the studies revealed a moderate, yet significant degree of benefit to clients with mental retardation. The researchers concluded that "psychotherapeutic interventions should be considered as part of overall treatment plan for persons with mental retardation" (p. 82).

CONCLUSION

Smith and Glass's study was a milestone in the history of psychology because it helped to remove much of the temptation for researchers to try to prove the superiority of a specific method of therapy and encouraged them instead to focus on how best to help those in psychological pain. Future research may now concentrate more directly on exactly which factors promote the fastest, most successful, and especially most healing, therapeutic experience.

Grohol, J. (19[illegible]). Types of therapies. Retrieved October 20, 2003 from http://www.grohol.com/therapy.htm

Hock, R., & Mackler, M. (2005). *Do you need psychotherapy?* Unpublished manuscript, Mendocino College.

Landman, J., & Dawes, R. (1982). Psychotherapy outcome: Smith and Glass's conclusions stand up under scrutiny. *American Psychologist, 37,* 504–516.

McDermut, W., Miller, I., & Brown, R. (2001). The efficacy of group psychotherapy for depression: A meta-analysis and review of the empirical research. *Clinical Psychology: Science and Practice, 8,* 98–116.

Penzien, D., Rains, J., & Andrasik, F. (2002). Behavioral management of recurrent headaches: Three decades of experience and empiricism. *Applied Psychology and Biofeedback, 27,* 163–181.

Prout, H., & Nowak-Drabik, K. (2003). Psychotherapy with persons who have mental retardation: An evaluation of the effectiveness. *American Journal of Mental Retardation, 108,* 82–93.

Smith, M., Glass, G., & Miller, T. (1980). *The benefits of psychotherapy.* Baltimore, MD: Johns Hopkins University Press.

RELAXING YOUR FEARS AWAY

Wolpe, J. (1961). The systematic desensitization treatment of neuroses.
***Journal of Nervous and Mental Diseases, 132,* 180–203.**

Before discussing the very important technique in psychotherapy called *systematic desensitization* (which means decreasing your level of anxiety or fear very gently and gradually), the concept of *neuroses* should be clarified. *Neuroses* is a somewhat outdated term used to refer to a group of psychological problems for which extreme anxiety was the central characteristic. Today, such problems are usually called *anxiety disorders.* We are all familiar with anxiety, and sometimes experience a high degree of it in situations that make us nervous, such as public speaking, job interviews, exams, and so on. However, when someone suffers from an anxiety *disorder,* the reactions are much more extreme, pervasive, frequent, and debilitating. Often such disorders interfere with a person's life so that normal and desired functioning is impossible.

The most common anxiety-related difficulties are phobias, panic disorder, and obsessive-compulsive disorder. If you have ever suffered from one of them, you know that this kind of anxiety can take control of your life. This chapter's discussion of Joseph Wolpe's (1915–1997) work in treating those disorders will focus primarily on phobias.

The word *phobia* comes from *Phobos,* the name of the Greek god of fear. The ancient Greeks painted images of Phobos on their masks and shields to frighten their enemies. A phobia is an irrational fear. In other words, it is a fear reaction that is out of proportion with the reality of the danger. For example, if you are strolling down a path in the forest and suddenly happen upon a rattlesnake, coiled and ready to strike, you will feel fear (unless you're Indiana Jones or something). This is *not* a phobia, but a normal, rational fear response to a real danger. On the other hand, if you are unable to go to the zoo because you might see a snake in a glass cage, that would probably be considered a phobia. This may sound humorous to you, but to those who suffer from phobias, it's not funny at all. Phobic reactions are extremely uncomfortable events that involve symptoms such as dizziness, heart palpitations, feeling faint, hyperventilation, sweating, trembling, and nausea. A person with a phobia will carefully avoid situations in which the feared stimulus might be encountered. Often, this avoidance can interfere drastically with a person's desired functioning in life.

