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# Abnormal Psychology: Past and Present

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Alexandra cries herself to sleep every night. She is certain that the future holds nothing but misery. Indeed, this is the only thing she does feel certain about. “I’m going to die and my daughters are going to die. We’re doomed. The world is ugly. I now detest every moment of my life.” She has great trouble sleeping. She is afraid to close her eyes, afraid that she will never wake up, and what will happen to her daughters then? When she does drift off to sleep, her dreams are nightmares filled with blood, dismembered bodies, thunder, decay, death, destruction.

One morning Alexandra even has trouble getting out of bed. The thought of facing another day frightens and overwhelms her. She wishes that she and her daughters were dead. “Get it over with. We’d all be better off.” She feels paralyzed by her depression and anxiety, too tired to move and too afraid to leave her house. She decides to stay home and to keep her daughters with her. She makes sure that all shades of the apartment are drawn and that every conceivable entrance is secured. She is afraid of the world and afraid of life.

During the past year Brad has been hearing mysterious voices that tell him to quit his job, leave his family, and prepare for the coming invasion. These voices have brought tremendous confusion and emotional turmoil to Brad’s life. He believes that they come from beings in distant parts of the universe who are somehow wired to him. Although it gives him a sense of purpose and specialness to be the chosen target of their communications, they also make him tense and anxious. He dreads the coming invasion. When he refuses an order, the voices insult and threaten him and turn his days into a waking nightmare.

Brad has put himself on a sparse diet against the possibility that his enemies may be contaminating his food. He has found a quiet apartment far from his old haunts where he has laid in a good stock of arms and ammunition. His family and friends have tried to reach out to Brad, to understand his problems, and to dissuade him from the disturbing course he is taking. Every day, however, he retreats further into his world of mysterious voices and imagined dangers.

Most of us would probably consider Alexandra’s and Brad’s emotions, thoughts, and behavior psychologically abnormal, the result of a state sometimes called *psychopathology*, *maladjustment*, *emotional disturbance*, or *mental illness* (see Box 1–1 on page 4). These terms have been applied to the many problems that seem closely tied to the human brain or mind. Psychological abnormality affects the famous and the obscure, the rich and the poor, the upright and the perverse. Politicians, actors, writers, and other public figures of the present and the past have struggled with it. Psychological problems can bring great suffering, but they can also be the source of inspiration and energy.

Because they are so common and so personal, these problems capture the interest of us all. Hundreds of novels, plays, films, and television programs have explored what many people see as the dark side of human

**A Beautiful Mind** Psychological disorders are a popular subject in today's movies, novels, and television shows. The film *A Beautiful Mind*, for example, which portrayed the struggles against schizophrenia of Nobel Prize winner John Nash, received the Academy Award for best picture of the year in 2001.



MCA Universal Pictures/Getty Images

nature, and self-help books flood the market. Mental health experts are popular guests on both television and radio, and some even have their own shows.

The field devoted to the scientific study of the problems we find so fascinating is usually called **abnormal psychology**. As in any science, workers in this field, called *clinical scientists*, gather information systematically so that they may describe, predict, and explain the phenomena they study. The knowledge that they acquire is then used by *clinical practitioners*, whose role is to detect, assess, and treat abnormal patterns of functioning.

## What Is Psychological Abnormality?

Although their general goals are similar to those of other scientific professionals, clinical scientists and practitioners face problems that make their work especially difficult. One of the most troubling is that psychological abnormality is very hard to define. Consider once again Alexandra and Brad. Why are we so ready to call their responses abnormal?

Although many definitions of abnormality have been proposed over the years, none is universally accepted (Woolfolk, 2001). Still, most of the definitions have certain features in common, often called “the four D’s”: deviance, distress, dysfunction, and danger. That is, patterns of psychological abnormality are typically *deviant* (different, extreme, unusual, perhaps even bizarre); *distressing* (unpleasant and upsetting to the person); *dysfunctional* (interfering with the person’s ability to conduct daily activities in a constructive way); and possibly *dangerous*. These criteria offer a useful starting point from which to explore the phenomena of psychological abnormality. As we shall see, however, they have key limitations.

### >>BY THE NUMBERS

#### Deviance

- 39% People who confess to snooping in their hosts' medicine cabinets<<

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- 27% Those who admit taking more than the maximum number of items through a supermarket express line<<

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- 23% Those who confess to not flushing the toilet all the time<<

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- 10% Those who believe they have seen a ghost<<

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- 5% Those who have sunbathed nude<<

(Kanner, 1995)

### Deviance

Abnormal psychological functioning is *deviant*, but deviant from what? Alexandra’s and Brad’s behaviors, thoughts, and emotions are different from those that are considered normal in our place and time. We do not expect people to cry themselves to sleep each night, wish themselves dead, or obey voices that no one else hears.

In short, behavior, thoughts, and emotions are deemed abnormal when they violate a society’s ideas about proper functioning. Each society establishes **norms**—explicit and implicit rules for proper conduct. Behavior that violates legal norms is called criminal. Behavior, thoughts, and emotions that violate norms of psychological functioning are called abnormal.

Judgments of abnormality vary from society to society. A society’s norms grow from its particular **culture**—its history, values, institutions, habits, skills, tech-



Carol Beckwith

**Deviance and abnormality** Along the Niger River, men of the Wodaabe tribe put on elaborate makeup and costumes to attract women. In Western society, the same behavior would break behavioral norms and probably be judged abnormal.



Patrick Gardin/Stringer/AP

**Changing times** Two decades ago, a woman's love for bullfighting would have been considered strange, perhaps even abnormal. Today Cristina Sánchez is one of Spain's finest matadors and is considered a role model.

nology, and arts. A society that values competition and assertiveness may accept aggressive behavior, whereas one that emphasizes cooperation and gentleness may consider aggressive behavior unacceptable and even abnormal. A society's values may also change over time, causing its views of what is psychologically abnormal to change as well. In Western society, for example, a woman's participation in the business world was widely considered inappropriate and strange a hundred years ago. Today the same behavior is valued.

Judgments of abnormality depend on *specific circumstances* as well as on cultural norms. What if, for example, we were to learn that the fears and desperate unhappiness of Alexandra were in fact occurring in the days following the deadly terrorist attack on the World Trade Center on September 11, 2001—an attack that killed her husband as he was at work on the 94th floor of the North Tower and wrecked the family's nearby apartment, shattering the secure and happy life they had all once known? In the ensuing weeks, as the horror and losses settled in, as she came to the conclusion that her missing husband must indeed be dead, as she and her daughters moved from one temporary location to another, Alexandra stopped expecting anything except more of the same. In this light, Alexandra's reactions do not seem quite so inappropriate. If anything is abnormal here, it is her situation. Many painful human experiences produce intense reactions—large-scale catastrophes and disasters, rape, child abuse, war, terminal illness, chronic pain (Resick, 2000; Ursano et al., 1999). Is there an “appropriate” way to react to such things? Should we ever call reactions to them abnormal?

## Distress

Even functioning that is considered unusual does not necessarily qualify as abnormal. According to many clinical theorists, behavior, ideas, or emotions usually have to cause *distress* before they can be labeled abnormal. Consider the Ice Breakers, a group of people in Michigan who go swimming in lakes throughout the state every weekend from November through February. The colder the weather, the better they like it. One man, a member of the group for 17 years, says he loves the challenge. Man against the elements. A 37-year-old lawyer believes that the weekly shock is good for her health. “It cleanses me,” she says. “It perks

**ABNORMAL PSYCHOLOGY** The scientific study of abnormal behavior in order to describe, predict, explain, and change abnormal patterns of functioning.

