings often do work in the short term. The trouble is that these are maladaptive

coping strategies in the long term. For a young person plagued by self-doubt and low self-esteem, alcohol or drug use might well provide a quick fix, but these methods only add to her or his problems over time.

Acceptance. ACT is designed to help patients learn that experiential avoidance does not work, and that it is part of the problem rather than the solution. Patients need to learn how to accept the thoughts and feelings they have been trying to get rid of. The goal of acceptance in ACT is essentially the same as in DBT, and mindfulness is taught in both systems. Treatment employs various experiential exercises during therapy sessions and, as with behavior therapy in general, uses homework assignments designed to help patients discover the benefits of acceptance over avoidance.

Cognitive Defusion. This concept refers to separating thoughts from their referents and differentiating the thinker from the thoughts. It means not taking thoughts as inherent aspects of self or as necessarily valid reflections of reality. For example, the thought "I am so fat" is very different from the thought "I am not fat, but a normal-weight person who experiences thoughts/feelings that she is fat." The latter is more defused than the former, and much less distressing. This is similar to the practice of describing feelings in mindfulness training in DBT. The assumption is that learning how to defuse language promotes acceptance and being in the present, and thus helps clients overcome psychological problems. Defusion is basically the same concept as that of distancing, which is described in Aaron Beck's chapter on cognitive therapy (Chapter 8).

Commitment. ACT focuses on action. Commitment in this context refers to making mindful decisions about what is important in your life and what you are going to do in order to live a valued life. Therapy involves helping patients choose the values they hold dear, setting specific goals, and taking concrete steps to achieve these goals.

ACT is increasingly being adapted to a wide range of clinical problems. One of the reasons for its popularity among clinicians is its foundation in core therapeutic principles that are linked to psychological science and have broad applicability to different disorders. It emphasizes common processes across clinical disorders, making it easier to teach fundamental treatment skills. Clinicians are then free to implement these basic principles in diverse and creative ways.

Other Systems

Behavior therapy has much in common with other psychological therapies, particularly those that tend to be brief and directive. In some cases, behavior therapy has borrowed concepts and methods from other systems. For example, cognitive behavioral treatment strategies have incorporated some of the concepts of Albert Ellis's rational emotive behavior therapy and especially Beck's cognitive therapy (O'Leary & Wilson, 1987). CBT is closer to Beck's cognitive therapy than Ellis's approach because Beck emphasizes the importance of behavioral procedures in correcting the dysfunctional beliefs assumed to cause emotional distress. Ellis's REBT, despite the later inclusion of *behavior* in the name, is mainly a semantic treatment in which the goal is to alter the person's basic philosophy of life through reason and logic. The overlap between BT and Beck's cognitive therapy is extensive. Both systems include cognitive and behavioral components but may differ in how these components are combined and especially in their theories about mechanisms of therapeutic change (Hollon & Beck, 1994).

Despite substantial overlap between behavior therapy and Beck's cognitive therapy, there are important theoretical and practical differences between certain forms of BT and cognitive therapy. For example, the emphasis on acceptance in DBT and ACT is

inconsistent with the major cognitive therapy technique of challenging or disputing specific thoughts and beliefs. In addition, the focus in more behaviorally oriented treatments is on the function of cognitions rather than their content as in cognitive therapy. Consider the following illustration. A common belief for someone who is depressed would be "I am worthless and incompetent at everything I do." As opposed to questioning the accuracy or validity of this belief as in cognitive therapy, the behavioral activation approach to treating depression (see below) would focus on its impact on behavior. A functional analysis would be conducted to identify the conditions under which the thought occurred and what happened as a result of the thought. The person would then be helped to act differently in those situations (Martell, Addis, & Jacobson, 2001).

In terms of clinical practice, behavior therapy and multimodal therapy are similar. The majority of the techniques that Arnold Lazarus (1981) lists as the most frequently used in multimodal therapy (see Chapter 11) are standard behavior therapy strategies. This is not surprising, given that Lazarus (1971) was one of the pioneers of clinical behavior therapy.

Therapists are guided in their formulations and treatment of different problems either by clearly stated principles or by their personal experience and intuition. Behavior therapy represents an attempt to move beyond idiosyncratic practices and to base clinical practice on secure scientific foundations. This does not mean that clinical practice by behavior therapists is always based on solid empirical evidence. Behavior therapists, not unlike therapists from other approaches, have developed their own clinical lore, much of which is not based on experimental research. Lacking sufficient information and guidelines from research, behavior therapists often adopt a trial-and-error approach. Nonetheless, behavior therapy is clearly linked to a specifiable and testable conceptual framework.

Behavior therapy differs fundamentally from psychodynamic approaches to treatment. Based on a learning or educational model of human development, it rejects the psychoanalytic model, in which abnormal behavior is viewed as a symptom of underlying unconscious conflicts. Psychoanalytic therapy has difficulty explaining the successes of behavior therapy that contradict basic concepts that psychoanalysts claim are crucial for therapeutic change. Some psychodynamic therapists state that behavioral treatments result in symptom substitution because behavioral treatment allegedly overlooks the "real" cause of the problem. Yet the evidence is clear that symptom substitution does not occur in successful behavior therapy (e.g., Sloane, Staples, Cristol, Yorkston, & Whipple, 1975). Both behavioral and psychodynamic treatments attempt to modify underlying causes of behavior. The difference is what proponents of each approach regard as causes. Behavior analysts look for current variables and conditions that control behavior. Some psychodynamic approaches (e.g., psychoanalysis) ask, "How did the client become this kind of person?" Others (e.g., Adlerian psychotherapy) ask, "What is this person trying to achieve?" Behavioral approaches ask, "What is causing this person to behave in this way right now, and what can we do right now to change that behavior?"

Family and systems therapists assert that individuals can best be understood and treated by changing the interpersonal system within a family. Behavior therapy has increasingly emphasized the importance of including family members in treatment. However, behavior therapists reject the assumption that every problem requires a broad-scale intervention in the family system. The findings of outcome studies show that this is not always necessary (Mathews, Gelder, & Johnston, 1981). For example, not only does individual behavior therapy for agoraphobics produce long-term improvement in phobic avoidance, it often also results in increases in marital satisfaction and improvements in other aspects of interpersonal functioning. Data such as these discredit the claims of some family systems theorists.

The focus on the problems of experiential avoidance, which is such a key aspect of ACT, clearly overlaps with some experiential and humanistic therapies such as Gestalt therapy and Rogers's person-centered treatment.

Most forms of psychotherapy are limited to specific populations. Traditional psychoanalytic therapy, for instance, has focused predominantly on white, well-educated, socially and economically advantaged clients. Behavior therapy is more broadly applicable to the full range of psychological disorders than is traditional psychotherapy (Kazdin & Wilson, 1978). It has also been shown to be effective with diverse patient populations, including disadvantaged minority groups (Miranda, Bernal, Kohn, Hwang, & La Fromboise, 2005).

Overall evaluation of the comparative efficacy of behavior therapy versus other psychotherapies is uncertain. As described below, behavioral treatments have been reliably shown to be more effective than no treatment or placebo treatments. However, there are few well-designed head-to-head comparisons with other psychological therapies. With rare exceptions, alternative psychological treatments have not been submitted to rigorous empirical evaluations. The evidence, unsatisfactory as it is, indicates that behavior therapy is more effective than psychoanalytic and other verbal psychotherapies (Hollon & Beck, 1994; O'Leary & Wilson, 1987).

HISTORY

Precursors

Two historical events stand out as foundations for behavior therapy. The first was the rise of behaviorism in the early 1900s. The key figure in the United States was J. B. Watson, who criticized the subjectivity and mentalism of the psychology of the time and advocated behaviorism as the basis for the objective study of behavior. Watson's emphasis on the importance of environmental events, his rejection of covert aspects of the individual, and his claim that all behavior could be understood as a result of learning became the formal bases of behaviorism.

Watson's position has been widely rejected by behavior therapists, and more refined versions of behaviorism have been developed by theorists such as B. F. Skinner, whose radical behaviorism has had a significant impact not only on behavior therapy but also on psychology in general. Like Watson, Skinner insisted that overt behavior is the only acceptable subject of scientific investigation.

The second event was experimental research on the psychology of learning. In Russia, around the turn of the 20th century, Ivan Pavlov, a Nobel laureate in physiology, established the foundations of classical conditioning. At about the same time in the United States, pioneering research on animal learning by E. L. Thorndike showed the influence of consequences (rewarding and punishing events) on behavior.

Research on conditioning and learning principles, conducted largely in the animal laboratory, became a dominant part of experimental psychology in the United States following World War II. Workers in this area, in the traditions of Pavlov and Skinner, were committed to the scientific analysis of behavior using the laboratory rat and pigeon as their prototypic subjects. Among the early applications of conditioning principles to the treatment of clinical problems were two particularly notable studies. In 1924, Mary Cover Jones described different behavioral procedures for overcoming children's fears. In 1938, O. Hobart Mowrer and E. Mowrer extended conditioning principles to the treatment of enuresis. The treatment they developed is now an effective and widely used approach (Ross, 1981). These isolated and sporadic efforts had scant impact on psychotherapy at the time, partly because conditioning principles, demonstrated with animals, were rejected as too simplistic for treating complex human problems. Conditioning treatments were rejected as superficial, mechanistic, and naive. In addition, a schism existed between academic–experimental and clinical psychologists. The former were trained in scientific methods, with an emphasis on controlled experimentation and quantitative measurement. The latter concerned themselves with the "soft" side of

psychology, including uncontrolled case studies, speculative hypotheses, and psychodynamic hypotheses. Some efforts were made to integrate conditioning principles with psychodynamic theories of abnormal behavior, but these formulations only obscured crucial differences between behavioral and psychodynamic approaches.

The advent of behavior therapy was marked by its challenge of the status quo through the presentation of a systematic and explicitly formulated clinical alternative that attempted to bridge the gap between the laboratory and the clinic.

Beginnings

The formal beginnings of behavior therapy can be traced to separate but related developments in the 1950s in three countries.

Joseph Wolpe, in South Africa, presented procedural details and results of his application of learning principles to adult neurotic disorders in his book *Psychotherapy by Reciprocal Inhibition* (1958). Wolpe introduced several therapeutic techniques based on Pavlov's conditioning principles, Hull's S–R learning theory, and his own experimental research on fear reduction in laboratory animals. Wolpe regarded anxiety as the causal agent in all neurotic reactions. It was defined as a persistent response of the autonomic nervous system acquired through classical conditioning. Wolpe developed specific techniques designed to extinguish these conditioned autonomic reactions, including systematic desensitization, one of the most widely used methods of behavior therapy. Wolpe made the controversial claim that 90% of his patients were either "cured" or "markedly improved." Moreover, this unprecedented success rate was apparently accomplished within a few months, or even weeks. Wolpe influenced Arnold Lazarus and Stanley Rachman, both of whom became leading figures in the development of behavior therapy. Wolpe's conditioning techniques in therapy were consistent with similar proposals that had been put forward by Andrew Salter (1949) in New York.

Another landmark in the development of behavior therapy was the research and writings of Hans J. Eysenck and his students at the Institute of Psychiatry of London University. In a seminal paper published in 1959, Eysenck defined behavior therapy as the application of modern learning theory to the treatment of behavioral and emotional disorders. Eysenck emphasized the principles and procedures of Pavlov and Hull, as well as learning theorists such as Mowrer (1947) and Miller (1948). In Eysenck's formulation, behavior therapy was an applied science, the defining feature of which was that it was testable and falsifiable. In 1963, Eysenck and Rachman established the first journal devoted exclusively to behavior therapy—*Behaviour Research and Therapy.*

A third force in the emergence of behavior therapy was the publication in 1953 of Skinner's book *Science and Human Behavior,* in which he criticized psychodynamic concepts and reformulated psychotherapy in behavioral terms. The most important initial clinical application of operant conditioning was with children, work carried out under the direction of Sidney Bijou at the University of Washington. The broad application of operant conditioning to the whole range of psychiatric disorders reached full expression in the 1965 publication of Leonard Ullmann and Leonard Krasner's *Case Studies in Behavior Modification.* In 1968, the first issue of the *Journal of Applied Behavior Analysis* was published. This journal provided the premier outlet for research on the modification of socially significant problems through the use of operant conditioning.