Phobias are divided into three main types. Simple phobias involve irrational fears of animals (such as rats, dogs, spiders, or snakes) or specific situations such as small spaces (claustrophobia) or heights (acrophobia). Social phobias are characterized by irrational fears about interactions with others, such as public speaking or fear of embarrassment. Finally, agoraphobia is the irrational fear of being in unfamiliar, open, or crowded spaces. While the various types of phobias are quite different, they share at least two common features: they are all irrational, and they all are treated in similar ways.

Early treatment of phobias centered around the Freudian concepts of psychoanalysis. This view maintains that a phobia is the result of unconscious psychological conflicts stemming from childhood traumas. It further contends that the phobia may be substituting for some other, deeper fear or anger that the person is unwilling to face. For example, a man with an irrational fear of heights (acrophobia) may have been cruelly teased as a small boy by his father, who pretended to try to push him off a high cliff. Acknowledging this experience as an adult might force the man to deal with his father's general abusiveness (something he doesn't want to face), so he represses it, and it is expressed instead in the form of a phobia. In accordance with this view of the source of the problem, psychoanalysts historically attempted to treat phobias by helping the person to gain insight into unconscious feelings and release the hidden emotion, thereby freeing themselves of the phobia in the process. However, such techniques, while useful for most other types of psychological problems, have proven relatively ineffective

in treating phobias. It appears that even when someone uncovers the underlying unconscious conflicts that may be related to the phobia, the phobia itself persists.

Joseph Wolpe was not the first to suggest the use of a behavioral technique called *systematic desensitization*, but he is generally credited with perfecting it and applying it to the treatment of anxiety disorders. The behavioral approach differs dramatically from psychoanalytic thinking in that it is not concerned with the unconscious sources of the problem or with repressed conflicts. The fundamental idea of behavioral therapy is that you have learned an ineffective behavior (the phobia), and now you must unlearn it. This formed the basis for Wolpe's method for the treatment of phobias.

THEORETICAL PROPOSITIONS

Earlier research by Wolpe and others had discovered that fear reactions in animals could be reduced by a simple conditioning procedure. For example, suppose a rat behaves fearfully when it sees a realistic photograph of a cat. If the rat is given food every time the cat is presented, the rat will become less and less fearful, until finally the fear response disappears entirely. The rat had originally been conditioned to associate the cat photo with fear. However, the rat's response to being fed was incompatible with the fear response. Since the fear response and the feeding response cannot both exist at the same time, the fear was inhibited by the feeding response. This incompatibility of two responses is called *reciprocal inhibition* (when two responses inhibit each other, only one may exist at a given moment). Wolpe proposed the more general proposition that "if a response inhibitory to anxiety can be made to occur in the presence of anxiety-provoking stimuli . . . the bond between these stimuli and the anxiety will be weakened" (p. 180). He also argued that human anxiety reactions are quite similar to those found in the animal lab and that the concept of reciprocal inhibition could be used to treat various human psychological disorders.

In his work with people, the anxiety-inhibiting response was deep relaxation rather than feeding. The idea was based on the theory that you cannot experience deep physical relaxation and fear at the same time. As a behaviorist, Wolpe believed that the reason you have a phobia is that you learned it sometime in your life through the process of classical conditioning, by which some object became associated in your brain with intense fear (see the reading on Pavlov's research). We know from the work of Watson (see the reading on Watson's study with little Albert) and others that such learning is possible even at very young ages. So, in order to treat your phobia, you must experience a response that is inhibitory to fear or anxiety (relaxation) while in the presence of the feared situation. Will this treatment technique work? Wolpe's article reports on 39 cases randomly selected out of 150, where the subjects' phobias were treated by the author using his systematic desensitization technique.

METHOD

Imagine that you suffer from an irrational fear of heights called acrophobia. This problem has become so extreme that you have trouble climbing onto a ladder to trim the trees in your yard or going above the second floor in an office building. Your phobia is interfering so much with your life that you decide to seek out psychotherapy from a behavior therapist such as Joseph Wolpe. Your therapy will consist of several stages.