**NORMS** A society's stated and unstated rules for proper conduct.

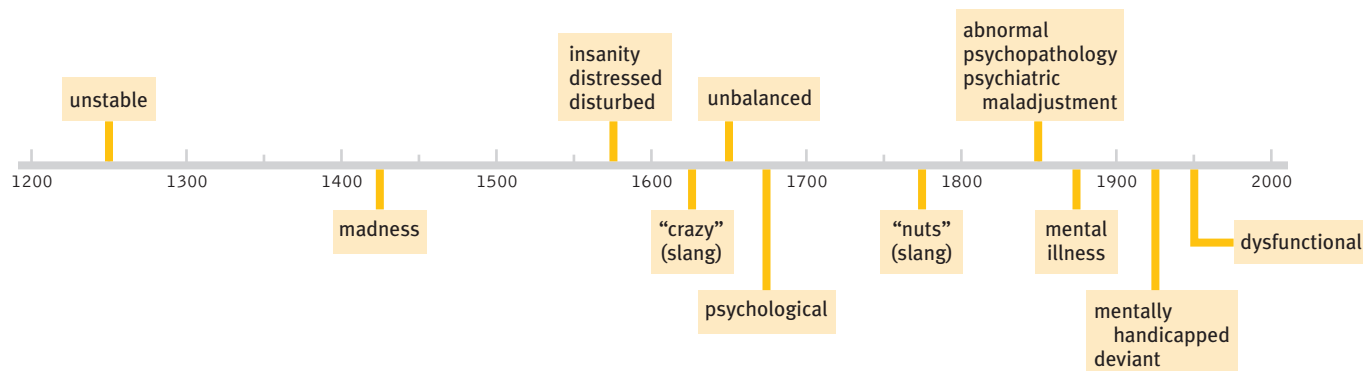
**CULTURE** A people's common history, values, institutions, habits, skills, technology, and arts.

## B O X 1-1

## Verbal Debuts

We use words like “abnormal” and “mental disorder” so often that it is easy to forget that there was a time not that long ago when these terms did not exist. When did these

and similar words (including slang terms) make their debut in print as expressions of psychological dysfunctioning? The *Oxford English Dictionary* offers the following dates.



me up and gives me strength.” Another Ice Breaker likes the special bond the group members share. “When we get together, we know we’ve done something special, something no one else understands. I can’t even tell most of the people I know that I’m an Ice Breaker.”

Certainly these people are different from most of us, but is their behavior abnormal? Far from experiencing distress, they feel energized and challenged. Their positive feelings must cause us to hesitate before we decide that they are functioning abnormally.

Should we conclude, then, that feelings of distress must always be present before a person’s functioning can be considered abnormal? Not necessarily. Some people who function abnormally maintain a positive frame of mind. What if this were the case with Brad, the young man who hears mysterious voices? Brad does experience severe distress over the coming invasion and the life changes he feels forced to make. But what if he enjoyed listening to the voices, felt honored to be chosen, and looked forward to saving the world? Shouldn’t we still regard his functioning as abnormal? As we shall discover in Chapter 8, people whose behaviors are described as manic often feel just wonderful, yet still they are diagnosed as psychologically disturbed. Indeed, in many cases it is their euphoria and disproportionate sense of well-being that make them candidates for this diagnosis.

## Dysfunction

Abnormal behavior tends to be *dysfunctional*; that is, it interferes with daily functioning. It so upsets, distracts, or confuses people that they cannot care for themselves properly, participate in ordinary social interactions, or work productively. Brad, for example, has quit his job, left his family, and prepared to withdraw from the productive life he once led.

Here again one’s culture plays a role in the definition of abnormality. Our society holds that it is important to carry out daily activities in an effective, self-enhancing manner. Thus Brad’s behavior is likely to be regarded as abnormal and undesirable, whereas that

**A spiritual experience** In the Val d’Isère, France, students bury themselves in snow up to their necks. Far from experiencing distress or displaying abnormality, they are engaging in a Japanese practice designed to open their hearts and enlarge their spirits.



Catherine Allemande/Gamma Liaison

of the Ice Breakers, who continue to perform well in their jobs and enjoy fulfilling relationships, would probably be considered simply unusual.

Then again, dysfunction alone does not necessarily indicate psychological abnormality. Some people (Gandhi or César Chávez, for example) fast or in other ways deprive themselves of things they need as a means of protesting social injustice. Far from receiving a clinical label of some kind, they are widely viewed as admirable people—caring, sacrificing, even heroic.

## Danger

Perhaps the ultimate in psychological dysfunctioning is behavior that becomes *dangerous* to oneself or others. Individuals whose behavior is consistently careless, hostile, or confused may be placing themselves or those around them at risk. Brad, for example, seems to be endangering himself by his diet and others by his buildup of arms and ammunition.

Although danger is often cited as a feature of abnormal psychological functioning, research suggests that it is actually the exception rather than the rule (Monahan, 2001, 1993, 1992; Linaker, 2000). Despite popular misconceptions, most people struggling with anxiety, depression, and even bizarre thinking pose no immediate danger to themselves or to anyone else.

## The Elusive Nature of Abnormality

If the concept of abnormality depends so heavily on social norms and values, it is no wonder that efforts to define psychological abnormality typically raise as many questions as they answer. Ultimately, each society selects general criteria for defining abnormality and then uses those criteria to judge particular cases.

Noting society's role in this process, one clinical theorist, Thomas Szasz (2000, 1997, 1970), argues that the whole concept of mental illness is invalid, a myth of sorts. According to Szasz, the deviations that society calls abnormal are simply "problems in living," not signs of something wrong within the person. Societies, he is convinced, invent the concept of mental illness so that they can better control or change people whose unusual patterns of functioning upset or threaten the social order.

Even if we assume that psychological abnormality is a valid concept and that it can indeed be defined, we may be unable to apply our definition consistently. If a behavior—excessive use of alcohol among college students, say—is familiar enough, the society may fail to recognize that it is deviant, distressful, dysfunctional, and dangerous. Thousands of college students throughout the United States are so dependent on alcohol that it interferes with their personal and academic lives, causes them great discomfort, jeopardizes their health, and often endangers them and the people around them. Yet their problem often goes unnoticed, certainly undiagnosed, by college administrators, other students, and health professionals. Alcohol is so much a part of the college subculture that it is easy to overlook drinking behavior that has become abnormal.

Conversely, a society may have trouble distinguishing between an abnormality that requires intervention and an *eccentricity*, or marked individuality, with which others have no right to interfere. From time to time we see or hear about people who behave in ways we consider strange, such as a man who lives alone with two dozen cats and rarely talks to other people. The behavior of such people is deviant, and it may well be distressful and dysfunctional, yet many professionals think of it as eccentric rather than abnormal (see Box 1–2 on the next page).

In short, while we may agree to define psychological abnormalities as patterns of functioning that are deviant, distressful, dysfunctional, and sometimes dangerous, we should be clear that these criteria are often vague and subjective. When is a pattern of behavior deviant, distressful, dysfunctional, and dangerous enough to be considered abnormal? The question may be impossible to answer. Few of the current categories of abnormality that we will meet in this book are as clear-cut as they may seem, and most continue to be debated by clinicians.

### >>IN THEIR WORDS

#### Mental Dysfunction

"The only difference between me and a madman is that I am not mad."<<

Salvador Dali

"Insanity: doing the same thing over and over again and expecting different results."<<

Albert Einstein

"Insanity—a perfectly rational adjustment to an insane world."<<

R. D. Laing

"The distance between insanity and genius is measured only by success."<<

James Bond in *Tomorrow Never Dies*

"One of the symptoms of an approaching nervous breakdown is the belief that one's work is terribly important."<<

Bertrand Russell

## B O X 1-2

## Marching to a Different Drummer: Eccentrics

I Gary Holloway, an environmental planner in San Francisco, keeps a veritable stable of hobbyhorses. He is also fascinated by Martin Van Buren. . . . He discovered that Van Buren was the only U.S. president not to have a society dedicated to his memory, so he promptly founded the Van Buren Fan Club. Holloway is a lifelong devotee of St. Francis of Assisi, and frequently dresses in the habit of a Franciscan monk. "It's comfortable, fun to wear, and I like the response I get when I wear it," he explains. "People always offer me a seat on the bus." I

(WEEKS & JAMES, 1995, PP. 29, 36–37)

The dictionary defines an *eccentric* as a person who deviates from common behavior patterns or displays odd or whimsical behavior. But how can we separate a psychologically healthy person who has unusual habits from a person whose oddness is a symptom of psychopathology? For years, little research was done on eccentrics, but some recent studies and

reviews seem to have started the ball rolling (Pickover, 1998; Weeks & James, 1995).

For example, the researcher David Weeks studied 1,000 eccentrics over a 10-year period and was able to pinpoint 15 characteristics common to them. Altogether, he estimates that as

many as 1 in 5,000 persons may be "classic, full-time eccentrics." Men and women seem equally prone to such patterns.