Toward the end of the 1960s, the theoretical and research bases of behavior therapy began to expand. Increasingly, behavior therapists turned to social, personality, and developmental psychology as sources of innovative therapeutic strategies. Particularly noteworthy in this regard was Bandura's (1969) social learning theory, with its emphases on vicarious learning (modeling), symbolic processes, and self-regulatory mechanisms. The 1970s witnessed an increased emphasis on cognitive processes and procedures in behavior therapy.

The 1980s and 1990s were marked by an even broader focus on developments in other areas of psychology. Particular attention has been paid to the role of affect in therapeutic change. The 1990s and turn of the century have also witnessed the evolution of newer forms of behavior therapy, such as DBT and ACT, described earlier in this chapter.

The experimental analysis of the complex interactions among cognition, affect, and behavior is one of the more important areas of theory and research in contemporary behavior therapy. There is also increasing recognition of the importance of biological factors and brain mechanisms in many of the disorders commonly treated with behavioral methods (e.g., anxiety disorders and obesity). The study of biobehavioral interactions is an increasingly significant part of behavior therapy. For example, research on brain mechanisms has identified the specific receptors in the amygdala of the brain that are involved in the extinction of learned fear responses. Behavior therapy treatments such as exposure are designed to promote extinction of phobic (fear) responses. D-cycloserine is a drug that facilitates extinction because it is an agonist at these receptor sites in the brain. Combining exposure (extinction) treatment with this drug results in significantly more rapid reduction in fear responses in laboratory animals as well as in patients with specific phobias (Davis, Myers, Ressler, & Rothbaum, 2005).

Current Status

Behavior therapy has had a profound impact on the field of psychotherapy. An important measure of the influence of behavior therapy is the degree to which psychotherapists use cognitive–behavioral principles and procedures in their clinical practice. Based on his survey of the theoretical orientations of clinical psychologists in the United States, Darrell Smith (1982) concluded that "No single theme dominates the present development of professional psychotherapy. Our findings suggest, however, that cognitive behavioral options represent one of the strongest, if not the strongest, theoretical emphases today" (p. 310). It seems likely that behavior therapy techniques will be increasingly used to treat a broad range of psychological problems.

In the 1990s, a panel of 75 expert psychotherapists comprising representatives of a wide range of different theoretical orientations in the United States was asked to predict what would happen to the practice of psychotherapy in the future (regardless of their personal preferences) (Norcross, Alford, & DeMichele, 1992). The panel largely agreed in ranking CBT techniques as those most likely to be used in the future. The reason? As health care policy in the United States is changing to contain costs and provide coverage to more people, the emphasis is switching to problem-focused, time-limited psychological treatment. Moreover, future third-party reimbursement for mental health services will not only emphasize cost containment but also demand that treatments be demonstrably effective in producing specified goals. Behavior therapy will be an important part of those interventions.

In its formative years in the 1950s and 1960s, behavior therapy was a radical minority movement that challenged the then-dominant psychoanalytic establishment. Today behavior therapy is part of the psychotherapeutic establishment. Beginning in the 1960s in the United States, several graduate clinical programs in some of the country's most distinguished universities placed primary emphasis on a behavioral orientation in their training of predoctoral students. Many others began to include behavior therapy as part of an eclectic approach to clinical training. In their analysis of the orientations of faculty in doctoral programs accredited by the American Psychological Association, Sayette and Mayne (1990) found that 14% could be described as having an applied behavioral or radical behavioral approach, while an additional 42% emphasized cognitive behavioral or social learning approaches.

In contrast to the impact on the training and practice of clinical psychologists, behavior therapy has had little influence on that of other mental health professionals in the United States (Glass & Arnkoff, 1992). The minimal impact on psychiatry is ironic, given

the seminal contributions of some psychiatrists to the development of cognitive behavior therapy (e.g., Joseph Wolpe and Aaron Beck). This is probably due to the total dominance of psychoanalysis in American psychiatry for more than 40 years. More recently, biological psychiatry has often supplanted the psychoanalytic model in training programs. As a result, psychological treatment has been deemphasized in the training of psychiatrists.

The first behavior therapy journal, *Behaviour Research and Therapy,* was published in 1963 in part because the psychodynamically inclined editors of existing clinical journals were unreceptive to behavior therapy. Today there are numerous journals devoted to behavior therapy in different countries. Moreover, behavior therapists have been editors and editorial board members of major all-purpose clinical psychology journals, such as the *Journal of Consulting and Clinical Psychology* in the United States.

The increasing tendency of behavior therapists to identify themselves as cognitive behavior therapists is reflected in the decision in 2005 to change the name of the Association for Advancement of Behavioral Therapy (AABT) to the Association for Behavioral and Cognitive Therapies (ABCT). It is unclear if behavior therapy will continue to be practiced as a pure approach to therapy or if it will eventually simply become subsumed under the general rubric of cognitive behavior therapy.

PERSONALITY

Theory of Personality

There are specific theoretical differences within the broad framework of contemporary behavior therapy. These differences are most noticeable in the personality theories on which the respective approaches are based. For example, Eysenck (1967) has developed an elaborate trait theory of personality. Briefly, Eysenck classifies people on two major personality dimensions. The first, *introversion–extraversion,* refers to characteristics usually associated with the words *introverted* and *extraverted.* The second dimension is *neuroticism–emotional stability,* ranging from moody and touchy at one extreme to stable and even-tempered at the other. Eysenck believed these personality dimensions are genetically determined and that introverts are more responsive to conditioning procedures than extraverts. In general, however, personality theory appears to have had little impact on clinical behavior therapy, and most behavior therapists have rejected trait theories of personality.

Applied behavior analysis, derived directly from Skinner's radical behaviorism, restricts itself to the study of overt behavior and environmental conditions that presumably regulate behavior. Covert, unobservable elements, such as needs, drives, motives, traits, and conflicts, are disregarded. Skinner's analyses of behavior, for example, are couched in terms of conditioning processes, such as reinforcement, discrimination, and generalization.

Radical behaviorism has been criticized for losing sight of the importance of the person and for lacking a theory of personality. Humanistic psychologists believe applied behavior analysts treat people as though they were controlled only by external, situational forces. A solution to this clash between two extreme viewpoints is to recognize that the characteristics of the environment *interact* with the nature of the people in it. Both commonsense and experimental findings demonstrate the folly of ignoring either side of this crucial interaction. A social learning framework of personality development and change provides a detailed and sophisticated analysis of this interaction between person and situation (Bandura, 1969; Mischel, 1968, 1981).

Many people have debated whether the person or the situation is more important in predicting behavior. However, this question is unanswerable. The relative importance of individual differences and situations will depend on the situation selected, the type of behavior assessed, the particular individual differences sampled, and the purpose of the assessment (Mischel, 1973).

Evidence clearly shows that an individual's behavioral patterns are generally stable and consistent over time. However, the specificity of behavior in different situations poses a problem for trait theories of personality. The central assumption of such theories is that stable and generalized personality traits determine behavioral consistency in a wide variety of different situations. Yet, as Mischel (1968) has pointed out, the correlations between different measures of the same trait are usually very low, and there is little consistency in behavior patterns across different situations.

Psychodynamic conceptualizations of personality assume that the underlying personality structure is stable across situations. Overt behavior is of interest to psychodynamic theorists only to the extent that the behavior provides signs of deep-seated personality traits. Psychodynamic theorists believe that behavior cannot be taken at face value but must be interpreted symbolically because the personality's defense mechanisms disguise and distort the "real" motivations being expressed. However,

> the accumulated findings give little support for the utility of clinical judgments. . . . Clinicians guided by concepts about underlying genotypic dispositions have not been able to predict behavior better than have the person's own direct self-report, simple indices of directly relevant past behavior, or demographic variables. (Mischel, 1973, p. 254)

Social–cognitive theory readily accounts for the discriminatory nature of human behavior. A person would be predicted to act consistently in different situations only to the extent that similar behavior leads, or is expected to lead, to similar consequences. An illustration from Mischel helps clarify this key concept:

> Consider a woman who seems hostile and fiercely independent some of the time but passive, dependent, and feminine on other occasions. What is she really like? Which one of these two patterns reflects the woman that she really is? Is one pattern in the service of the other, or might both be in the service of a third motive? Must she be a really aggressive person with a facade of passivity—or is she a warm, passive dependent woman with a surface defense of aggressiveness? Social learning theory suggests that it is possible for her to be all of these—a hostile, fiercely independent, passive, dependent, feminine, aggressive, warm person all in one. Of course, which of these she is at any particular moment would not be random and capricious; it would depend on discriminative stimuli—who she is with, when, how, and much, much more. But each of these aspects of herself may be a quite genuine and real aspect of her total being. (1976, p. 86)

The difference between the behavioral and psychodynamic approaches in explaining the development of abnormal behavior can be illustrated by Freud's case of Little Hans. This child developed a phobia of horses, which Freud attributed to castration anxiety and oedipal conflict. In their reinterpretation of this case, Wolpe and Rachman (1960) point out that Little Hans had recently experienced four incidents in which horses were associated with frightening events that could have created a classically conditioned phobic reaction. For example, Hans was terrified when he saw a horse that was pulling a loaded cart knocked down and apparently killed. From a psychodynamic viewpoint, the external stimuli (what Little Hans saw) had little effect on the phobia; the fear of horses per se was less significant than the underlying conflict. As Freud put it, "the anxiety originally had no reference to horses but was transposed onto them secondarily." This interpretation does not account for the discriminative pattern of the boy's reactions. For example, he was fearful of a single horse pulling a loaded cart (viewed by Freud as a symbol of pregnancy) but not of two horses, of large horses but not small ones, and of rapidly moving horse-drawn carts but not slowly moving ones. How is this pattern predicted by a global, internal construct such as an oedipal conflict? In the accident that the boy witnessed, a single, large horse, moving rapidly, was believed to have been killed. A conditioning explanation emphasizes that specific

stimulus elements elicit particular responses and therefore accounts plausibly for the discriminative fear responses of Little Hans.

Trait theories emphasize differences among people on dimensions selected by the clinician. For some purposes, such as gross screening (e.g., administering the Minnesota Multiphasic Personality Inventory [MMPI] to a client) or group comparisons, a trait approach is useful. But it does not aid the therapist in making treatment decisions about a particular individual. For example, consider the trait of introversion–extraversion. According to Eysenck's theory, particular treatments will have different effects on clients who vary along these dimensions. In a well-controlled study, Paul (1966) correlated performance on paper-and-pencil personality tests measuring extraversion, emotionality, and anxiety, among other traits, with the therapeutic success obtained by treating public speaking anxiety with systematic desensitization. His results revealed no relationship whatsoever between global personality measures and therapeutic outcome. This result is typical of other outcome studies.

Variety of Concepts

Learning Principles

The use of learning principles in behavior therapy is summarized in Agras and Wilson (2005). The case of Little Hans illustrates the role of classical conditioning. When a previously neutral stimulus is paired with a frightening event (the unconditioned stimulus, or US), it can become a *conditioned stimulus* (CS) that elicits a *conditioned response* (CR) such as anxiety. Current analyses of classical conditioning have moved away from the once popular notion that what was learned consisted of simple S–R bonds. Rather, people learn that there are correlational or contingent relationships between the CS and US. This learning defines the conditioning process. Classical conditioning is no longer seen as the simple pairing of a single CS with a single US. Instead, correlations between entire classes of stimulus events can be learned. People may be exposed to traumatic events (contiguity), but not develop phobic reactions unless a correlational or contingent relationship is formed between the situation and the traumatic event.