Relaxation Training

The first several sessions will deal very little with your phobia. Instead, the therapist will focus on teaching you how to relax your body. Wolpe recommended a form of progressive muscle relaxation introduced by Edmund Jacobson in 1938 that is still in common therapeutic use today. The process involves tensing and relaxing various groups of muscles (such as the arms and hands, the face, the back, the stomach, the legs, etc.) throughout the body until a deep state of relaxation is achieved. This relaxation training may take most of your first five or six sessions with the therapist. After the training, you are able to place yourself in this state of relaxation whenever you want. It should be noted that for most of the cases reported in this article, Wolpe also incorporated hypnosis to ensure full relaxation, but this has since been shown to be usually unnecessary for effective therapy because full relaxation can be obtained without the need of hypnosis.

Construction of an Anxiety Hierarchy

The next stage of the process is for you and your therapist to develop a list of anxiety-producing situations or scenes involving your phobia. The list would begin with a situation that is only slightly uncomfortable and proceed through increasingly more frightening scenes until finishing with the most anxiety-producing event. The number of steps in a patient's hierarchy varies from 5 or 6 to 20 or more. Table 1 shows what might appear on your list for your phobia of heights, as well as a hierarchy directly from Wolpe's article about a patient suffering from claustrophobia.

Desensitization

Now comes the actual unlearning. According to Wolpe, no direct contact with the feared situations is necessary to reduce a person's sensitivity to them. The same effect could be accomplished through description and imagination. Remember, you developed your phobia through the process of association, so you will eliminate the phobia the same way. First, you are instructed to place yourself in a state of deep relaxation as you have been taught. Then the therapist begins with the first step in your hierarchy and describes the scene to you: "You are walking down the sidewalk and you come to a large grating. As you continue walking, you can see through the grating to the bottom 10 feet below." Your job is to imagine the scene while remaining completely relaxed. If this is successful, the therapist will proceed to the next step:

TABLE 1 Anxiety Hierarchies

ACROPHOBIA

1. Walking over a grating in the sidewalk.
2. Sitting in a third-floor office near the window (not a floor-to-ceiling window).
3. Riding an elevator to the 45th floor.
4. Watching window washers 10 floors up on a platform.
5. Standing on a chair to change a lightbulb.
6. Sitting on the balcony with a railing of a fifth-floor apartment.
7. Sitting in the front row of the second balcony at the theater.
8. Standing on the third step of a ladder to trim bushes in the yard.
9. Standing at the edge of the roof of a three-story building with no railing.
10. Driving around curves on a mountain road.
11. Riding as a passenger around curves on a mountain road.
12. Standing at the edge of the roof of a 20-story building.

(Adapted from Goldstein, Jamison, & Baker, 1980, p. 371.)

CLAUSTROPHOBIA

1. Reading of miners trapped.
2. Having polish on fingernails without access to remover.
3. Being told of someone in jail.
4. Visiting and unable to leave.
5. Having a tight ring on finger.
6. On a journey by train (the longer the journey, the more the anxiety).
7. Traveling in an elevator with an operator (the longer the ride, the more the anxiety).
8. Traveling alone in an elevator.
9. Passing through a tunnel on a train (the longer the tunnel, the greater the anxiety).
10. Being locked in a room (the smaller the room and the longer the duration, the greater the anxiety).
11. Being stuck in an elevator (the greater the time, the greater the anxiety).

(Adapted from Wolpe, p. 197.)

"You are sitting in an office on the third floor . . . ," and so on. If at any moment during this process you feel the slightest anxiety, you are instructed to raise your index finger. When this happens, the presentation of your hierarchy will stop until you have returned to full relaxation. Then the descriptions will begin again from a point further down the list so that you can maintain your relaxed state. This process continues until you are able to remain relaxed through the entire hierarchy. Once you accomplish this, you might repeat the process several times in subsequent therapy sessions. In Wolpe's work with his clients, the number of sessions for successful treatment varied greatly. Some people claimed to be recovered in as few as six sessions, while one took nearly 100 (this was a patient with a severe phobia of death, plus two additional phobias). The average number of sessions was around 12. This, by the way, was considerably fewer than the number of sessions generally required for formal psychoanalysis, which usually lasted years.

The most important question relating to this treatment method is this: Does it work?