Weeks suggests that eccentrics do not typically suffer from mental disorders. Whereas the unusual behavior of persons with mental disorders is thrust

#### Eccentricity takes a break

*Gene Pool, a 37-year-old carpenter, journeys repeatedly around New York City wearing an outfit made of 500 empty cans. The reason? To make a statement about the need for recycling and to be noticed. Here he rests for a while on a city park bench.*



Gamma Liaison

## What Is Treatment?

Once clinicians decide that a person is indeed suffering from some form of psychological abnormality, they seek to treat it. **Treatment**, or *therapy*, is a procedure designed to change abnormal behavior into more normal behavior; it, too, requires careful definition (Compas & Gotlib, 2002). For clinical scientists, the problem is closely related to defining abnormality. Consider the case of Bill:

**February:** He cannot leave the house; Bill knows that for a fact. Home is the only place where he feels safe—safe from humiliation, danger, even ruin. If he were to go to work, his co-workers would somehow reveal their contempt for him. A pointed remark, a quizzical look—that's all it would take for him to get the message. If he were to go shopping at the store, before long everyone would be staring at him. Surely others would see his dark mood and thoughts; he wouldn't be able to hide them. He dare not even go for a walk alone in the woods—his heart would probably start racing again, bringing him to his knees and leaving him breathless, incoherent, and unable to get home. No, he's much better off staying in his room, trying to get through another evening of this curse called life.

**July:** Bill's life revolves around his circle of friends: Bob and Jack, whom he knows from the office, where he was recently promoted to director of customer relations, and Frank and Tim, his weekend tennis partners. The gang meets for

**TREATMENT** A procedure designed to help change abnormal behavior into more normal behavior. Also called *therapy*.

upon them and usually causes them suffering, eccentricity is chosen freely and provides pleasure. In short, “Eccentrics know they’re different and glory in it” (Weeks & James, 1995, p. 14). Similarly, the thought processes of eccentrics are not severely disrupted, and they do not leave the person dysfunctional.

In fact, Weeks found that eccentrics actually had fewer emotional problems than the general population. Perhaps being an “original” is good for mental health. The eccentrics in his study also seemed physically healthier than others, visiting a doctor only once every eight years on average. Weeks concludes that most eccentrics, despite their deviant behavior—perhaps even because of it—are happy, well-adjusted, and joyful people.

### Are You Eccentric?

According to Weeks, the following 15 qualities (in descending order of importance) are characteristic of eccen-

trics. The first 5 are the most definitive, but possessing any 10 may qualify a person as an eccentric.

- ✦ Nonconforming
- ✦ Creative
- ✦ Strongly curious
- ✦ Idealistic
- ✦ Happily obsessed with a hobby (often more than one)
- ✦ Aware from early childhood of being different from others
- ✦ Intelligent
- ✦ Opinionated and outspoken
- ✦ Noncompetitive
- ✦ Unusual eating or living habits
- ✦ Not interested in the opinions or company of others
- ✦ Mischievous sense of humor
- ✦ Single
- ✦ Eldest or only child
- ✦ Bad speller

### Famous Eccentrics

- ✦ James Joyce always carried a tiny pair of lady’s bloomers, which he waved in the air to show approval.
- ✦ Emily Dickinson always wore white, never left her room, and hid her poems in tiny boxes.
- ✦ Benjamin Franklin took “air baths” for his health, sitting naked in front of an open window.
- ✦ President John Quincy Adams swam nude in the Potomac River each morning.
- ✦ Alexander Graham Bell covered the windows of his house to keep out the rays of the full moon. He also tried to teach his dog how to talk.
- ✦ The writer D. H. Lawrence enjoyed removing his clothes and climbing mulberry trees.

(ASIMOV, 1997; WEEKS & JAMES, 1995)

dinner every week at someone’s house, and they chat about life, politics, and their jobs. Particularly special in Bill’s life is Janice. They go to movies, restaurants, and shows together. She thinks Bill’s just terrific, and Bill finds himself beaming whenever she’s around. Bill looks forward to work each day and his one-on-one dealings with customers. He is enjoying life and basking in the glow of his many activities and relationships.

Bill’s thoughts, feelings, and behavior interfered with all aspects of his life in February. Yet most of his symptoms had disappeared by July. All sorts of factors may have contributed to Bill’s improvement. Friends and family members may have offered support or advice. A new job or vacation may have lifted his spirits. Perhaps he changed his diet or started to exercise. Any or all of these things may have been useful to Bill, but they could not be considered treatment, or therapy. Those terms are usually reserved for special, systematic procedures that are designed to help people overcome their psychological difficulties. According to the clinical theorist Jerome Frank, all forms of therapy have three essential features:

1. A *sufferer* who seeks relief from the healer.
2. A trained, socially accepted *healer*, whose expertise is accepted by the sufferer and his or her social group.



3. A *series of contacts* between the healer and the sufferer, through which the healer, often with the aid of a group, tries to produce certain changes in the sufferer's emotional state, attitudes, and behavior.

(Frank, 1973, pp. 2-3)

Frank's definition seems straightforward enough, yet clinicians argue about how to apply it. Carl Rogers, a pioneer in the modern clinical field whom we will meet in Chapter 3, noted that "therapists are not in agreement as to their goals or aims. . . . They are not in agreement as to what constitutes a successful outcome of their work. They cannot agree as to what constitutes a failure. It seems as though the field is completely chaotic and divided."

Some clinicians view abnormality as an illness and so consider therapy a procedure that helps *cure* the illness. Others see abnormality as a problem in living and therapists as *teachers* of more functional behavior and thought. Clinicians even differ on what to call the person undergoing therapy: those who see abnormality as an illness speak of the "patient," while those who view it as a problem in living refer to the "client." Because both terms are so common, this book will use them interchangeably.

Despite their differences, most clinicians do agree that large numbers of people need therapy of one kind or another. Later we shall encounter evidence that therapy is indeed often helpful (Clements, 2002; Chambless & Ollendick, 2001).

## How Was Abnormality Viewed and Treated in the Past?

In any given year as many as 30 percent of the adults and 20 percent of the children and adolescents in the United States display serious psychological disturbances and are in need of clinical treatment (Narrow et al., 2002; Kessler et al., 2001, 1994; Kazdin, 2000). It is estimated that up to 19 of every 100 adults have a significant anxiety disorder, 10 suffer from profound depression, 5 display a personality disorder (inflexible and maladaptive personality traits), 1 has schizophrenia (loses touch with reality for an extended period of time), 1 experiences the brain deterioration of Alzheimer's disease, and 11 abuse alcohol or other drugs. Add to these figures as many as 600,000 suicide attempts, 500,000 rapes, and 3 million cases of child abuse each year, and it becomes apparent that abnormal psychological functioning is a pervasive problem in this country. The numbers and rates in other countries are similarly high. Furthermore, most people go through periods of extreme tension, demoralization, or other forms of psychological discomfort in their lives and at such times experience at least some of the distress associated with psychological disorders.

It is tempting to conclude that unique characteristics of the modern world are responsible for these numerous emotional problems—perhaps rapid technological change, the growing threats of terrorism, or a decline in religious, family, or other support systems (Schumaker, 2001). Although the special pressures of modern life probably do contribute to psychological dysfunctioning, they are hardly its primary cause. Historical records demonstrate that every society, past and present, has witnessed psychological abnormality. Perhaps, then, the proper place to begin our examination of abnormal behavior and treatment is in the past.

As we look back, we can see how each society has struggled to understand and treat psychological problems, and we can observe that many present-day ideas and treatments have roots in the past. A look backward makes it clear that progress in the understanding and treatment of mental disorders has hardly been a steady movement forward. In fact, many of the inadequacies and controversies that mark the clinical field today parallel those of the past. At the same time, looking back can help us to appreciate the significance of recent breakthroughs and the importance of the journey that lies ahead.

**TREPHINATION** An ancient operation in which a stone instrument was used to cut away a circular section of the skull, perhaps to treat abnormal behavior.

**EXORCISM** The practice in early societies of treating abnormality by coaxing evil spirits to leave the person's body.

**HUMORS** According to Greek and Roman physicians, bodily chemicals that influence mental and physical functioning.

## Ancient Views and Treatments

Most of our knowledge of prehistoric societies has been acquired indirectly and is based on inferences made from archaeological discoveries. Historians scrutinize the unearthed bones, artwork, and other remnants of ancient societies to find clues to people's customs and beliefs. Any conclusions are at best tentative and are always subject to revision in the face of new discoveries.