Operant conditioning emphasizes that behavior is a function of its environmental consequences. Behavior is strengthened by positive and negative reinforcement; it is weakened by punishment. *Positive reinforcement* refers to an increase in the frequency of a response followed by a favorable event. An example would be a teacher or parent praising a child for obtaining a good report card. *Negative reinforcement* refers to an increase in behavior as a result of avoiding or escaping from an aversive event that one would have expected to occur. For example, an agoraphobic, fearing loss of control and panic in a crowded shopping mall, will escape this aversive prospect by staying at home. This individual then experiences relief from anxiety by having avoided this panic and finds it increasingly difficult to leave the house.

In *punishment,* an aversive event is contingent on a response; the result is a decrease in the frequency of that response. If a child is criticized or punished by his parents for speaking up, he is likely to become an inhibited and unassertive adult.

Extinction refers to the cessation or removal of a response. For example, the family of an obsessive–compulsive client might be instructed to ignore requests for reassurance from the client that he has not done something wrong. The reinforcer that is no longer presented is inappropriate attention.

Discrimination learning occurs when a response is rewarded (or punished) in one situation but not in another. Behavior is then under specific *stimulus control.* This process is particularly important in explaining the flexibility of human behavior. For example, an obese client who goes on eating binges may show good self-control under some circumstances but lose control in predictable situations (e.g., when alone and feeling frustrated or depressed).

Generalization refers to the occurrence of behavior in situations other than that in which it was acquired. A therapist might help a client to become more assertive and expressive during treatment sessions. But the ultimate goal of therapy is to have the client act more assertively in real-life situations.

Social–cognitive theory recognizes both the importance of awareness in learning and the person's active cognitive appraisal of environmental events. Learning is facilitated when people are aware of the rules and contingencies governing the consequences of their actions. Reinforcement does not involve an automatic strengthening of behavior. Learning is a consequence of the informative and incentive functions of rewards. By observing the consequences of behavior, a person learns what action is appropriate in what situation. By symbolic representation of anticipated future outcomes of behavior, one generates the motivation to initiate and sustain current actions (Bandura, 1977). Often, people's expectations and hypotheses about what is happening to them may affect their behavior more than the objective reality.

The importance social–cognitive theory attaches to *vicarious learning (modeling)* is consistent with its emphasis on cognitive processes. In this form of learning, people acquire new knowledge and behavior by observing other people and events, without engaging in the behavior and without any direct consequences to themselves. Vicarious learning may occur when people watch what others do. The influence of vicarious learning on human behavior is pervasive, and this concept greatly expands the power of social–cognitive theory.

Person Variables

People do not passively interact with situations with empty heads or an absence of feelings. Rather, they actively attend to environmental stimuli, interpret them, encode them, and selectively remember them. Mischel (1973) has spelled out a series of *person variables* that explain the interchange between person and situation. These person variables are the products of each person's social experience and cognitive development that, in turn, determine how future experiences influence him or her. Briefly, they include the individual's *competencies* to construct diverse behaviors under appropriate conditions. In addition, there is the person's *categorization* of events and people, including the self. To understand how a person will perform in particular situations also requires attention to his or her *expectancies,* the *subjective values* of any expected outcomes, and the individual's *self-regulatory systems and plans.*

A full discussion of these person variables is beyond the scope of the present chapter, but some illustrative examples may be given. For example, consider the role of *personal constructs.* It is common in clinical practice to find clients who constantly put themselves down, even though it is clear to the objective onlooker that they are competent and that they are distorting reality. In cases like these, behavior is mainly under the control of internal stimuli rather than environmental events. Different people might respond differently to the same objective stimulus situation, depending on how they interpret what is happening to them. Therapy concentrates on correcting such faulty cognitive perceptions. But the behavior therapist must also assess a client's cognitive and behavioral *competencies* to ascertain whether he or she really can respond in a particular way. A client may be depressed not because he misperceives the situation but because he actually lacks the appropriate skills to secure rewards. A case in point would be a shy, underassertive college freshman who is motivated to date but who realizes he does not have the social skills needed to establish relationships with women. Therapy would be geared to overcoming his behavioral deficit, helping the student acquire the requisite interpersonal skills.

Self-efficacy refers to one's belief about being able to perform certain tasks or achieve certain goals (Bandura, 1998). Self-efficacy is assessed simply by asking a person to indicate the degree of confidence that he or she can do a particular task.

Such person variables differ from traits in that they do not assume broad cross-situational consistency but depend on specific contexts. Constructs such as generalized expectancies have not proved fruitful in predicting behavior. However, specific evaluations of individuals' efficacy expectations with respect to particular tasks are useful.

Applied behavior analysts reject cognitive mediating processes and have little use for person variables. They agree that the environment interacts with the person but contend that the role of the person is best explained in terms of *past history of reinforcement.* To illustrate the differences between the social–cognitive approach and the radical behaviorist position, imagine a client who is phobic about flying. This client typically becomes highly anxious when he hears the plane's landing gear retracting. A therapist with a social–cognitive view might attribute this anxiety reaction to the client's perception that something is wrong. The radical behaviorist would suggest that the client is reacting not only to the present environment (the sudden noise) but also to stories he has heard in the past about engines falling off and planes crashing. This example makes it clear that radical behaviorism is not free from inferential reasoning. The question is not whether inferences will be made in trying to account for human behavior, but what sort of inference is the most useful. There is now evidence to demonstrate that taking person variables into account improves prediction about behavior and enhances therapeutic efficacy (O'Leary & Wilson, 1987).

PSYCHOTHERAPY

Theory of Psychotherapy

Learning

Behavior therapy emphasizes corrective learning experiences in which clients acquire new coping skills, improve communication, or learn to break maladaptive habits and overcome self-defeating emotional conflicts. These corrective learning experiences involve broad changes in cognitive, affective, and behavioral functioning: They are not limited to modifications of narrow response patterns in overt behavior.

The learning that characterizes behavior therapy is carefully structured. Perhaps more than any other form of treatment, behavior therapy involves asking a patient to do something such as practice relaxation training, self-monitor daily caloric intake, engage in assertive acts, confront anxiety-eliciting situations, and refrain from carrying out compulsive rituals. The high degree to which behavior therapists emphasize the client's activities in the real world between therapy sessions is one of the distinctive features of the behavioral approach. However, behavior therapy is not a one-sided influence process by the therapist to effect changes in a client's beliefs and behavior. It involves both dynamic interaction between therapist and client and directed work on the part of the client. A crucial factor in all forms of therapy is the client's motivation, the willingness to cooperate in the arduous and challenging task of making significant changes in real-life behavior. Resistance to change and lack of motivation are common reasons for treatment failures in behavior therapy. Much of the art in therapy involves coping with these issues (Lazarus & Fay, 1982).

The Therapeutic Relationship

Behavior therapy demands skill, sensitivity, and clinical acumen. Brady et al. (1980) underscore the importance of the therapeutic relationship as follows:

> There is no question that qualitative aspects of the therapist–patient relationship can greatly influence the course of therapy for good or bad. In general, if the patient's relationship to the therapist is characterized by belief in the therapist's competence

> (knowledge, sophistication, and training) and if the patient regards the therapist as an honest, trustworthy, and decent human being with good social and ethical values (in his own scheme of things), the patient is more apt to invest himself in the therapy. Equally important is the quality and tone of the relationship he has with the therapist. That is, if he feels trusting and warm toward the therapist, this generally will facilitate following the treatment regimen, will be associated with higher expectations of improvement, and other generally favorable factors. The feelings of the therapist toward the patient are also important. If the therapist feels that his patient is not a desirable person or a decent human being or simply does not like the patient for whatever reasons, he may not succeed in concealing these attitudes toward the patient, and in general they will have a deleterious effect. (1980, pp. 285–286)

As opposed to the neutral and detached role that the psychoanalytically oriented therapist is taught to assume, the behavior therapist is directive and concerned—a problem solver and a coping model. In their comparative study of behavior therapy and psychoanalytically oriented psychotherapy, Staples, Sloane, Whipple, Cristol, and Yorkston concluded:

> Differences between behavior therapy and analytically-oriented psychotherapy . . . involved the basic patterns of interactions between patient and therapist and the type of relationship formed. Behavior therapy is not psychotherapy with special "scientific techniques" superimposed on the traditional therapeutic paradigm; rather, the two appear to represent quite different styles of treatment although they share common elements. (1975, p. 1521)

The behavior therapists in this study were rated as more directive, more open, more genuine, and more disclosing than their psychoanalytically oriented counterparts.

A strong therapeutic alliance is essential for effective behavior therapy, including manual-based treatment. For example, it is important in engaging the patient in treatment process, enhancing motivation to change, and facilitating adherence to homework assignments. Nonetheless, the therapeutic alliance does not mediate treatment outcome in behavior therapy (DeRubeis et al., 2005). It is necessary but not sufficient. Treatment method accounts for more variance than measures of therapeutic alliance (Loeb et al., 2005). It is a misconception that manual-based treatment undermines the therapeutic relationship because the therapist is focused on administering a somewhat standardized treatment protocol. Studies show that competently conducted manual-based CBT results in highly positive therapeutic alliance as in earlier forms of behavior therapy as noted above.

Ethical Issues

In behavior therapy the client is encouraged to participate actively. Consider, for example, the important issue of who determines the goals of therapy. Because it is fundamental to behavior therapy that the client should have the major say in setting treatment goals, it is important that the client is fully informed and consents to and participates in setting goals. A distinction is drawn between how behavior is to be changed—in which the therapist is presumably expert—and the objectives of therapy. The latter ultimately must be determined by the client. The client controls what; the therapist controls how. The major contribution of the therapist is to assist clients by helping them to generate alternative courses of action and to analyze the consequences of pursuing various goals. Because this process involves an expression of the therapist's own values, the therapist should identify them and explain how they might affect his or her analysis of therapeutic goals.

Selecting goals is far more complicated in the case of disturbed clients (such as institutionalized patients who are struggling with psychosis) who are unable to participate meaningfully in deciding treatment objectives. To ensure that treatment is in the client's best interests, it is important to monitor program goals and procedures through conferences with other professionals (Risley & Sheldon-Wildgen, 1982).

All forms of therapy involve social influence. The critical ethical question is whether therapists are aware of this influence. Behavior therapy entails an explicit recognition of the influence process and emphasizes specific, client-oriented behavioral objectives. Behavior therapists have formulated procedures to guarantee the protection of human rights and personal dignity of all clients (Stolz, 1978; Wilson & O'Leary, 1980).

Process of Psychotherapy

Problem Identification and Assessment

The initial task of a behavior therapist is to identify and understand the client's presenting problem(s). The therapist seeks detailed information about the specific dimensions of problems, such as initial occurrence, severity, and frequency. What has the client done to cope with the problems? What does the client think about his or her problem and any previous therapeutic contacts? Obtaining answers to such searching questions is facilitated by a relationship of trust and mutual understanding. To achieve this, the therapist is attentive, trying to be objective and empathic. The therapist then proceeds to make a functional analysis of the client's problem, attempting to identify specific environmental and person variables that are thought to be maintaining maladaptive thoughts, feelings, or behavior. The emphasis on variables currently maintaining the problem does not mean that the client's past history is ignored. However, past experiences are important only to the degree that they directly contribute to the client's present distress.