RESULTS

The 39 cases reported in Wolpe's article involved many different phobias. The themes of their hierarchies included, among others, claustrophobia, storms, being watched, crowds, bright light, wounds, agoraphobia, falling, rejection, and snakelike shapes. The success of their therapy was judged by the patients' own reports and by occasional direct observation. Generally, patients who report improvement and gradual recovery describe the process in ways that led Wolpe to accept their reports as credible. The desensitization process was rated as either completely successful (freedom from phobic reactions), partially successful (phobic reactions of 20% or less of original strength), or unsuccessful.

For the 39 cases, there were a total of 68 phobias treated. Sixty-two of these (in a total of 35 patients) were judged to be completely or partially successful. This was a success rate of 91%. The remaining six hierarchies (9%) were unsuccessful. The average number of sessions needed for successful treatment was 12.3. Wolpe explained that most of the unsuccessful cases displayed special problems that did not allow for proper desensitization to take place, such as an inability to imagine the situations presented in the hierarchy.

Critics of Wolpe, mainly from the psychoanalytic camp, claimed that his methods were only treating the symptoms and not the underlying cause of the anxiety. They maintained that other symptoms would appear to replace the ones treated in this way. They likened it to a leaking dike: when one hole is plugged, another appears. Related to this was the question of how lasting this treatment would be. Any form of therapy would be of little value if the symptoms returned soon after the sessions ended. Wolpe responded to criticisms and questions by obtaining follow-up reports from 25 of the 35 patients who had received successful desensitization at various times from six months to four years after treatment. Upon examining the reports he wrote, "There was no reported instance of relapse or new phobias or other neurotic symptoms. I have never observed resurgence of neurotic anxiety when desensitization has been complete or virtually so" (p. 200).

DISCUSSION

The discussion in Wolpe's article focuses on responding to the skepticism of the psychoanalysts at the time his research was done. During the 1950s, psychoanalysis was a very common and popular form of psychotherapy. As behavior therapies began to make their way into the mainstream of clinical psychology, a great deal of controversy was created, much of which continues in various forms today. Wolpe pointed out that the desensitization method offered several advantages over traditional psychoanalysis (see p. 202 of the original study):

1. The goals of psychotherapy can be clearly stated in every case.
2. Sources of anxiety can be clearly defined.
3. Changes in the patient's reactions during descriptions of scenes from the hierarchy can be measured during the sessions.
4. Therapy can be performed with others present (Wolpe found that having others present, such as therapists in training, during the sessions did not interfere with the effectiveness).
5. Therapists can be interchanged if desired or necessary.

SUBSEQUENT RESEARCH AND RECENT APPLICATIONS

Since Wolpe published this article and a book on the use of reciprocal inhibition in psychotherapy (Wolpe, 1958), the use of systematic desensitization has grown to the point that now it is considered the treatment of choice for anxiety disorders, especially phobias. This growth has been due in large part to more recent and more scientific research on its effectiveness.

A study by Paul (1969) treated college students who suffered from extreme phobic anxiety in public-speaking situations. First, all the subjects were asked to give a short, ad-libbed speech to an unfamiliar audience. Their degree of anxiety was measured by observer's ratings physiological measures, and a self-report questionnaire. The students were then randomly assigned to three treatment groups: (1) systematic desensitization, (2) insight therapy (similar to psychoanalysis), or (3) no treatment (control). Experienced therapists carried out the treatment in five sessions. All the subjects were then placed in the same public-speaking situation, and all the same measures of anxiety were taken. Figure 1 summarizes the results. Clearly, systematic desensitization was significantly more effective in reducing anxiety on all measures. Even more convincing was that in a *two-year* follow-up, 85% of the desensitization group *still* showed significant improvement, compared with only 50% of the insight group.