Thus our knowledge of how ancient societies viewed and treated people with mental disturbances is limited. Most historians believe that prehistoric societies regarded abnormal behavior as the work of evil spirits. These early societies apparently explained all phenomena as resulting from the actions of magical, sometimes sinister beings who controlled the world. In particular, they viewed the human body and mind as a battleground between external forces of good and evil. Abnormal behavior was typically interpreted as a victory by evil spirits, and the cure for such behavior was to force the demons from a victim's body.

This supernatural view of abnormality may have begun as far back as the Stone Age, a half-million years ago. Some skulls from that period recovered in Europe and South America show evidence of an operation called **trephination**, in which a stone instrument, or *trephine*, was used to cut away a circular section of the skull. Historians surmise that this operation was performed as a treatment for severe abnormal behavior—either hallucinations, in which people saw or heard things not actually present, or melancholia, characterized by extreme sadness and immobility. The purpose of opening the skull was to release the evil spirits that were supposedly causing the problem (Selling, 1940).

In recent decades, some historians have questioned whether Stone Age people actually believed that evil spirits caused abnormal behavior. Trephination may instead have been used to remove bone splinters or blood clots caused by stone weapons during tribal warfare (Maher & Maher, 1985). Either way, later societies clearly did attribute abnormal behavior to possession by demons. Egyptian, Chinese, and Hebrew writings all account for psychological deviance this way. The Bible, for example, describes how an evil spirit from the Lord affected King Saul and how David feigned madness in order to convince his enemies that he was visited by divine forces.

The treatment for abnormality in these early societies was often **exorcism**. The idea was to coax the evil spirits to leave or to make the person's body an uncomfortable place in which to live. A *shaman*, or priest, might recite prayers, plead with the evil spirits, insult them, perform magic, make loud noises, or have the person drink bitter potions. If these techniques failed, the shaman performed a more extreme form of exorcism, such as whipping or starving the person.

## Greek and Roman Views and Treatments

In the years from roughly 500 B.C. to A.D. 500, in the flourishing Greek and Roman civilizations, philosophers and physicians identified a number of mental disorders. Heading the list were *melancholia*, a condition marked by unshakable sadness; *mania*, a state of euphoria and frenzied activity; *dementia*, a general intellectual decline; *hysteria*, the presence of a physical ailment with no apparent physical cause; *delusions*, blatantly false beliefs; and *hallucinations*, the experience of imagined sights or sounds as if they were real. Although demonological interpretations of mental and physical illness were still widespread, philosophers and physicians began to offer alternative explanations during this period.

Hippocrates (460–377 B.C.), often called the father of modern medicine, taught that illnesses had natural causes. He saw abnormal behavior as a disease arising from internal physical problems. Specifically, he believed that some form of brain pathology was the culprit and that it resulted—like all other forms of disease, in his view—from an imbalance of four fluids, or **humors**, that flowed through the body: *yellow bile*, *black bile*, *blood*, and *phlegm*. An excess of yellow bile, for example, caused mania; an excess of black bile was the source of melancholia. To treat psychological dysfunctioning, Hippocrates sought to correct the underlying



John W. Verano

**Expelling evil spirits** The two holes in this skull recovered from ancient times indicate that the person underwent trephination, possibly for the purpose of releasing evil spirits and curing mental dysfunctioning.

**Humors in action** Hippocrates believed that imbalances of the four humors affected personality. In these depictions of two of the humors, yellow bile (left) drives a husband to beat his wife, and black bile (right) leaves a man melancholic and sends him to bed.



physical pathology. He believed, for instance, that the excess of black bile underlying melancholia could be reduced by a quiet life, a vegetable diet, temperance, exercise, celibacy, and even bleeding. Hippocrates' focus on internal causes for abnormal behavior was shared by the great Greek philosophers Plato (427–347 B.C.) and Aristotle (384–322 B.C.) and by influential Greek and Roman physicians.

## Europe in the Middle Ages: Demonology Returns

The enlightened views of Greek and Roman physicians and scholars did not prevent ordinary people from continuing to believe in demons. And with the decline of Rome, demonology enjoyed a strong resurgence, as a growing distrust of science spread throughout Europe.

From A.D. 500 to 1350, the period known as the Middle Ages, the power of the clergy increased greatly throughout Europe. In those days the church rejected scientific forms of investigation, and it controlled all education. Religious beliefs, which were highly superstitious and demonological at this time, came to dominate all aspects of life. Once again behavior was usually interpreted as a conflict between good and evil, God and the devil. Deviant behavior, particularly psychological dysfunctioning, was seen as evidence of Satan's influence. Although some scientists and physicians still insisted on medical explanations and treatments, their views carried little weight in this atmosphere.

The Middle Ages were a time of great stress and anxiety, of war, urban uprisings, and plagues. People blamed the devil for these troubles and feared being possessed by him. The incidence of abnormal behavior apparently increased dramatically during this period. In addition, there were outbreaks of *mass madness*, in which large numbers of people apparently shared delusions and hallucinations. In one such disorder, *tarantism* (also known as St. Vitus's dance), groups of people would suddenly start to jump, dance, and go into convulsions (Sigerist, 1943). Some dressed oddly; others tore off their clothing. All were convinced that they had been bitten and possessed by a wolf spider, now called a tarantula, and they sought to cure their disorder by performing a dance called a tarantella. In another form of mass madness, *lycanthropy*, people thought they were possessed by wolves or other animals. They acted wolflike and imagined that fur was growing all over their bodies. Stories of lycanthropes, more popularly known as *werewolves*, have been passed down to us and continue to fire the imagination of writers, moviemakers, and their audiences.

Not surprisingly, some of the earlier demonological treatments for psychological abnormality reemerged during the Middle Ages. Once again the key to cure

### »»LOOKING BACK

#### Historical Notes

During the Middle Ages, there was, on average, one church for every 200 people (Asimov, 1997).<<

Most of the patients in asylums, from all classes and circumstances, were women (Gold, 1998; Showalter, 1985).<<

Doctors who treated people with mental disorders in the eighteenth century were called "mad-doctors."<<

Before the American Revolution, only 10 percent of the 3,500 doctors in the country had any formal training. Fewer than 5 percent had medical degrees (Whitaker, 2002).<<

was to rid the person's body of the devil that possessed it. Exorcisms were revived, and clergymen, who generally were in charge of treatment during this period, would plead, chant, or pray to the devil or evil spirit. If these techniques did not work, they had others to try, some indistinguishable from torture (see Box 1-3).

## BOX 1-3

### Exorcism Lives

Exorcism has a long history as a "treatment" for persons who behave abnormally. During biblical times, *shamans*, or priests, would often perform exorcisms on such people—reciting prayers or offering bitter-tasting drinks in order to coax evil spirits to leave the bodies of the troubled individuals. Similarly, during the Middle Ages, clergymen would plead with or insult the devil who was thought to be residing in those people who behaved abnormally, recite prayers, administer holy water or bitter solutions, or even starve or stretch the bodies of the individuals in question. But all that is a thing of the distant past, right? Well, not completely, it turns out.

By the 1970s exorcism had all but disappeared from Western culture (Cuneo, 2000). Then in 1973, the enormously popular book and movie *The Exorcist* spurred an onslaught of books and movies on demonic possession, and public interest in this kind of intervention increased dramatically. Since then, numerous evangelical ministers and charismatics have declared themselves exorcists and performed exorcisms on people with behavioral disturbances. In most such instances, the person's problems have failed to respond to a conventional intervention such as psychotherapy or drug therapy. Typically, the exorcist blesses the person who is thought to be possessed, recites passages from the Bible, and commands the evil spirits to leave the body (Fountain, 2000). Often a support group is present to pray for the person while he or she cries out and perhaps even thrashes on the floor, regurgitates, or flails out (Cuneo, 2000).