Assessment Methods

In the behaviorally oriented interview, the therapist seldom asks the client *why* questions, e.g., "Why do you become anxious in crowded places?" Questions starting with *how, when, where,* and *what* are more useful. The therapist does not necessarily take everything the client says at face value and is constantly looking for inconsistencies, evasiveness, or apparent distortions. Nevertheless, the therapist relies heavily on clients' self-reports, particularly in assessing thoughts, fantasies, and feelings. Self-report has often proved to be a superior predictor of behavior when compared to clinicians' judgments or scores on personality tests (Mischel, 1981). Of course, therapists must ask the right questions if they are to get meaningful answers. Given the tendency of most people to describe themselves with broad personality labels, therapists may have to help clients to identify specific behavioral referents for global subjective impressions.

Guided Imagery

A useful method for assessing clients' reactions to particular situations is to have them symbolically recreate a problematic life situation. Instead of asking clients simply to talk about an event, the therapist has them imagine the event actually happening to them. When clients have conjured up an image of a situation, they are then asked to verbalize any thoughts that come to mind, an especially useful way of uncovering the specific thoughts associated with particular events.

Role-Playing

Another option is to ask clients to role-play a situation. This method lends itself to the assessment of interpersonal problems, with the therapist adopting the role of the person with whom the client reports problems. Role-playing provides the therapist with a sample of the problem behavior, albeit under somewhat artificial circumstances. If the therapist is assessing a client couple, the two partners are asked to discuss chosen issues that enable the therapist to observe first-hand the extent of their interpersonal skills and their ability to resolve conflict.

Physiological Recording

Technological progress in monitoring different psychophysiological reactions has made it possible to objectively measure a number of problems. Monitoring a client's sexual arousal in response to specific stimuli that cause changes in penile or vaginal blood flow (Rosen & Keefe, 1978) is an example of the use of physiological recording instruments in behavioral assessment and treatment strategies.

Self-Monitoring

Clients are typically instructed to keep detailed, daily records of particular events or psychological reactions. Obese clients, for example, are asked to self-monitor daily caloric intake, the degree to which they engage in planned physical activities, the conditions under which they eat, and so on. In this way it is possible to detect behavioral patterns in clients' lives functionally related to their problems.

Behavioral Observation

Assessment of overt problem behavior, ideally, is based on actual observation of the client's behavior in the natural environment. Accordingly, behavior therapists have developed sophisticated behavioral observation rating procedures. These procedures most often have been used with children and hospitalized patients. Parents, teachers, nurses, and hospital aides have been trained as behavioral observers. Once these individuals have learned to observe behavior, they can be taught to make a behavioral analysis of a problem and then instructed to alter their own behavior to influence the problem behavior of another person.

Psychological Tests and Questionnaires

In general, behavior therapists do not use standardized psychodiagnostic tests. Tests such as the MMPI may be useful for providing an overall picture of the client's personality profile, but they do not yield the kind of information necessary for a functional analysis or for the development of therapeutic interventions. Projective tests are widely rejected because of a lack of acceptable evidence for their validity or utility (Lilienfeld, Lynn, & Lohr, 2003). Behavior therapists do use checklists and questionnaires, such as the Marks and Mathews Fear Questionnaire (1979), self-report scales of depression like the Beck Depression Inventory (Beck, Rush, Shaw, & Emery, 1979), assertion inventories like the Rathus (1973) questionnaire, and paper-and-pencil measures of marital satisfaction such as the Locke and Wallace (1959) inventory of marital adjustment. These assessment devices are not sufficient for carrying out a functional analysis of the determinants of a problem, but are useful in establishing the initial severity of the problem and charting therapeutic efficacy over the course of treatment.

Treatment Techniques

Behavior therapy offers a wide range of different treatment methods and attempts to tailor the principles of social–cognitive theory to each individual's unique problem. In selecting treatment techniques, the behavior therapist relies heavily on empirical evidence about the efficacy of that technique applied to the particular problem. In many cases, the empirical evidence is unclear or largely nonexistent. Here the therapist is influenced by accepted clinical practice and the basic logic and philosophy of a social–cognitive approach to human behavior and its modification. In the process, the therapist must often use intuitive skill and clinical judgment to select appropriate treatment methods and determine the best time to implement specific techniques. Both science and art influence clinical practice, and the most effective therapists are aware of the advantages and limitations of each.

The following are some selective illustrations of the varied methods the typical behavior therapist is likely to employ in clinical practice.

Imagery-Based Techniques. In systematic desensitization, after isolating specific events that trigger unrealistic anxiety, the therapist constructs a stimulus hierarchy in which different situations that the client fears are ordered along a continuum from mildly stressful to very threatening. The client is instructed to imagine each event while he or she is deeply relaxed. Wolpe (1958) adapted Jacobson's (1938) method of progressive relaxation training as a means of producing a response incompatible with anxiety. Briefly, this consists of training clients to concentrate on systematically relaxing different muscle groups. When any item produces excessive anxiety, the client is instructed to cease visualizing the particular item and to restore feelings of relaxation. The item is then repeated, or the hierarchy adjusted, until the client can visualize the scene without experiencing anxiety. Only then does the therapist present the next item of the hierarchy. Real-life exposure, where possible, is even more powerful than using imagination and is the technique of choice for treating anxiety disorders. An example of exposure treatment for an agoraphobic client is described in the "Applications" section.

Symbolically generated aversive reactions are used to treat diverse problems such as alcoholism and sexual disorders (e.g., exhibitionism). In this procedure, the client is asked to imagine aversive consequences associated with the problem behavior. An alcoholic might be asked to imagine experiencing nausea at the thought of a drink; an exhibitionist might be asked to imagine being apprehended by the police. This method is often referred to as covert sensitization (Cautela, 1967). A hierarchy of scenes that reliably elicit the problem urge or behavior is developed, and each scene is systematically presented until the client gains control over the problem.

Cognitive Restructuring. The treatment techniques in this category are based on the assumption that emotional disorders result, at least in part, from dysfunctional thinking. The task of therapy is to alter this maladaptive thinking. Although there is some overlap with Ellis's REBT, the cognitive restructuring method most commonly used by behavior therapists is derived from Beck's cognitive therapy. An example of this method is illustrated in the following excerpt from a therapy session. Notice how the therapist prompts the patient to examine his dysfunctional assumptions and how behavioral tasks are used to help the patient to alter his assumption (P = Patient; T = Therapist):

P: In the middle of a panic attack, I usually think I am going to faint or collapse . . .
T: Have you ever fainted in an attack?
P: No.
T: What is it then that makes you think you might faint?
P: I feel faint, and the feeling can be very strong.

T: So, to summarize, your evidence that you are going to faint is the fact that you feel faint?
P: Yes.
T: How can you then account for the fact that you have felt faint many hundreds of times and have not yet fainted?
P: So far, the attacks have always stopped just in time or I have managed to hold onto something to stop myself from collapsing.
T: Right. So one explanation of the fact that you have frequently felt faint, had the thought that you would faint, but have not actually fainted, is that you have always done something to save yourself just in time. However, an alternative explanation is that the feeling of faintness that you get in a panic attack will never lead to you collapsing, even if you don't control it.
P: Yes, I suppose.
T: In order to decide which of these two possibilities is correct, we need to know what has to happen to your body for you to actually faint. Do you know?
P: No.
T: Your blood pressure needs to drop. Do you know what happens to your blood pressure during a panic attack?
P: Well, my pulse is racing. I guess my blood pressure must be up.
T: That's right. In anxiety, heart rate and blood pressure tend to go together. So, you are actually less likely to faint when you are anxious than when you are not.
P: That's very interesting and helpful to know. However, if it's true, why do I feel so faint?
T: Your feeling of faintness is a sign that your body is reacting in a normal way to the perception of danger. Most of the bodily reactions you are experiencing when anxious were probably designed to deal with the threats experienced by primitive people, such as being approached by a hungry tiger. What would be the best thing to do in that situation?
P: Run away as fast as you can.
T: That's right. And in order to help you run, you need the maximum amount of energy in your muscles. This is achieved by sending more of your blood to your muscles and relatively less to the brain. This means that there is a small drop in oxygen to the brain and that is why you feel faint. However, this feeling is misleading because your overall blood pressure is up, not down.
P: That's very clear. So next time I feel faint, I can check out whether I am going to faint by taking my pulse. If it is normal, or quicker than normal, I know I won't faint. (Clark, 1989, pp. 76–77)

Assertiveness and Social Skills Training. Unassertive clients often fail to express their emotions or to stand up for their rights. They are often exploited by others, feel anxious in social situations, and lack self-esteem. In behavior rehearsal, the therapist may model the appropriate assertive behavior and may ask the client to engage repeatedly in a graduated sequence of similar actions (Alberti & Emmons, 2001). Initially, the therapist focuses on expressive behavior (e.g., body posture, voice training, and eye contact). The therapist then encourages the client to carry out assertive actions in the real world to ensure generalization. Behavior therapy is frequently conducted in a group as well as on an individual basis. Behavior rehearsal for assertiveness training is well suited to group therapy, because group members can provide more varied sources of educational feedback and can also offer a diversified range of modeling influences.

The instructional, modeling, and feedback components of behavior rehearsal facilitate a broad range of communication competencies, including active listening, giving personal feedback, and building trust through self-disclosure. These communication principles,

drawn from nonbehavioral approaches to counseling but integrated within a behavioral framework, are an important ingredient of behavioral marital therapy (Margolin, 1987).

Self-Control Procedures. Behavior therapists use a number of self-control procedures (Bandura, 1977; Kanfer, 1977). Fundamental to successful self-regulation of behavior is self-monitoring, which requires helping the client set goals or standards that guide behavior. In the treatment of obesity, for example, daily caloric goals are mutually selected. Behavioral research has identified certain properties of goals that increase the probability of successful self-control. For example, one should set highly specific, unambiguous, and short-term goals, such as consumption of no more than 1,200 calories each day. Compare this to the goal of "cutting back" on eating for the "next week." Failure to achieve such vague goals elicits negative self-evaluative reactions by clients, whereas successful accomplishment of goals produces self-reinforcement that increases the likelihood of maintaining the new behavior.

Self-instructional training, described above, is often used as a self-control method for coping with impulsivity, stress, excessive anger, and pain. Similarly, progressive relaxation training is widely applied as a self-control method for reducing different forms of stress, including insomnia, tension headaches, and hypertension (O'Leary & Wilson, 1987). Biofeedback methods used to treat a variety of psychophysiological disorders also fall under the category of self-control procedures (Yates, 1980).

Real-Life Performance-Based Techniques. The foregoing techniques are applied during treatment sessions, and most are routinely coupled with instructions to clients to complete homework assignments in their natural environment.

The diversity of behavioral treatment methods is seen in the application of operant conditioning principles in settings ranging from classrooms to institutions for people affected by retardation or mental illness. An excellent illustration is the use of a *token economy.* The main elements of a token reinforcement program can be summarized as follows: (a) carefully specified and operationally defined target behaviors, (b) backup reinforcers, (c) tokens that represent the backup reinforcers, and (d) rules of exchange that specify the number of tokens required to obtain backup reinforcers.

A token economy in a classroom might consist of the teacher, at regular intervals, making ratings indicating how well a student had behaved, both academically and socially. At the end of the day, good ratings could be exchanged for various small prizes. These procedures reduce disruptive social behavior in the classroom and can improve academic performance (O'Leary & O'Leary, 1977). In the case of psychiatric inpatients, the staff might make tokens contingent upon improvements in self-care activities, reductions in belligerent acts, and cooperative problem-solving behavior (Kazdin, 1977). The behavior therapist designs the token economy and monitors its implementation and efficacy. The procedures themselves are implemented in real-life settings by teachers, parents, nurses, and psychiatric aides—whoever has most direct contact with the patient. Ensuring that these psychological assistants are well trained and supervised is the responsibility of the behavior therapist.