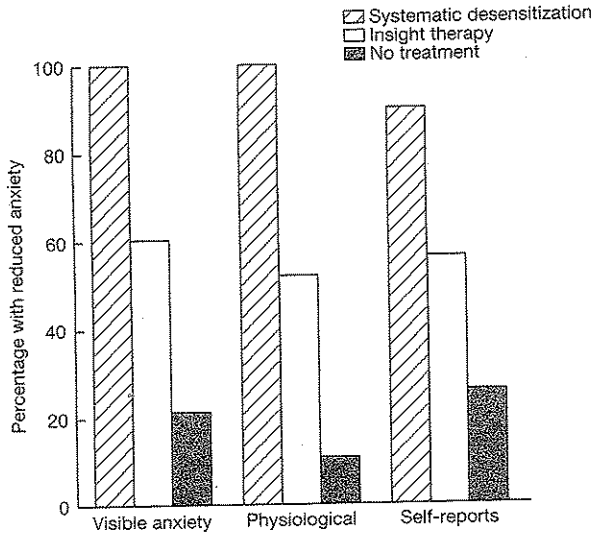

FIGURE 1 Results of treatment for anxiety. (From Paul, 1969.)

Numerous studies on behavior therapy continue to cite Wolpe's early work as part of their theoretical underpinnings. His application of classical conditioning concepts to the treatment of psychological disorders has become part of intervention strategies in a wide range of settings. For example, one study (Fredrickson, 2000) relied in part on Wolpe's concept of reciprocal inhibition in developing a new treatment strategy for difficulties stemming primarily from negative emotions such as anxiety, depression, aggression, and stress-related health problems. Fredrickson proposes assisting and teaching patients with such psychological problems to generate more and stronger positive emotions, such as love, optimism, joy, interest, and contentment, which directly inhibit negative thinking. The author contends that:

> Positive emotions loosen the hold that negative emotions gain on an individual's mind and body by undoing the narrowed psychological and physiological preparation for specific action. . . . Therapies optimize health and well being to the extent that they cultivate positive emotions. Cultivated positive emotions not only counteract negative emotions, but also broaden individuals' habitual modes of thinking, and build their personal resources for coping. (p. 1)

Another article resting on Wolpe's research studied the effectiveness of systematic desensitization for a condition many students know all too well: *math phobia* (Zettle, 2003). In this study Wolpe's treatment techniques were used to help students overcome extreme levels of math anxiety. Participants were given instructions on progressive muscle relaxation and a tape to practice relaxing each day at home. Each student worked with the researcher to develop an 11-item math fear heirarchy containing items such as "being called upon by my math instructor to solve a problem at the blackboard," or "encountering a word problem I don't know how to solve on the final" (p. 205). The hierarchy was then presented to each student as described earlier in this reading. To summarize briefly, it worked! At the end of the treatment, 11 out of 12 students "displayed recovery or improvement in their levels of math anxiety. . . . Furthermore, clinically significant reductions in math anxiety were maintained during the 2 months of follow-up (p. 209)."

CONCLUSION

Wolpe was quick to point out that the idea of overcoming fear and anxiety was not new. "It has long been known that increasing measures of exposure to a feared object may lead to the gradual disappearance of the fear" (p. 200). In fact, you probably already knew this yourself, even if you had never heard of systematic desensitization prior to reading this chapter. For example, imagine a child who is about 13 years old and has a terrible phobia of dogs. This fear is probably the result of a frightening experience with a dog when the child was much younger, such as being jumped on by a big

dog, being bitten, or even having a parent who was afraid of dogs. Because of these experiences, the child developed an association between dogs and fear. If you wanted to cure this child of the fear of dogs, how might you break that association? Many people's first response to this question is, "Buy the child a puppy!" If that's what you thought of, you have just recommended a form of systematic desensitization.

Fredrickson, B. (2000). Cultivating positive emotions to optimize health and well-being. *Prevention and Treatment, 3(article 00001a),* 1–22. Retrieved October 10, 2003 from http://www.umich.edu/~psycdept/emotions/preventreat_00.pdf.

Paul, G. L. (1969). Outcome of systematic desensitization: Controlled investigation of individual technique variations and current status. In C. Franks (Ed.), *Behavior Therapy: Appraisal and Status.* New York: McGraw-Hill.

Wolpe, J. (1958). *Psychotherapy through reciprocal inhibition.* Palo Alto, CA: Stanford University Press.