During the 1990s, the techniques used by some contemporary exorcists

#### Exorcism at the movies

*In the remarkably popular horror movie The Exorcist, an exorcist offers prayers and administers holy water to try to force the devil to leave the body of a troubled teenage girl.*



seemed to grow more extreme, at times dangerous. The media reported cases of death by exorcism; a New York mother accidentally smothered her teenage daughter during one such procedure and a Rhode Island man jammed steel crosses down his mother-in-law's throat (Fountain, 2000). In addition, a growing number of priests began to perform spiritual cleansing ceremonies not sanctioned by the Roman Catholic Church. By the year 2000, hundreds of exorcists, from evangelical ministers and charismatics to unsanctioned priests, were performing a wide variety of exorcisms in the United States (Cuneo, 2000).

In order to regulate this growing field, both within and outside the church, and to ensure more acceptable procedures, the Roman Catholic Church in the United States has become more actively involved in exorcisms during the past decade. The number of full-time exorcists formally appointed by the church increased from 1 in 1990 to 10 in 2000 (Fountain, 2000). Over the past several years, these officials have investigated and evaluated hundreds of cases in which individuals or their relatives or

priests have sought exorcisms, determining in each case whether exorcism is appropriate. In 1999 the church issued a revised Catholic rite of exorcism for the first time since 1614, establishing rules to be followed in making such decisions and in the exorcisms themselves. For example, a church exorcism can take place only after the church-approved exorcist consults with physicians to rule out mental or physical disorders. Also, church exorcisms must be approved by a bishop.

As a result of such rules and procedures, only a small number of potential cases actually result in church-approved exorcisms (Fountain, 2000). Even a small number of exorcisms, however, is excessive in the eyes of many mental health professionals. They argue that one can never totally rule out mental and physical causes in cases of abnormal functioning and that exorcisms—even those that are carefully selected and conducted—divert attention from more accurate explanations of abnormal behavior and more appropriate interventions. Given its long history and deep roots, this debate is not likely to be settled in the near future.



**Bewitched or bewildered?** A great fear of witchcraft swept Europe even during the “enlightened” Renaissance. Tens of thousands of people, mostly women, were thought to have made a pact with the devil. Some appear to have had mental disorders, which caused them to act strangely (Zilboorg & Henry, 1941). This individual is being “dunked” repeatedly until she confesses to witchery.

**Bedlam** In this eighteenth-century work from *The Rake’s Progress*, William Hogarth depicted London’s Bethlehem Hospital, or Bedlam, as a chaotic asylum where people of fashion came to marvel at the strange behavior of the inmates.



It was not until the Middle Ages drew to a close that demonology and its methods began to lose favor (Magherini & Biotti, 1998). Towns throughout Europe grew into cities, and municipal authorities gained more power and took over nonreligious activities. Among their other responsibilities, they began to run hospitals and direct the care of people suffering from mental disorders. Medical views of abnormality gained favor once again. When *lunacy trials* were held in late thirteenth-century England to determine the sanity of certain persons, it was not unusual for natural causes, such as a “blow to the head” or “fear of one’s father,” to be held responsible for an individual’s unusual behavior (Neugebauer, 1979, 1978). During these same years, many people with psychological disturbances received treatment in medical hospitals. The Trinity Hospital in England, for example, was established to treat “madness,” among other kinds of illness, and to keep the mad “safe until they are restored to reason” (Alderidge, 1979, p. 322).

## The Renaissance and the Rise of Asylums

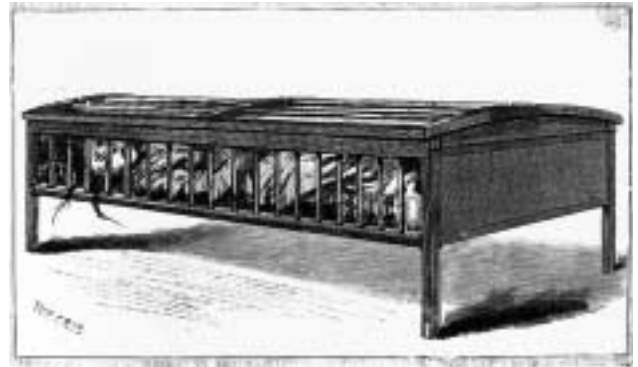
During the early part of the Renaissance, a period of flourishing cultural and scientific activity (about 1400–1700), demonological views of abnormality continued to decline. The German physician Johann Weyer (1515–1588), the first physician to specialize in mental illness, believed that the mind was as susceptible to sickness as the body. He is now considered the founder of the modern study of psychopathology.

The care of people with mental disorders continued to improve in this atmosphere. In England such individuals might be kept at home while their families were aided financially by the local parish. Across Europe religious shrines were devoted to the humane and loving treatment of people with mental disorders. The best known of these shrines was actually established centuries earlier at Gheel in Belgium, but beginning in the fifteenth century, people came to it from all over the world for psychic healing. Local residents welcomed these pilgrims into their homes, and many stayed on to form the world’s first “colony” of mental patients. Gheel was the forerunner of today’s *community mental health programs*, and it continues to demonstrate that people with psychological disorders can respond to loving care and respectful treatment (Morton, 2002; Aring, 1975, 1974). Today patients are still welcome to live in foster homes in this town, interacting with other residents, until they recover.

Unfortunately, these improvements in care began to fade by the mid-sixteenth century. By then municipal authorities had discovered that private homes and community residences could house only a small percentage of those with severe mental disorders and that medical hospitals were too few and too small. Increasingly, they converted hospitals and monasteries into **asylums**, institutions whose primary purpose was to care for people with mental illness. These institutions were founded with every intention of providing good care. Once the asylums started to overflow, however, they became virtual prisons where patients were held in filthy conditions and treated with unspeakable cruelty.

The first asylum had been founded in Muslim Spain in the early fifteenth century, but the idea did not gain full momentum until the 1500s. In 1547, Bethlehem Hospital was given to the city of London by Henry VIII for the sole purpose of confining the mentally ill. In this asylum patients bound in chains cried out for all to hear. During certain phases of

the moon in particular, they might be chained and whipped in order to prevent violence (Asimov, 1997). The hospital even became a popular tourist attraction; people were eager to pay to look at the howling and gibbering inmates. The hospital's name, pronounced "Bedlam" by the local people, has come to mean a chaotic uproar. Similarly, in the Lunatics' Tower in Vienna, patients were herded into narrow hallways by the outer walls so that tourists outside could look up and see them. In La Bicêtre in Paris, patients were shackled to the walls of cold, dark, dirty cells with iron collars and given spoiled food that could be sold nowhere else (Selling, 1940). Such asylums remained a popular form of "care" until the late 1700s.



Bettmann Archives

**The "crib"** *Outrageous devices and techniques, such as the "crib," were used in asylums, and some continued to be used even during the reforms of the nineteenth century.*

## The Nineteenth Century: Reform and Moral Treatment

As 1800 approached, the treatment of people with mental disorders began to improve once again. Historians usually point to La Bicêtre, an asylum in Paris for male patients, as the first site of asylum reform. In 1793, during the French Revolution, Philippe Pinel (1745–1826) was named the chief physician there. He argued that the patients were sick people whose illnesses should be treated with sympathy and kindness rather than chains and beatings. He unchained them and allowed them to move freely about the hospital grounds, replaced the dark dungeons with sunny, well-ventilated rooms, and offered support and advice. Pinel's approach proved remarkably successful. Patients who had been shut away for decades were now enjoying fresh air and sunlight and being treated with dignity. Many improved greatly over a short period of time and were released. Pinel later brought similar reforms to a mental hospital in Paris for female patients, La Salpêtrière. Jean Esquirol (1772–1840), Pinel's student and successor, went on to help establish 10 new mental hospitals that operated on the same principles.

Meanwhile an English Quaker named William Tuke (1732–1819) was bringing similar reforms to northern England. In 1796 he founded the York Retreat, a rural estate where about 30 mental patients lived as guests in quiet country houses and were treated with a combination of rest, talk, prayer, and manual work (Borthwick et al., 2001).

**THE SPREAD OF MORAL TREATMENT** The methods of Pinel and Tuke, called **moral treatment** because they emphasized moral guidance and humane and respectful techniques, caught on throughout Europe and the United States. Patients with psychological problems were increasingly perceived as potentially productive human beings whose mental functioning had broken down under stress. They were considered deserving of individual care, including discussions of their problems, useful activities, work, companionship, and quiet.