Length of Treatment. There are no established guidelines for deciding on the length of therapy. Much of behavior therapy is short-term treatment, but therapy lasting from 25 to 50 sessions is commonplace, and still longer treatment is not unusual. Therapy in excess of 100 sessions is relatively rare. The usual approach in clinical practice is to carry out a detailed behavioral assessment of a client's problem(s) and to embark upon interventions as rapidly as possible. Assessment is an ongoing process, as the consequences of initial treatment interventions are evaluated against therapeutic goals. Unless treatment time is explicitly limited from the start, the length of therapy and the scheduling of the treatment sessions are contingent upon the patient's progress.

Typically, a behavior therapist might contract with a patient to pursue a treatment plan for two to three months (approximately 8 to 12 sessions) and reevaluate progress at the end of this period. The relative absence of any discernible improvement is cause for the therapist to reevaluate whether he or she conceptualized the problem accurately, whether he or she is using the appropriate techniques or needs to switch tactics, whether there is some personal problem with him or her as the therapist, or whether a referral to another therapist or another form of treatment might be necessary.

In terminating a successful case, the behavior therapist usually avoids abruptness. A typical procedure is to lengthen gradually the time between successive therapy sessions, from weekly to fortnightly to monthly and so on. These concluding sessions may be shorter than earlier ones, with occasional telephone contact.

Manual-Based Treatments

The use of standardized, manual-based treatments in clinical practice represents a new and controversial development with far-reaching implications for clinical practice. Cognitive behavioral therapists have been at the forefront of this development (Wilson, 1998), and there are now evidence-based CBT treatment manuals for a variety of clinical disorders, including different anxiety disorders, depressions, and eating disorders.

A treatment manual describes a limited and set number of techniques for treating a specific clinical disorder. These techniques are implemented in the same sequence over a more or less fixed number of treatment sessions, and all patients diagnosed with the disorder in question are treated with the same manual-based approach. For example, all patients with the eating disorder of bulimia nervosa would be treated in essentially the same fashion using the cognitive behavior therapy manual developed specifically for this disorder by Fairburn and his colleagues (Fairburn, Marcus, & Wilson, 1993).

A particular strength of these manuals is that they describe treatment programs that have been evaluated in controlled clinical trials. Treatment manuals make psychological therapy, whatever its particular form, more consistent and more widely available. They make it easier for therapists to learn specific treatment strategies and to acquire skill in using them. They not only facilitate the training of therapists but also make it easier for supervisors to monitor their trainees' expertise. The structured and time-limited nature of treatment manuals results in more highly focused treatment than might otherwise be the case.

Nonetheless, manual-based treatments have been criticized by practitioners, including some behavior therapists, because the standardized approach limits the role of the therapist's clinical judgment in tailoring specific interventions to the individual patient's needs (Davison & Lazarus, 1995). In response, proponents of manual-based treatments argue that therapists' clinical judgments are often highly subjective, relying more on intuition than empirical evidence.

The limitations of clinical judgment have been well documented. Clinical judgment as a form of human inference is no better, and is worse in some situations, than actuarial prediction in which patients' behavior is predicted by viewing them as members of an aggregate (e.g., a diagnostic category) and by determining what variables generally predict for that aggregate or diagnostic category (Dawes, 1994). Empirically supported, manual-based treatments are consistent with the actuarial approach. The relative effectiveness of manual-based behavior therapy versus reliance on the therapist's clinical judgment is the subject of ongoing clinical investigation.

Mechanisms of Psychotherapy

Research on behavior therapy has demonstrated that particular treatment methods are effective and has identified what components of multifaceted treatment methods and programs are responsible for therapeutic success. For example, empirical evidence has

established that the changes produced by token reinforcement programs are due to the learning principles of operant conditioning on which they are based (Kazdin, 1977).

Learning Processes

Ayllon and Azrin (1965) described a pioneering token reinforcement program with predominantly schizophrenic patients on a psychiatric hospital ward. The target behaviors in this investigation were self-care and improved capacity for productive work. Rewards were made contingent on improvement in these two areas. Following a period during which the job assignments of all 44 patients on the entire ward were rewarded contingently (phase A), tokens were administered on a noncontingent basis (phase B). In phase B, patients were given tokens each day regardless of their performance, which broke the contingency between reinforcer and response. This ensured that the amount of social interaction between the attendants and ward staff who administered the tokens and the patients remained unchanged. Any deterioration in performance was then directly attributable to the precise functional relationship between behavior and reinforcement.

Phase C marked a return to contingent reinforcement as in phase A. The results showed that "free" reinforcement (phase B) was totally ineffective. Similarly, the complete withdrawal of all tokens resulted in performance decreasing to less than one-fourth the rate at which it had previously been maintained by contingently rewarding the patients with tokens.

No single, monolithic theory encompasses the diverse methods and applications of the different behavior therapies. Although operant conditioning principles explain the efficacy of a broad range of behavioral procedures, they do not account for the success of a number of other methods. Classical conditioning and different cognitive processes all play a part in determining the effects of the various cognitive behavioral treatment methods described in this chapter. In many cases, the mechanisms responsible for the therapeutic success of a method remain unclear. Consider exposure treatment for phobic and obsessive–compulsive disorders. The effectiveness of this method has been well established, but its explanation is still a matter of some controversy. Originally, the explanation was based on Mowrer's (1947) two-factor theory of learning, according to which repeated exposure to anxiety-eliciting situations, as in systematic desensitization, resulted in the extinction of the classically conditioned anxiety that mediates phobic avoidance behavior. However, other research (Bandura, 1986) casts doubt on the validity of this explanation.

Cognitive Mechanisms

In terms of social–cognitive theory, exposure leads not to the extinction of any underlying anxiety drive state, but rather to modification of the client's expectations of self-efficacy (Bandura, 1982). Self-efficacy refers to clients' beliefs that they can cope with formerly feared situations. For efficacy expectations to change, the client must make a self-attribution of behavioral change. For example, it is not uncommon for an agoraphobic client to approach situations she has avoided without increases in self-efficacy or reductions in fear. The explanation seems to be that some clients do not credit themselves for the behavioral change. The agoraphobic might say that she was "lucky" that she did not have a panic attack or that she just happened to have one of those rare "good days." The therapist must be prepared to help the client use cognitive methods to attribute changes to herself so that her sense of personal efficacy increases.

Initial studies with phobic subjects have generally provided empirical support for self-efficacy theory, although the findings are mixed. Experiments by Bandura and his associates have shown that efficacy expectations accurately predicted reductions in phobic avoidance

regardless of whether they were created by real-life exposure or symbolic modeling, covert modeling, or systematic desensitization. Moreover, measures of personal efficacy predicted differences in coping behavior by different individuals receiving the same treatment and even specific performance by subjects in different tasks. Consistent with the theory, participant modeling, a performance-based treatment, produced greater increases in level and strength of efficacy expectations and in related behavior change (Bandura, 1986).

APPLICATIONS

Who Can We Help?

Behavior therapy can be used to treat a full range of psychological disorders in different populations (Kazdin & Wilson, 1978). It also has broad applicability to problems in education, medicine, and community living. The following are selected examples of problems for which behavior therapy is an effective treatment.

Anxiety Disorders

Several well-controlled studies have established that behavior therapy is an effective form of treatment for anxiety disorders. Simple phobias are successfully eliminated within a short number of sessions by using guided exposure treatment in which patients are helped to gradually approach and confront the objects or situations they fear and avoid. For example, Tom Ollendick and his colleagues (2009) demonstrated that even a one-session in vivo graduated exposure treatment of up to three hours was superior to an education support treatment and treatment effects were maintained at follow-up. Behavior therapy also is the treatment of choice for more complex and debilitating disorders such as panic disorder and obsessive–compulsive disorder.

Panic Disorder. Panic disorder is defined by a discrete period of intense fear that develops suddenly and involves physiological symptoms such as a pounding heart, shortness of breath, sweating, dizziness, and fear of going crazy. Effective treatment typically combines both behavioral and cognitive components. At Oxford University in England, David Clark and his colleagues tested the effects of a treatment that focused mainly on changing panic patients' catastrophic interpretation of bodily sensations. This cognitive behavioral treatment proved to be superior to pharmacological therapy with imipramine, an antidepressant often assumed to be the therapy of choice for panic disorder. Patients treated with cognitive–behavioral therapy maintained their improvement over a one-year follow-up period, whereas patients treated with imipramine tended to relapse when the drug was discontinued (Clark, Salkovskis, Hackmann, Middleton, & Gelder, 1994).

In the United States, studies by David Barlow and his colleagues have evaluated the effects of a panic control treatment (PCT) that includes both behavioral and cognitive components. The two main behavioral components are (1) progressive relaxation training designed to help patients cope with their anxiety and (2) exposure (extinction) treatment in which patients are systematically exposed to cues (mainly internal bodily sensations) that typically trigger panic attacks. The treatment eliminates the panic reactions via the process of extinction. PCT was more effective than a wait list control condition (in which patients were assessed but their treatment delayed) or relaxation training alone. A two-year follow-up showed that 81% of patients treated with PCT were panic-free (Craske, Brown, & Barlow, 1991). A subsequent large, controlled study of panic disorder showed that both CBT and imipramine were effective treatments in the short term. Again, the therapeutic effects of CBT were maintained over follow-up, whereas patients withdrawn from their medication tended to relapse (Barlow, Gorman, Shear, & Woods, 2000). Most

recently, Craske and her colleagues have shown that this form of cognitive behavior therapy can be successfully implemented to treat panic disorder in primary-care medical settings where the customary therapy has been antidepressant medication. Adding cognitive behavioral treatment to the medication results in significantly superior results than medication alone (Craske et al., 2005).

Obsessive—Compulsive Disorders. Traditional psychotherapy is ineffective in treating obsessive–compulsive disorder (OCD). A significant advance was made in the 1970s with the development of specific behavioral methods. The most effective treatment is exposure and response prevention, which can be illustrated with compulsive hand washers. The different objects or activities leading the patient to wash his or her hands are first identified through behavioral assessment. Then, following a thorough explanation of the technique and its rationale, and with the patient's fully informed consent, touching objects that trigger hand washing is systematically encouraged. This is the exposure part of treatment. Once the patient has touched what is unrealistically viewed as contaminated, he or she refrains from washing. This is the response prevention part of treatment. The patient's anxiety typically rises after initially touching the object and then decreases over the course of the session. Focusing the patient's attention on fear of contamination assists the treatment. The goal of treatment is to break the negative reinforcing value of the compulsion, extinguish the anxiety elicited by the contaminated object, and enhance the patient's self-efficacy in coping with this kind of situation. Imaginal exposure is used in cases when in vivo exposure is impractical or impossible. Patients are instructed to conjure up detailed imagery of compulsive activities and stay with these images until their anxiety decreases.

Research has shown that roughly 65 to 75% of patients with OCD show marked improvement following behavioral treatment (Barlow, 2002). This therapeutic success is maintained during follow-ups as long as two years after treatment. Of particular interest is the finding that exposure treatment influences the biological basis of OCD. Successfully treated patients show significant changes in glucose metabolism in the caudate nucleus, a specific region of the brain that is known to be connected with anxiety. These changes are identical to those produced by successful pharmacological treatment (Baxter et al., 1992).

Posttraumatic stress disorder (PTSD). PTSD develops following an intensely stressful event that is likely to cause significant distress in most people. Common examples are traumatic experiences in military combat and rape-related trauma. The major symptoms of PTSD include: (1) re-experiencing symptoms, flashbacks, feeling as if the event were re-occurring, nightmares, and distressing intrusive images; (2) avoidance, in which people try to suppress memories of the event; (3) hyperarousal, including hypervigilance for threat, irritability, difficulty concentrating, and sleep difficulties; and (4) emotional numbing, including the lack of ability to experience feelings and amnesia for significant aspects of the event. Associated difficulties, such as depression, substance abuse, and interpersonal problems, are commonplace.