Zettle, R. (2003). Acceptance and commitment therapy (ACT) vs. systematic desensitization in treatment of mathematics anxiety. *Psychological Record,* 53, 197–215.

PROJECTIONS OF WHO YOU ARE

Rorschach, H. (1942). *Psychodiagnostics: A diagnostic test based on perception.* New York: Grune & Stratton.

Picture yourself and a friend relaxing in a grassy meadow on a warm summer's day. The blue sky above is broken only by a few white puffy clouds. Pointing to one of the clouds, you say to your friend, "Look! That cloud looks like a woman in a wedding dress with a long veil." To this your friend replies, "Where? I don't see that. To me, that cloud is shaped like a volcano with a plume of smoke rising from the top." As you try to convince each other of your differing perceptions of the same shape, the air currents change and transform the cloud into something entirely different. But why such a difference in what the two of you saw? You were looking at the same shape, and yet interpreting it as two entirely unrelated objects.

Since everyone's perceptions are often influenced by psychological factors, perhaps the different objects found in the cloud formations revealed something about the personalities of the observers. In other words, you and your friend were projecting something about yourselves onto the shapes in the sky. This is the concept underlying Hermann Rorschach's (1884–1922) development of his "form interpretation test," better known as *the inkblot test.* This was one of the earliest versions of a type of psychological tool known as the *projective technique.*

The two most widely known and used projective tests are the Rorschach inkblot and the *Thematic Apperception Test,* or *TAT* (to be discussed in the next reading). Both of these instruments are pivotal in the history of clinical psychology. Since Rorschach's test, first described in 1922, involves direct comparisons among various groups of mental illnesses and is often associated with the diagnosis of psychological disorders, we will discuss it first.

A *projective test* presents a person with an ambiguous stimulus and assumes that the person will *project* his or her inner or unconscious psychological processes onto it. In the case of Rorschach's test, the stimulus is nothing more than a symmetrical inkblot that can be perceived to be virtually anything. Rorschach suggested that what a person sees in the inkblot often reveals a great deal about his or her true psychological nature. He called this *the interpretation of accidental forms.* An often-told story about Rorschach's inkblots tells of a psychotherapist who is administering the test to a client. With the first inkblot card the therapist asks, "What does this suggest to you?" The client replies, "Sex." The same question is asked of the second card, to which the client again replies, "Sex." When the same one-word answer is given to the first five cards, the therapist remarks, "Well, you certainly seem to be preoccupied with sex!" To this the surprised client responds, "Me? Doctor, you're the one showing me the dirty pictures!" Of course, this story oversimplifies Rorschach's test and, although the inkblots themselves are selected to be vaguely suggestive of objects in order to encourage active interpretation, sexual meanings should, on average, be no more likely than any other.

Rorschach believed that his projective technique could serve two major purposes. One was that it could be used as a research tool to reveal unconscious aspects of personality. The other purpose, claimed somewhat later by Rorschach, was that the test could be used to diagnose various types of psychopathology.

THEORETICAL PROPOSITIONS

The theory underlying Rorschach's technique was that in the course of interpreting a random inkblot, attention would be drawn away from the subject so that the person's usual psychological defenses would be weakened. This, in turn, would allow normally hidden aspects of the psyche to be revealed. When the stimulus being perceived is ambiguous (that is, having few clues as to what it really is), the interpretation of the stimulus has to come from inside the person doing the perceiving (for an expanded discussion of this concept, see the next reading on Murray's *Thematic Apperception Test*). In Rorschach's conceptualization, inkblots were about as ambiguous as you can get and, therefore, would allow for the greatest amount of projection from a person's unconscious.

METHOD

An examination of Rorschach's formulation of his inkblot test can be divided into two broad sections: the process he used to develop the original forms and the methods suggested for interpreting and scoring the responses made by subjects or clients.

Development of the Test

Rorschach's explanation of how the forms are made sounded very much like instructions for a fun children's art project: "The production of such accidental forms is very simple. A few large inkblots are thrown on a piece of paper,