The person most responsible for the early spread of moral treatment in the United States was Benjamin Rush (1745–1813), an eminent physician at Pennsylvania Hospital. Limiting his practice to mental illness, Rush developed innovative, humane approaches to treatment (Whitaker, 2002). For example, he required that the hospital hire intelligent and sensitive attendants to work closely with patients, reading and talking to them and taking them on regular walks. He also suggested that it would be therapeutic for doctors to give small gifts to their patients now and then. Rush, widely considered the father of American psychiatry, also wrote the first American treatise on mental illness and organized the first American course in psychiatry.

Rush's work was influential, but it was a Boston schoolteacher named Dorothea Dix (1802–1887) who made humane care a public and political concern in the United States. In 1841 Dix had gone to teach Sunday school at a local prison and been shocked by the conditions she saw there. Before long, her interest in prison conditions broadened to include the plight of poor and mentally ill people throughout the country. A powerful campaigner, Dix went from state legislature to state legislature speaking of the horrors she had observed and calling for reform. Similarly, she told the Congress of the United States that mentally ill

**ASYLUM** A type of institution that first became popular in the sixteenth century to provide care for persons with mental disorders. Most became virtual prisons.

**MORAL TREATMENT** A nineteenth-century approach to treating people with mental dysfunction that emphasized moral guidance and humane and respectful treatment.



**Dance in a madhouse** A popular feature of moral treatment was the “lunatic ball.” Hospital officials would bring patients together to dance and enjoy themselves. One such ball is shown in this painting, *Dance in a Madhouse*, by George Bellows.

people across the country were still being “bound with galling chains, bowed beneath fetters and heavy iron balls attached to drag chains, lacerated with ropes, scourged with rods and terrified beneath storms of execration and cruel blows” (Zilboorg & Henry, 1941, pp. 583–584).

From 1841 until 1881, Dix fought for new laws and greater government funding to improve the treatment of people with mental disorders. Each state was made responsible for developing effective public mental hospitals. Dix personally helped establish 32 of these **state hospitals**, all intended to offer moral treatment (Bickman & Dokecki, 1989). Similar hospitals were established throughout Europe.

**THE DECLINE OF MORAL TREATMENT** As we have observed, the treatment of abnormality has followed a crooked path. Over and over again, relative progress has been followed by serious decline (see Box 1–4). Viewed in this context, it is not surprising that the moral treatment movement

began to decline toward the end of the nineteenth century.

Several factors were responsible (Bockoven, 1963). One was the speed with which the moral movement had spread. As mental hospitals multiplied, severe money and staffing shortages developed, recovery rates declined, and overcrowding in the hospitals became a major problem. Under such conditions it was often impossible to provide individual care and genuine concern. Another factor was the assumption behind moral treatment that all patients could be cured if treated with humanity and dignity. For some, this was indeed sufficient. Others, however, needed more effective treatments than any that had yet been developed. Many of these people remained hospitalized until they died. An additional factor contributing to the decline of moral treatment was the emergence of a new wave of prejudice against people with mental disorders. As more and more patients disappeared into large, distant mental hospitals, the public came to view them as strange and dangerous. In turn, people were less open-handed when it came to making donations or allocating government funds. Moreover, many of the patients entering public mental hospitals in the United States in the late nineteenth century were impoverished foreign immigrants, whom the public had little interest in helping.

## BOX 1-4

### Beware the Evil Eye

A number of demonological explanations for abnormal behavior continue in today’s world. In rural Pakistan, for example, many parents apply special makeup around the eyes of their young children, as their ancestors have done for centuries. A paste of hazelnut powder and several oils, known as *surma*, is applied partly to protect the eyes from the smoke given off by home heating fires and partly to cool and

Judy Griesedieck, Minneapolis



clean the eyes (Smolan, Moffitt, & Naythons, 1990). But another, less acknowledged reason is to ward off *nazar*, the “evil eye,” thought to be responsible for the many deaths among infants and for poor health and behavioral problems in those who survive.

By the early years of the twentieth century, the moral treatment movement had ground to a halt in both the United States and Europe. Public mental hospitals were providing only custodial care and ineffective medical treatments and were becoming more overcrowded every year. Long-term hospitalization became the rule once again.

## The Early Twentieth Century: The Somatogenic and Psychogenic Perspectives

As the moral movement was declining in the late 1800s, two opposing perspectives emerged and began to vie for the attention of clinicians: the **somatogenic perspective**, the view that abnormal psychological functioning has physical causes, and the **psychogenic perspective**, the view that the chief causes of abnormal functioning are psychological. These perspectives came into full bloom during the twentieth century.

**THE SOMATOGENIC PERSPECTIVE** The somatogenic perspective has at least a 2,400-year history—remember Hippocrates’ view that abnormal behavior resulted from brain disease and an imbalance of humors? Not until the late nineteenth century, however, did this perspective make a triumphant return and begin to gain wide acceptance.

Two factors were responsible for this rebirth. One was the work of an eminent German researcher, Emil Kraepelin (1856–1926). In 1883 Kraepelin published an influential textbook which argued that physical factors, such as fatigue, are responsible for mental dysfunction. In addition, as we shall see in Chapter 4, he also constructed the first modern system for classifying abnormal behavior. He identified various syndromes, or clusters of symptoms; listed their physical causes; and discussed their expected course (Kihlstrom, 2002). Kraepelin also measured the effects of various drugs on abnormal behavior.

New biological discoveries also triggered the rise of the somatogenic perspective. One of the most important discoveries was that an organic disease, *syphilis*, led to *general paresis*, an irreversible disorder with both physical and mental symptoms, including paralysis and delusions of grandeur. In 1897 Richard von Krafft-Ebing (1840–1902), a German neurologist, injected matter from syphilis sores into patients suffering from general paresis and found that none of the patients developed symptoms of syphilis. Their immunity could have been caused only by an earlier case of syphilis. Since all patients with general paresis were now immune to syphilis, Krafft-Ebing theorized that syphilis had been the cause of their general paresis. Finally, in 1905, Fritz Schaudinn (1871–1906), a German zoologist, discovered that the microorganism *Treponema pallida* was responsible for syphilis, which in turn was responsible for general paresis.

The work of Kraepelin and the new understanding of general paresis led many researchers and practitioners to suspect that organic factors were responsible for many mental disorders, perhaps all of them. These theories and the possibility of quick and effective medical solutions for mental disorders were especially welcomed by those who worked in mental hospitals, where patient populations were now growing at an alarming rate.

Despite the general optimism, biological approaches yielded largely disappointing results throughout the first half of the twentieth century. Although many medical treatments were developed for patients in mental hospitals during that time, most of the techniques failed to work. Physicians tried tooth extraction, tonsillectomy, hydrotherapy (alternating hot and cold baths), and lobotomy, a surgical cutting of certain nerve fibers in the brain. Even worse, biological views and claims led, in some circles, to proposals for immoral solutions such as eugenic sterilization (see Table 1–1).

**STATE HOSPITALS** State-run public mental institutions in the United States.

**SOMATOGENIC PERSPECTIVE** The view that abnormal psychological functioning has physical causes.

**PSYCHOGENIC PERSPECTIVE** The view that the chief causes of abnormal functioning are psychological.

**Back wards** Overcrowding, limited funding, and ineffective hospital treatments led to the creation of crowded, often appalling back wards in state hospitals across the United States, which continued well into the twentieth century.



Jerry Cooke/Photo Researchers



Table 1-1

## Eugenics and Mental Disorders

YEAR	EVENT
1896	Connecticut became the first state in the United States to prohibit persons with mental disorders from marrying.
1896–1933	Every state in the United States passed a law prohibiting marriage by persons with mental disorders.
1907	Indiana became the first state to pass a bill calling for people with mental disorders, as well as criminals and other “defectives,” to undergo sterilization.
1927	The U.S. Supreme Court ruled that eugenic sterilization was constitutional.
1907–1945	Around 45,000 Americans were sterilized under eugenic sterilization laws; 21,000 of them were patients in state mental hospitals.
1929–1932	Denmark, Norway, Sweden, Finland, and Iceland passed eugenic sterilization laws.
1933	Germany passed a eugenic sterilization law, under which 375,000 people were sterilized by 1940.
1940	Nazi Germany began to use “proper gases” to kill people with mental disorders; 70,000 or more people were killed in less than two years.

Source: Whitaker, 2002.

Not until the 1950s, when a number of effective medications were finally discovered, did the somatogenic perspective truly begin to pay off for patients.