Different combinations of both cognitive and behavioral techniques have been used to treat PTSD, but the strongest evidence supports exposure therapy (Foa, Hembree, Cahill, Rauch, & Riggs, 2005). In this treatment, following detailed assessment and education about the nature of trauma, the therapist and patient develop a hierarchy of threatening situations. Homework exercises are designed to have the patient confront these situations in a graded fashion. In addition, using imaginal exposure, therapy sessions are devoted to having the patient re-experience the trauma itself, for example, being raped by a stranger. The patient's reactions to these imaginal exposure sessions are discussed and progress carefully monitored. In a large treatment study of rape survivors,

Foa et al. (2005) showed that 12 sessions of this therapy not only produced significant improvement in PTSD, but also associated depression, work, and social functioning.

Depression

Beck's cognitive therapy (CT) for depression is described in Chapter 8. CT is a mix of cognitive and behavioral strategies. Several well-controlled treatment outcome studies have shown that CT is an effective treatment for depression, including severe depression among adults. What is especially significant is that CT appears to be as effective as antidepressant medication (DeRubeis, Brotman, & Gibbons, 2005). Moreover, CT may be even more effective over the long term because when medication is discontinued, patients often relapse rapidly. In short, patients would have to continue taking medication over a period of years in order to equal the enduring effects of several months of CT (Hollon, Stewart, & Strunk, 2006). Importantly, CT is effective not just in research conducted at major universities, but also in routine clinical practice and with minority groups who are typically underserved (Miranda et al., 2005).

CT comprises the following overlapping series of different strategies: Systematic self-observation (self-monitoring); behavioral activation; monitoring thoughts; challenging accuracy of thoughts; exploring underlying core beliefs or what are called schemas; and relapse prevention (Hollon, 1999). Notice that the strategies begin with behavioral techniques (self-monitoring and behavioral activation) and become progressively more cognitive in nature as the therapy develops. An important theoretical and practical question is which of these strategies accounts for the success of the approach? Jacobson and his colleagues (1996) conducted a component analysis of CT in order to determine the necessary and sufficient treatment elements of this approach. They compared the full CT treatment package, which by definition focused on modifying dysfunctional cognitions, to the behavioral component that they labeled behavioral activation (BA). The focus in BA is helping patients to become more active. They learn to self-monitor their daily activities, assess pleasure from engaging in different activities, complete increasingly difficult tasks designed to promote a sense of mastery, and overcome deficits in social skills. The results showed that BA was as effective as the full CT package in decreasing depression both at the end of therapy and at 6-month and 2-year follow-ups (Gortner, Gollan, Dobson, & Jacobson, 1998). Furthermore, BA was equally effective in altering negative thinking in these depressed patients. Jacobson et al. (1996) concluded that CT is no more effective than the behavioral component of the full treatment package.

The results of the Jacobson et al. (1996) study have been replicated by Dimidjian et al. (in press). These investigators found no difference between a behavioral activation treatment and the full CT approach. However, when the results from only the most severely depressed patients were analyzed, behavioral activation proved more effective than CT. Finally, the apparent efficacy of behavioral activation is consistent with the finding that most of the improvement in CT occurs early in treatment (Ilardi & Craighead, 1994). As noted above, the behavioral component is especially prominent during the early part of CT, and these findings collectively call into question the added value of specific cognitive procedures for treating depression.

Another innovative treatment for depression is mindfulness-based cognitive behavior therapy, or MBCT (Segal, Teasdale, & Williams, 2004). This therapy has many features of Beck's CT, with two important differences. First, instead of encouraging patients to actively challenge the validity of their beliefs, MBCT teaches patients to use mindfulness skills in reacting to negative thoughts or bad feelings. The focus is on what Segal et al. (2004) call meta-cognitive awareness—this is essentially the same concept as defusion or distancing as described earlier in this chapter in the section of DBT and ACT. Second, and consistent with behavioral activation and ACT, the focus is on dealing with the

functional consequences of thoughts and beliefs rather than on analyzing their content or truth value. Preliminary findings indicate that MBCT is effective in reducing relapse.

Two additional forms of behavior therapy have been used successfully to treat depression. One, developed by Peter Lewinsohn, combines many of the cognitive strategies of Beck's approach with a more traditional behavioral emphasis on increasing the range of patients' positive reinforcers. This approach has been shown to be effective in overcoming depression in adolescents (Lewinsohn, Clarke, Hops, & Andrews, 1990). The other is a form of behavioral marital therapy. The goal in this treatment is to modify the interpersonal influences on unipolar depression by reducing marital conflict and facilitating increased feelings of closeness and open sharing of thoughts and feelings (O'Leary & Beach, 1990). This treatment seems especially effective with depressed women who also have marital problems.

Dobson et al. (2008) conducted a randomized controlled trial that compared the effectiveness of cognitive therapy, behavioral activation, and antidepressant medication. These researchers found no significant difference between behavioral activation and cognitive therapy, but each treatment was at least as efficacious as continued treatment with antidepressant medication, and the psychological treatments were longer lasting and actually cost less than continued treatment with antidepressant medications.

Eating and Weight Disorders

Binge Eating and Bulimia Nervosa. Bulimia nervosa (BN) is an eating disorder that occurs mainly in adolescent and young adult women. It is characterized by a severe disturbance of eating in which determined attempts to restrict food intake are punctuated by binge eating, namely, episodes of uncontrolled consumption of very large amounts of food. Binges are commonly followed by purging (self-induced vomiting or the misuse of laxatives). BN patients have dysfunctional concerns about body shape and weight and judge their self-worth in terms of shape and weight. Other psychiatric disorders, such as depression, substance abuse, and personality disorders, are commonly associated with BN. Binge eating disorder (BED) is diagnosed if patients show recurrent binge eating in the absence of extreme attempts at weight control such as purging. Whereas BN patients are typically of normal weight, BED patients are usually overweight or obese.

Manual-based CBT for BN (Fairburn et al., 1993) is designed to eliminate binge eating and purging, replace rigid dieting with more normal and flexible eating patterns, and modify dysfunctional thoughts and feelings about the personal significance of body weight and shape. Patients are helped to achieve enhanced self-acceptance instead of struggling to conform to unrealistic societal ideals of feminine beauty. In addition, cognitive and behavioral strategies are used to help patients cope more adaptively with stressful events instead of resorting to binge eating.

Numerous controlled studies in the United States and Europe have demonstrated the effectiveness of CBT in treating BN (Wilson & Fairburn, 2002). CBT has proved to be more effective than several other psychological treatments, including supportive psychotherapy, supportive–expressive psychotherapy, stress management therapy, and a form of behavior therapy that did not address the cognitive features of bulimia nervosa. The exception is interpersonal psychotherapy (IPT). A major comparative outcome study found that at the end of treatment, IPT was less effective than CBT, but during a one-year follow-up, the difference between the two treatments disappeared due to continuing improvement among the patients who received IPT (Fairburn et al., 1995).

Antidepressant medication has also been shown to be an effective treatment for BN. Research studies evaluating the relative and combined effectiveness of CBT and antidepressant drug treatment have, as a whole, shown that CBT is superior to medication alone. Combining CBT with medication is significantly more effective than medication alone. Combining the two has produced few benefits over CBT alone on the reduction of

the core features of bulimia nervosa. In contrast to the data on CBT, there is virtually no evidence of the long-term effect of pharmacological treatment on BN (Wilson, 1997).

CBT is also effective in treating binge eating and associated psychopathology in BED patients, but does not produce significant weight loss (Wilson, Grilo, & Vitousek, 2007).

Obesity. A comprehensive behavioral weight control program, comprising components of improved eating habits, lifestyle change, sound nutrition, and increased exercise, is widely viewed as the treatment of choice for mild to moderate cases of obesity. Short-term results are good. Following 5 months of treatment, behavioral treatment combined with moderate dietary restriction (1,200 calories of self-selected foods daily) results in a mean weight loss of roughly 20 pounds, together with significant decreases in depression and body image dissatisfaction. The problem is that these treatment effects are not maintained over time (Wadden, Butryn, & Byrne, 2004).

The pattern of weight loss and regain in behavioral treatment is consistent. The rate of initial weight loss is rapid but then slowly declines. The low point is reached after approximately 6 months. Weight regain then begins and continues gradually until weight stabilizes near baseline levels. Obesity is a chronic condition that may require treatment of indefinite duration. Continuing therapist contact appears to be a key element in successful maintenance programs (Perri, 1998).

Schizophrenia

In the early days of behavior therapy, the treatment of schizophrenic patients consisted of token economy programs in mental hospitals. The most prominent example of this approach was a study by Paul and Lentz (1977). They treated chronic mental patients, all of whom were diagnosed as process schizophrenic and were of low socioeconomic status. These patients had been confined to a mental hospital for an average of 17 years and had been treated previously with drugs and other methods without success. Approximately 90% were taking medication at the onset of the study. Their level of self-care was too low and the severity of their bizarre behavior too great to permit community placement. According to Paul and Lentz, these subjects were "the most severely debilitated chronically institutionalized adults ever subjected to systematic study" (p. v). In the most detailed, comprehensive, and well-controlled evaluation of the treatment of chronic mental hospital patients ever conducted, Paul and Lentz produced a wealth of objective data, including evidence of cost effectiveness, showing that behavioral procedures (predominantly a sophisticated token reinforcement program) were effective.

In the 1980s, research began to show that family environment was decisive in determining whether schizophrenic patients discharged from hospital relapsed or maintained their improvement. As a result, family interventions were developed for preventing relapse, and some of these were strongly behavioral in nature (Tarrier & Wykes, 2004). Given the success of cognitive behavioral treatment for anxiety and other disorders, the same strategies began to be applied to schizophrenic patients. The treatments were designed to modify schizophrenic symptoms that proved resistant to medication as well as acute psychotic episodes. Overall, the evidence that these treatments are effective is promising, but not definitive. Tarrier and Wykes (2004) note that there has been a tendency for more behavioral interventions to be more effective than those relying on cognitive methods.

Childhood Disorders

Children have been treated from the earliest days of behavior therapy. Treatment programs have addressed problems ranging from circumscribed habit disorders in children to multiple responses of children who suffer all-encompassing excesses, deficits, or bizarre behavior patterns. These problems include conduct disorders, aggression, and

delinquency. Hyperactivity is widely treated by behavioral methods, such as token reinforcement programs. The documented success of the behavioral approach, particularly in improving the academic performance of these children, suggests that it can sometimes be used as an alternative to drug treatment (O'Leary, 1980).

Autism is a particularly severe early childhood disorder with a very poor prognosis. Traditional psychological and medical treatments have proved ineffective. Behavioral methods, however, have achieved notable success. Lovaas (1987) has reported that intensive, long-term behavioral treatment of autistic children resulted in 47% achieving normal intellectual and educational functioning. Another 40% were mildly retarded and assigned to special classes for the language delayed. Of a control group of autistic children, only 2% achieved normal functioning. These findings are the most positive ever obtained with autistic children and illustrate the efficacy of behavioral methods with serious childhood disorders.

Childhood psychoses have also been treated with behavioral techniques. Self-stimulatory and self-destructive behavior such as biting and head banging have been eliminated with aversive procedures. Positive behaviors have been developed to improve language and speech, play, social interaction and responsiveness, and basic academic skills (O'Leary & Carr, 1982).

One of the most effectively treated childhood problems has been enuresis. The bell-and-pad method has produced improvement rates greater than 80% in many reports. Toileting accidents have been effectively altered with other behavioral procedures (Ross, 1981).

Behavioral Medicine

Behavioral medicine has been defined as the "interdisciplinary field concerned with the development and integration of behavioral and biomedical science knowledge and techniques relevant to health and illness and application of this knowledge and these techniques to prevention, diagnosis, treatment and rehabilitation" (Schwartz & Weiss, 1978, p. 250). Behavior therapy has helped to catalyze the rapid growth of this field.

Prevention and Treatment of Cardiovascular Disease

Specific behavior patterns appear to increase the risk of needless or premature cardiovascular disease. Modification of these behavior patterns is likely to produce significant reductions in cardiovascular disease. Among the risk factors that have been the target of behavioral treatment programs are cigarette smoking, obesity, lack of exercise, stress, hypertension, and excessive alcohol consumption. Substance abuse is typically treated with a combination of the self-control procedures. Stress and hypertension have been successfully treated using methods such as relaxation training. Behavior intervention methods have been applied not only to identified clients in both individual and group therapy sessions but also to essentially healthy individuals in the workplace and the community in programs designed to prevent cardiovascular disease.

Other Applications

Behavioral techniques have been successfully applied to such diverse health-related problems as tension headaches, different forms of pain, asthma, epilepsy, sleep disorders, nausea reactions in cancer patients (resulting from radiation therapy), and children's fears about being hospitalized and undergoing surgery (Melamed & Siegel, 1980). Behavior therapy has also been applied successfully to the treatment of alcoholism (McCrady, Epstein, Cook, Jensen, & Hildebrandt, 2009), suicidal adults with borderline personality and substance dependence disorders (Harned et al., 2008), and suicidal adolescents (Miller, Rathus, & Linehan, 2007). Finally, cognitive–behavioral principles

show promise in increasing compliance with medical treatments (Meichenbaum & Turk, 1987).

Treatment

Some clinical details of a cognitive–behavioral approach to therapy may be illustrated by the treatment of agoraphobia, a complex anxiety disorder. Initially, the therapist carries out a careful assessment of the nature of the problem and the variables that seem to be maintaining it. Subsequent treatment may vary, but it is probable that some form of real-life exposure will be a central part of therapy. Together, therapist and client work out a hierarchy of increasingly fear-eliciting situations that the client has been avoiding. Repeated and systematic exposure to these situations occurs until avoidance is eliminated and fear is decreased.

The therapist is careful to distinguish systematic exposure from the unsystematic and ill-considered attempts clients have typically made to enter feared situations too quickly. Preparation for each exposure experience involves anticipating the inevitable fearful reactions and teaching clients appropriate coping skills. This includes recognizing and accepting feelings of fear, identifying cognitive distortions that elicit or exacerbate fear, and counteracting cognitive distortions.

The therapist might accompany the client during real-life exposure sessions, providing encouragement, support, and social reinforcement. Although empathic, the therapist remains firm about the necessity for systematic exposure. Once the client enters the feared situation, it is important for the client not to leave until his or her anxiety has decreased.

Following exposure, therapist and client analyze what happened. This provides the therapist an opportunity to see how the client interprets his or her experience and to uncover any faulty cognitive processing. For example, people coping with agoraphobia tend to discount positive accomplishments, do not always attribute success experiences to their own coping ability, and therefore do not develop greater self-efficacy.

Clients are given specific instructions about exposure homework assignments between therapy sessions and are asked to keep detailed daily records of what they attempted, how they felt, and what problems they encountered. These self-recordings are reviewed by the therapist at the beginning of each session. In addition to providing the therapist with information on clients' progress (or lack of progress), these daily records facilitate the process of changing clients' cognitive sets about their problems. By directing their attention to the records of their own experience, the therapist helps clients to gain a more objective and balanced view of their problems and progress.

Homework assignments typically require the active cooperation of the client's spouse (or some other family member). The therapist invites the spouse to one or more therapy sessions to assess his or her willingness and ability to provide the necessary support and to explain what is required. It is common practice to use treatment manuals for both the client and the spouse in which they detail each step of real-life exposure treatment and describe mutual responsibilities. In many cases, these manuals can greatly reduce the number of sessions the couple spends with the therapist.

Clients often fail to complete homework assignments. There are several possible reasons for lack of compliance, ranging from poorly chosen homework assignments to resistance to change. Another possibility is that the spouse is uncooperative or tries to sabotage therapy. One of the advantages of including the spouse in treatment is that this resistance to progress is rapidly uncovered and can be addressed directly in therapy sessions.

To supplement real-life exposure, some clients need assertiveness training, whereas others need to acquire ways of coping with suppressed anger. Before terminating successful treatment, the therapist works on relapse prevention training with clients. Briefly, clients are told that it is possible that they might experience an unexpected return of

some fear at unpredictable points in the future. Using imagery to project ahead to such a recurrence of fear, clients learn to cope with their feelings by reinstituting previously successful coping responses. They are reassured that these feelings are quite normal and time-limited and do not necessarily signal a relapse. Clients learn that it is primarily the way they interpret these feelings that determines whether or not they experience a relapse. Specifically, the therapist tries to inoculate them against such anxiety-inducing cognitive errors as catastrophizing or selective focus on an isolated anxiety symptom.

Evidence

Behavior therapy consists of a broad range of different strategies and techniques, some of which are differentially effective for different problems. Hence, it is difficult to evaluate some global entity called "behavior therapy." Instead, evaluation must be directed at specific methods applied to particular problems.

Research Strategies

Behavior therapists have developed various research strategies for evaluating therapy outcome. Single-case experimental designs are important because they enable cause–effect relationships to be drawn between treatments and outcome in the individual case. The ABA, or reversal, design was illustrated in the Ayllon and Azrin (1965) study previously described. In the multiple-baseline design, different responses are continuously measured. Treatment is then applied successively to each response. If the desired behavior changes maximally only when treated, then a cause–effect relationship can be inferred. Limitations of single-subject methodology include the inability to examine the interaction of subject variables with specific treatment effects and difficulty in generalizing findings to other cases.

Laboratory-based studies permit the evaluation of specific techniques applied to particular problems under tightly controlled conditions; for example, evaluating fear reduction methods with snake-phobic subjects (Bandura, 1986). The advantages of this methodology include the use of multiple objective measures of outcome, the selection of homogeneous subject samples and therapists, and the freedom to assign subjects to experimental and control groups. Limitations include the possibility that findings with only mildly disturbed subjects might not be generalizable to more severely disturbed clients.

The treatment package strategy evaluates the effect of a multifaceted treatment program. If the package proves to be successful, its effective components are analyzed in subsequent research. One way of doing this is to use the dismantling strategy, in which components of the treatment package are systematically eliminated and the associated decrement in treatment outcome is measured.

The comparative research strategy is directed toward determining whether some therapeutic techniques are superior to others. Comparative studies are most appropriate after specific techniques have been shown to be effective in single-subject or laboratory-based research. Different group designs require different control groups, depending on the research question addressed. The no-treatment control group controls for the possible therapeutic effects of assessment of outcome, maturation, and other changes in clients' behavior that occur independently of formal treatment. Attention–placebo control groups are used to parcel out the contribution to treatment effects of factors that are common to most forms of therapy and often called *nonspecific factors*. These factors include the relationship between therapist and client, expectations of therapeutic progress, and suggestion. For example, behavior therapy has been increasingly compared with antidepressant medication in the treatment of anxiety, mood, and eating disorders (as mentioned earlier in this chapter) in what are called randomized controlled trials (RCTs). In the basic design, the antidepressant medication and the behavioral treatment are compared with each other

and with a pill–placebo. If the medication or behavioral treatment is significantly more effective than the pill–placebo condition, the treatment has been shown to have a specific therapeutic effect above and beyond so-called "nonspecific" factors.

In research on the effects of both pharmacological and psychological treatments, a distinction is made between efficacy and effectiveness studies. An *efficacy study* is tightly controlled, with random assignment of patients to different treatments, the use of manual-based treatments, the inclusion of therapists who have been carefully trained in the use of the specific treatments, and rigorous assessment of outcome by independent evaluators. They are typically conducted in specialty university and medical school settings. In contrast, *effectiveness studies* are usually less well-controlled: Formal therapy manuals are not used, there is no specific training or supervision of therapists for the purposes of the study, and the study is conducted under conditions of routine clinical practice (e.g., in a community mental health center). The goal of effectiveness research is to evaluate the "clinical representativeness" of efficacy outcome research. We need to assess how well the results of controlled research generalize to diverse patient populations, clinical settings, and different therapists.

Research Findings

The efficacy and effectiveness of behavior therapy has been studied more intensively than in any other form of psychological treatment. In addition to traditional qualitative reviews of the evidence for different disorders, numerous meta-analyses exist that provide comprehensive and quantitative evaluations of the findings of large numbers of different treatment outcome studies (Nathan & Gorman, in press). The most rigorous and complete evaluations of both psychological and pharmacological treatment of different clinical disorders are those of the National Institute for Clinical Excellence (NICE) in the United Kingdom (NICE, 2004). NICE issues treatment guidelines that are a product of a multidisciplinary process in which the standard is consistent across all of medicine. The guidelines are based on data and are graded from A (strong empirical support from well-controlled RCTs) to C (expert opinion with strong empirical data).

Behavior therapy has fared well in the NICE evaluations of the evidence for the various clinical disorders. The level of empirical support for behavioral treatments is typically rated as A. These treatments are recommended as the psychological treatment of choice for specific mood and anxiety disorders and evaluated as equally effective as pharmacological therapy. In the case of eating disorders, behavior therapy has been evaluated as even more effective than medication (Fairburn, Cooper, & Shafran, 2008; Wilson & Shafran, 2005). Examples of individual research studies documenting the efficacy of behavior therapy have been summarized in the earlier section on Applications.

In another evaluation of the evidence for different psychological treatments, Division 12 of the American Psychological Association established criteria for judging treatments as "empirically supported." For example, a treatment had to have at least two well-controlled studies, conducted by different investigators, that showed the treatment to be significantly more effective than a pill, psychological placebo, or other form of treatment. They then identified those treatments that met these standards of evidence (Woody, Weisz, & McLean, 2005). Behavioral treatments dominate the list of what have been called empirically supported therapies.

The treatments that have been evaluated in the NICE guidelines and by Woody et al. (2005) have been traditional behavioral and cognitive behavioral interventions. Evidence on third-wave forms of behavior therapy is gradually emerging. DBT for borderline personality disorder clearly enjoys empirical support, as summarized earlier (Lieb et al., 2004; Linehan et al., 2006). The evidence on ACT is promising albeit still at a rudimentary stage (Hayes et al., 2006).

Most of the evidence in support of behavior therapy treatments for different clinical disorders is based on well-controlled efficacy research. It is important to point out, however, that effectiveness studies are beginning to show that the results of the efficacy studies do generalize to routine clinical practice (Wilson, 2007). For example, there is now evidence that cognitive and behavioral treatments for anxiety disorders and depression are effective in helping minority group members in community-based treatment settings (e.g., Foa et al., 2005; Miranda et al., 2005). Demonstrating the relevance of evidence-based psychological therapy for members of minority groups is a research priority given that these individuals tend to be underrepresented in RCTs in specialized university and medical school settings.

Psychotherapy in a Multicultural World

Junko Tanaka-Matsumi (2008) has examined the interface between two growing domains in psychotherapy: multiculturalism and the demand for empirically supported psychotherapy. She noted the importance of providing culturally responsive cognitive–behavioral therapy to people of diverse cultural backgrounds and points out that the minority population in the United States grew 11 times as rapidly as the non-Hispanic population between 1980 and 2000. This rapid growth of the minority population in the United States shows no sign of abating. However, Tanaka-Matsumi also notes that the well-documented effectiveness of behavioral therapy is largely based on evidence derived from Caucasian groups from North America or with European cultural backgrounds, and there is a pressing need to develop evidence from diverse populations around the globe. She writes:

> globalization will encourage training of multicultural mental health professionals who can apply universally applicable principles of behavior change and implement culturally specific treatment. Functional analysis is a flexible and individualized method that can identify culture-relevant content in cognitive–behavior therapy for diverse clients. (p. 191)

CASE EXAMPLE[1]

Melissa was a 22-year-old graduate student who sought treatment at the counseling center of her university because of her eating disorder. Her body mass index was 23, which is in the middle of the normal (healthy) range.