**THE PSYCHOGENIC PERSPECTIVE** The late nineteenth century also saw the emergence of the psychogenic perspective, the view that the chief causes of abnormal functioning are often psychological. This view, too, had a long history. The Roman statesman and orator Cicero (106–43 B.C.) held that psychological disturbances could cause bodily ailments, and the Greek physician Galen believed that many mental disorders are caused by fear, disappointment in love, and other psychological events. However, the psychogenic perspective did not gain much of a following until studies of *hypnotism* demonstrated its potential.

Hypnotism is a procedure that places people in a trancelike mental state during which they become extremely suggestible. It was used to help treat psychological disorders as far back as 1778, when an Austrian physician named Friedrich Anton Mesmer (1734–1815) established a clinic in Paris. His patients suffered from *hysterical disorders*, mysterious bodily ailments that had no apparent physical basis. Mesmer had his patients sit in a darkened room filled with music; then he appeared, dressed in a flamboyant costume, and touched the troubled area of each patient’s body with a special rod. A surprising number of patients seemed to be helped by this treatment, called *mesmerism*. Their pain, numbness, or paralysis disappeared. Several scientists believed that Mesmer was inducing a trancelike state in his patients and that this state was causing their symptoms to disappear. The treatment was so controversial, however, that eventually Mesmer was banished from Paris.

It was not until years after Mesmer died that many researchers had the courage to investigate his procedure, later called hypnotism (from *hypnos*, the Greek word for “sleep”), and its effects on hysterical disorders. By the late nineteenth century, two competing views had emerged. Because hypnosis—a technique relying on the power of suggestion—was able to alleviate hysterical ailments, some scientists concluded that hysterical disorders must be caused by the power of suggestion—

## &gt;&gt;LOOKING AROUND

## Literature and Abnormal Psychology

Writing during the Renaissance, William Shakespeare speculated on the nature and causes of abnormal behavior in 20 of his 38 plays and in many of his sonnets (Dalby, 1997).<<

Although controversial in professional circles, Anton Mesmer’s work attracted many persons outside the clinical field. Charles Dickens, the nineteenth-century English novelist, so strongly believed in mesmerism that he considered himself to be a doctor in this method of healing the sick (Asimov, 1997).<<

that is, by the mind—in the first place. In contrast, other scientists believed that hysterical disorders had subtle physiological causes. For example, Jean Charcot (1825–1893), Paris’s most eminent neurologist, argued that hysterical disorders were the result of degeneration in portions of the brain.

The experiments of two physicians practicing in the city of Nancy in France finally seemed to settle the matter. Hippolyte-Marie Bernheim (1840–1919) and Ambroise-Auguste Liébault (1823–1904) showed that hysterical disorders could actually be induced in otherwise normal subjects while they were under the influence of hypnosis. That is, the physicians could make normal people experience deafness, paralysis, blindness, or numbness by means of hypnotic suggestion—and they could remove these artificial symptoms by the same means. Thus, they established that a *mental* process—hypnotic suggestion—could both cause and cure even a physical dysfunction. Leading scientists, including Charcot, finally embraced the idea that hysterical disorders were largely psychological in origin, and the psychogenic perspective rose in popularity.

Among those who studied the effects of hypnotism on hysterical disorders was Josef Breuer (1842–1925) of Vienna. This physician discovered that his patients sometimes awoke free of hysterical symptoms after speaking candidly under hypnosis about past upsetting events. During the 1890s Breuer was joined in his work by another Viennese physician, Sigmund Freud (1856–1939). As we shall see in Chapter 3, Freud’s work eventually led him to develop the theory of **psychoanalysis**, which holds that many forms of abnormal and normal psychological functioning are psychogenic. In particular, he believed that *unconscious* psychological processes are at the root of such functioning.

Freud also developed the *technique* of psychoanalysis, a form of discussion in which clinicians help troubled people gain insight into their unconscious psychological processes. He believed that such insight, even without hypnotic procedures, would help the patients overcome their psychological problems.

Freud and his followers applied the psychoanalytic treatment approach primarily to patients suffering from anxiety or depression, problems that did not typically require hospitalization. These patients visited therapists in their offices for sessions of approximately an hour and then went about their daily activities—a format of treatment now known as *outpatient therapy*. By the early twentieth century, psychoanalytic theory and treatment were widely accepted throughout the Western world.

The psychoanalytic approach had little effect on the treatment of severely disturbed patients in mental hospitals, however. This type of therapy requires levels of clarity, insight, and verbal skill beyond the capabilities of most such patients. Moreover, psychoanalysis often takes years to be effective, and the overcrowded and understaffed public mental hospitals could not accommodate such a leisurely pace.

## Current Trends

It would hardly be accurate to say that we now live in a period of great enlightenment or dependable treatment of mental disorders (see Box 1–5 on the next page). In fact, some recent surveys found that 43 percent of respondents believe that people bring on mental disorders themselves, 35 percent consider such disorders to be caused by sinful behavior, and 19 percent point to a lack of willpower or self-discipline as a cause (NMHA, 1999; Murray, 1993). Nevertheless, the



Corbis-Bettmann

**The roots of psychogenic theory** The nineteenth century’s leading neurologist, Jean Charcot, gives a clinical lecture in Paris on hypnotism and hysterical disorders.

**PSYCHOANALYSIS** Either the theory or the treatment of abnormal mental functioning that emphasizes unconscious psychological forces as the cause of psychopathology.

## B O X 1-5

## The Moon and the Mind

Primitive societies believed that the moon had magical, mystical powers and that its changes portended events of many kinds. The moon supposedly had the power to impregnate women, to make plants grow, and to drive people crazy. Later societies also credited the power of the moon to affect behavior, and they applied the terms “lunatic” and “lunacy” to the person and the behavior to capture their lunar, or moonlike, qualities. Even today many institutions and people believe that behavior is affected by the phases of the moon.

Anecdotal evidence abounds: police officers have sometimes noted more violent and bizarre crimes during the full moon, and certain hospitals have claimed to experience an increase in births. One hospital even linked the full moon to the onset of ulcers and heart attacks. A Wall Street broker for years used the schedule of the full moon as a guide in giving investment advice—successfully (Gardner, 1984).

A number of scientists have advanced theories to explain a lunar effect on human behavior. Some say that since the moon causes the tides of the oceans, it is reasonable to expect that it has a similar effect on the bodily fluids of human beings, whose composition is more than 80 percent water (Thakur & Sharma, 1984). The increase in births might therefore be explained by the force of the moon on the expectant mother’s amniotic fluid. Similar tidal and gravitational effects have been used to explain the apparent increases in bizarre behavior during full moons.

One team of researchers has noted that a full moon seemed to have a greater impact on behavior in the past than in current times and has attributed this difference to the lack of electricity in years past. Before the advent of artificial lighting, they argue, full moons were a significant source of illumination that disrupted the sleep-wake cycle. This tended to

cause sleep deprivation and, consequently, psychological disturbances (Raison et al., 1999).

Still other researchers have tried to determine whether the activity of the moon is in fact related to human behavior by calculating the precise numbers of births, crimes, and unusual behaviors that occur during full moons. Some of these investigators have indeed found an association between full moons and unintentional poisonings (Oderda & Klein-Schwartz, 1983), aggression (Lieber, 1978), absenteeism (Sands & Miller, 1991), and crime (Thakur & Sharma, 1984). Other researchers, however, have found no relationship between full moons and increases in violence in mental health settings (Owen et al., 1998), suicides (Mathew et al., 1991), car accidents (Lavery & Kelly, 1998), or people seeking help for anxiety or depression (Wilkinson et al., 1997).

Skeptics have noted that even if an association exists, it may simply be due to people’s own expectations.

That is, because certain persons expect to be influenced by a full moon, they may be more attentive and responsive to their internal sensations or desires at that time. To test this interpretation, researchers recently examined the effects of moon phases on animals—who presumably have little self-awareness. One group of researchers found a significant increase in the number of people who visited emergency rooms with animal bites during full moons in a small British town (Bhattacharjee et al., 2000), suggesting that unusual animal behavior may indeed be affected by the moon. However, other researchers—who conducted studies with other animals, breeds, and towns—found no increase in animal bites during full moons (Frangakis & Petridov, 2001; Chapman & Morrell, 2000).