During the first session Dr. Jones, the female clinical psychologist to whom she had been assigned, asked a number of questions to learn as much as possible about Melissa's problems, such as when the eating disorder had started and how it had developed. Dr. Jones also inquired about any other associated problems (e.g., substance abuse, depression, and anxiety), as well as Melissa's social interactions with family and friends. Melissa's score on the Beck Depression Inventory (BDI) was 25, indicating a high probability of clinical depression.

As she talked about her problems, Melissa became teary and mentioned how ashamed she felt about her behavior. Dr. Jones expressed empathy, saying that she knew how upset Melissa was and how hard it must have been the last few months struggling with the eating disorder without confiding in anyone, including her boyfriend. She praised Melissa for having the courage to seek treatment and reassured her that they could work together to help her overcome the problem. Dr. Jones explained that Melissa's pattern

[1] This case example consists of a composite of features from more than one patient in order to fully ensure confidentiality. The therapeutic strategies summarized in this case study are described in detail in Fairburn et al. (1993) and Wilson (2004).

of regular binge eating followed by self-induced vomiting, together with her attempts to diet to lose more weight, were consistent with bulimia nervosa (BN). She gave Melissa a copy of *Overcoming Binge Eating*, an evidence-based self-help book written by Chris Fairburn (see Fairburn, 1995), one of the world's leading authorities on eating disorders. She asked Melissa to read the first half of the book that described the nature of eating disorders like BN. Dr. Jones also asked Melissa to keep a daily written record of everything she ate and drank, when, and under what circumstances—i.e., she was asked to practice self-monitoring. Dr. Jones took care to explain why this was important—it would provide valuable information for her as the therapist but would also immediately begin to help Melissa understand and begin to take control of her eating behavior. After explaining self-monitoring, Dr. Jones asked Melissa what she thought about it. Did it make sense to her? Could she anticipate any obstacles that would interfere with self-monitoring? Melissa answered that she understood the purpose of the assignment and expressed her willingness to work on the task. When leaving, she thanked Dr. Jones and said that she felt a great sense of relief in finally having confided in someone, especially someone who was caring and seemed to understand the problem.

At the beginning of the second session, Dr. Jones and Melissa jointly reviewed her self-monitoring records. She had kept excellent records for 5 of the 7 days, although over the weekend her recording was very spotty. Melissa ruefully stated that the week had been a bad one, although she had not binged or vomited on two of the days. Dr. Jones made a point of praising Melissa's self-monitoring while at the same time encouraging her to keep accurate daily records. She also checked to see if Melissa had read the self-help book. She had and was encouraged to learn that other young women like her had successfully overcome the problem. As she would do every session, Dr. Jones then set the agenda for the rest of the session. She explained that she wanted to go over the reasons Melissa was binge eating and vomiting and to explore what was different between the two days that Melissa had not binged and the rest of the past week. Dr. Jones invited Melissa's feedback on the agenda and asked if she wanted to cover any other issue so as to reinforce the concept of collaboration between therapist and patient.

Dr. Jones then presented the cognitive behavioral model of the factors that maintain BN. The core of the model is that extreme concerns about the importance of body shape and weight lead individuals to diet in dysfunctional and unhealthy ways. This leads to binge eating for both biological (hunger) and psychological (setting rules for eating that are too rigid and unrealistic) reasons. Finally, vomiting and laxative abuse are attempts to compensate for the binge eating to avoid weight gain. The vomiting induces shame and only leads to more unhealthy attempts to diet—thereby perpetuating the problem.

Melissa agreed that the model accurately described what was happening to her and understood that she would have to deal with her over-concern about body shape and weight and change her unhealthy dieting to overcome BN. But she expressed her reluctance to give up dieting. She worried that this would lead to weight gain—the thing she feared most. In response to Dr. Jones's gentle questioning, Melissa made clear her ambivalence about change—she wanted to stop binge eating and vomiting, but she feared the potential consequences associated with these changes. Dr. Jones empathized with Melissa's conflict and asked her to complete the following homework assignment. Melissa was to write down (1) the advantages and disadvantages of continuing to diet; and (2) the corresponding advantages and disadvantages of stopping dysfunctional dieting (see Wilson [2004] for details of this strategy for overcoming ambivalence).

In the third session, Dr. Jones reviewed Melissa's self-monitoring and homework. She had concluded that, on the whole, it was worth changing her dysfunctional behavior—the advantages were greater than the disadvantages. Dr. Jones then explained what needed to be done to change dysfunctional dieting into healthy eating patterns. The first step would be to eat regular meals—breakfast, lunch, and dinner, with planned snacks in the morning

and afternoon. Melissa could still choose "safe" foods but needed to change her pattern of skipping meals. Dr. Jones also asked Melissa to weigh herself no more than once a week instead of weighing multiple times each day. Melissa expressed her concern that without frequent daily weighing she would gain weight. Dr. Jones suggested that Melissa think of this task as an experiment—she was encouraged to try it for the next 2 weeks and see what would happen to her weight. Melissa liked this idea and agreed to give it a try.

In the next two sessions the focus remained on Melissa self-monitoring, adopting a regular eating pattern, and weighing herself weekly. She was able to accomplish each of these goals. Her binge eating stopped and her depression score on the BDI that Dr. Jones administered each session dropped significantly (BDI = 16). However, Melissa was still eating in a very restrictive fashion. She avoided so-called "forbidden" foods out of fear that they would trigger binge eating. Dr. Jones encouraged her to try another experiment—one in which she planned to eat a "forbidden food" such as ice cream. She was to do this one afternoon when she had not skipped breakfast or lunch, and when she felt good about herself. Melissa was amazed to discover that she did not experience an urge to binge and felt in control. The goal of this behavioral experiment was to show Melissa that she could eat a wider range of foods than she previously believed without losing control.

The focus in Sessions #6 and #7 remained on overcoming dysfunctional dieting. Melissa was no longer binge eating, but she still occasionally resorted to vomiting as a means of coping with negative feelings about herself. Based on her self-monitoring records, it was clear that these occasions were typically triggered by conflicts with her boyfriend.

In Sessions #8 through 10, therapy focused on helping Melissa to become more assertive (see Alberti & Emmons, 2001) and not allow herself to be treated badly by her boyfriend. She learned to express her feelings and to insist on being treated with respect. This led to her leaving her boyfriend and dating someone else with whom she developed a close and caring relationship. Her self-esteem increased, her mood improved (BDI = 6), and she stopped vomiting.

Despite her good progress, Melissa remained over-concerned about the importance of her body shape and weight. She continued to "feel fat" even though, objectively, she was of normal weight. She constantly worried about her appearance and how people would judge her. As is typical in BN, she constantly "body-checked," such as pinching parts of her body to see how fat she was and checking herself out in mirrors. She also avoided some situations that would expose her body, such as wearing form-fitting clothes or a bikini at the shore.

Dr. Jones explained how important it was to stop this pathological body-checking and body-avoidance. Over the course of Sessions #11 through 14, she encouraged Melissa to try another behavioral experiment, namely, stopping all body-checking and seeing what effect it would have. Melissa was afraid that by being less vigilant she would gain weight, just as she was previously worried about giving up weighing herself multiple times a day. To her surprise, she found that her weight remained stable and her preoccupation with body weight diminished. Dr. Jones also encouraged her to combat body-avoidance by wearing clothes she liked and by participating in fun social events.

In Sessions #13 and #14, Dr. Jones used a mindfulness-based procedure in which she asked Melissa to stand in front of a full-size mirror. Her task was to observe and describe her body, from her head to her toes, in a nonjudgmental fashion while staying in the present (see Wilson, 2004). Initially Melissa found this task very upsetting—she was very judgmental and focused exclusively on her stomach and thighs, the areas she always worried about. With practice, however, she was able to describe her whole body and "let go" of negative feelings without reacting to them. She learned to "distance" herself from thoughts and feelings that she was fat and to say to herself that she was a normal-weight woman who was often beset by thoughts that she was fat. She complemented this in-session mirror exposure with homework assignments in which she tried to adopt a mindful approach

to looking at herself in a mirror. She used a mirror only for an agreed-upon purpose and time, and never in response to an urge to check her body because she "felt fat." Melissa became more accepting of her body shape and weight and happier with her life.

Melissa's last two sessions focused on relapse prevention. With the help of Dr. Jones, Melissa wrote up her own personal maintenance manual in which she summarized the improvements she had made, what she needed to focus on in the future, and what she would do if she ever slipped and binged or vomited again. Therapy terminated with Melissa confident and prepared to maintain the improvement she had made in working with Dr. Jones.

SUMMARY

Behavior therapy helped to change the face of psychotherapy in the latter half of the 20th century by generating innovative treatment strategies and influencing how we conduct research on psychological treatment. In turn, behavior therapy itself has changed and continues to evolve. Its theoretical foundations have broadened and its treatment techniques have become more diverse. In the process, its overlaps with other systems of psychotherapy have become more apparent. Nonetheless, it remains a distinctive approach to assessment and treatment.

Methodological rigor and innovation have been major contributions of behavior therapy to the field of psychotherapy. Behavioral treatments have been subjected to more rigorous evaluation than any other psychological therapy.

Behavior therapy faces two immediate challenges in the 21st century. One is the need to improve the dissemination and adoption of demonstrably effective behavioral treatments for a number of common disorders. Although behavior therapy has become an accepted part of the psychotherapeutic establishment, its methods are not being used as widely as the evidence would warrant (Persons, 1997). As noted earlier in this chapter, the growing demand for accountability in health care will provide an impetus for more widespread application of behavioral methods.

The evidence supporting behavior therapy comes mainly from well-controlled research studies conducted at universities where therapists are carefully selected and highly trained and patients are recruited specifically for the treatment studies. However, many practitioners question the relevance of this type of research to actual clinical practice in which they are confronted with a diverse mix of patients and varying clinical problems. Encouragingly, an increasing emphasis on clinical research focused on evaluating the generalizability of the findings from tightly controlled, university-based research to different service settings such as mental health clinics and independent practice is showing that the research findings are holding up in routine clinical practice.

Another likely trend will be the use of a stepped-care approach to treatment services. In a stepped-care framework, which is widely used in medicine, treatments are provided sequentially according to need. Initially, all patients receive the lowest step—the simplest, least intrusive, and most cost-effective treatment. More complex or intensive interventions are administered to patients who do not respond to these initial efforts. To date, most behavior therapy treatments have been designed for use within specialist settings and require professional training. Relatively few therapists are sufficiently well trained in these specialized, manual-based treatments (Wilson, 1998). Moreover, there are unlikely ever to be sufficient specialist treatment resources for all patients. Briefer and simpler methods that can be used by a wide range of different mental health professionals are needed. It will be challenging but critical to identify reliable predictors of patients for whom these cost-effective methods are appropriate.

The second major challenge confronting behavior therapy is the need to develop more effective treatments for a broader range of problems. At present, even the most

effective treatments are often not good enough. Clinical researchers and practitioners need to cooperate in devising innovative and improved methods for treating patients who do not respond to the best available treatments.

Whereas considerable progress has been made in developing effective treatments, the field has lagged behind in understanding how these treatments achieve their therapeutic effects. We need to learn more about the mechanisms of therapeutic change. Understanding the mechanisms through which behavior therapy methods operate is vital to the development of innovative and more potent interventions. With respect to current manual-based treatments, active therapeutic procedures could be enhanced and inactive elements discarded. Theory-driven, experimental analysis of therapy outcome and its mechanisms of action is a priority for future research.

Finally, to fulfill its original promise of linking clinical practice to advances in scientific research, behavior therapy must be responsive to developments both in experimental psychology and in biology. Dramatic breakthroughs in genetics and neuroscience have already revolutionized the biological sciences. Progress will continue in unlocking the secrets of the brain. A better understanding of the role of brain mechanisms in the development and maintenance of clinical disorders will lead to better theories and therapies for behavior change.

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