And so the debate continues, as scientists and philosophers alike try to determine whether the cause of lunacy does indeed lie in the heavens or in our minds.



**Lunar effect** Moonstruck maidens dance in the town square in this eighteenth-century French engraving.

Corbis-Bettmann

past 50 years have brought major changes in the ways clinicians understand and treat abnormal functioning. There are more theories and types of treatment, more research studies, more information, and, perhaps for these reasons, more disagreements about abnormal functioning today than at any time in the past. In some ways the study and treatment of psychological disorders have made great strides, but in other respects clinical scientists and practitioners are still struggling to make a difference.

## How Are People with Severe Disturbances Cared For?

In the 1950s researchers discovered a number of new **psychotropic medications**—drugs that primarily affect the brain and alleviate many symptoms of mental dysfunctioning. They included the first *antipsychotic drugs*, to correct extremely confused and distorted thinking; *antidepressant drugs*, to lift the mood of depressed people; and *antianxiety drugs*, to reduce tension and worry.

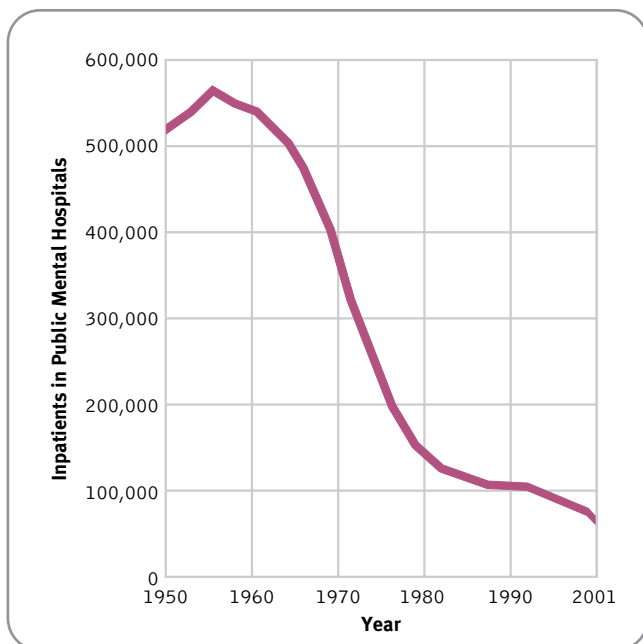
When given these drugs, many patients who had spent years in mental hospitals began to show signs of improvement. Hospital administrators, encouraged by these results and pressured by a growing public outcry over the terrible conditions in public mental hospitals, began to discharge patients almost immediately.

Since the discovery of these medications, mental health professionals in most of the developed nations of the world have followed a policy of **deinstitutionalization**, releasing hundreds of thousands of patients from public mental hospitals. On any given day in 1955, close to 600,000 people were confined in public mental institutions across the United States (see Figure 1-1). Today the daily patient population in the same kinds of hospitals is around 60,000 (Torrey, 2001).

In short, outpatient care has now become the primary mode of treatment for people with severe psychological disturbances as well as for those with more moderate problems. Today when severely impaired people do need institutionalization, they are usually given *short-term* hospitalization (NAPHS, 1999). Ideally, they are then given outpatient psychotherapy and medication in community programs and residences.

**PSYCHOTROPIC MEDICATIONS** Drugs that mainly affect the brain and reduce many symptoms of mental dysfunctioning.

**DEINSTITUTIONALIZATION** The practice, begun in the 1960s, of releasing hundreds of thousands of patients from public mental hospitals.



**FIGURE 1-1** The impact of deinstitutionalization The number of patients (60,000) now hospitalized in public mental hospitals in the United States is a small fraction of the number hospitalized in 1955. (Adapted from Torrey, 2001; Lang, 1999.)



John Ficare/Woodfin Camp and Associates

**Alternative treatment?** Tens of thousands of people with severe mental disorders are currently homeless. They receive no treatment or guidance and wind up on the streets or in public shelters, such as this shelter for the homeless in Washington, D.C.

**>>PSYCH•LISTINGS****Top Autobiographies Recommended by Therapists***An Unquiet Mind* (K. R. Jamison) <<*Nobody Nowhere: The Autobiography of an Autistic* (D. Williams) <<*Darkness Visible: A Memoir of Madness* (W. Styron) <<*Out of Depths* (A. T. Boisin) <<*Girl, Interrupted* (S. Kaysen) <<*Too Much Anger, Too Many Tears: A Personal Triumph over Psychiatry* (J. Gotkin and P. Gotkin) <<*Undercurrents: A Therapist's Reckoning with Depression* (M. Manning) <<*Getting Better: Inside Alcoholics Anonymous* (N. Robertson) <<

**The availability of therapy** *Therapy for people with mild to severe psychological disturbances is widely available in individual, group, and family formats.*



Ziggy Kaluzny/Stone

Chapters 3 and 15 will look more closely at this recent emphasis on community care for people with severe psychological disturbances—a philosophy called the *community mental health approach*. The approach has been helpful for many patients, but too few community programs are available to address current needs in the United States. As a result, hundreds of thousands of persons with severe disturbances fail to make lasting recoveries, and they shuffle back and forth between the mental hospital and the community. After release from the hospital, they at best receive minimal care and often wind up living in decrepit rooming houses or on the streets. In fact, only 40 percent of persons with severe psychological disturbances currently receive treatment of any kind (Wang, Demler, & Kessler, 2002). At least 100,000 individuals with such disturbances are homeless on any given day; another 135,000 or more are inmates of jails and prisons (Gilligan, 2001; Torrey, 2001). Their abandonment is truly a national disgrace.

### How Are People with Less Severe Disturbances Treated?

The treatment picture for people with moderate psychological disturbances has been more positive than that for people with severe disorders. Since the 1950s, outpatient care has continued to be the preferred mode of treatment for them, and the number and types of facilities that offer such care have expanded to meet the need (NAPHS, 1999).

Before the 1950s, almost all outpatient care took the form of **private psychotherapy**, an arrangement by which an individual directly pays a psychotherapist for counseling services. This tended to be an expensive form of treatment, available only to the wealthy. Since the 1950s, however, most health insurance plans have expanded coverage to include private psychotherapy, so that it is now also widely available to people with modest incomes. In addition, outpatient therapy is now offered in a number of less expensive settings, such as community mental health centers, crisis intervention centers, family service centers, and other social service agencies. The new settings have spurred a dramatic increase in the number of persons seeking outpatient care for psychological problems. Nationwide surveys suggest that one of every six adults and one of every five children between the ages of 9 and 17 now receive some form of mental health service in the course of a year (DHHS, 1999).

Outpatient treatments are also becoming available for more and more kinds of problems. When Freud and his colleagues first began to practice, most of their patients suffered from anxiety or depression. These problems still dominate therapy today; almost half of all clients suffer from them. However, people with other kinds of disorders are also receiving therapy (Zarin et al., 1998; Narrow et al., 1993). In addition, at least 25 percent of clients enter therapy because of milder problems in living, problems with marital, family, job, peer, school, or community relationships.

Yet another change in outpatient care since the 1950s has been the development of programs devoted exclusively to one kind of psychological problem. We now have, for example, suicide prevention centers, substance abuse programs, eating disorder programs, phobia clinics, and sexual dysfunction programs. Clinicians in these programs have the kind of expertise that can be acquired only by concentration in a single area.

### A Growing Emphasis on Preventing Disorders and Promoting Mental Health

Although the community mental health approach has often failed to address the needs of people with severe disorders, it has given rise to an important principle of mental health care—**prevention** (Compass & Gotlib, 2002; Felner et al., 2000). Rather than wait for psychological disorders to occur, many of today's community programs try to

correct the social conditions that give rise to psychological problems (poverty or violence in the community, for example) and to identify and help individuals who are at risk for developing emotional problems (for example, teenage mothers or the children of people with severe psychological disorders). As we shall see later, community prevention programs are not always successful and they often suffer from limited funding, but they have grown in number throughout the United States and Europe, offering great promise as the ultimate form of intervention. In fact, during the 1990s, the United States Secretary of Health and Human Services labeled prevention as the nation's number one health and social priority (Felner et al., 2000).

Prevention programs have been further energized in the past few years by the field of psychology's growing interest in **positive psychology** (Seligman & Csikszentmihalyi, 2000). Positive psychology is the study and enhancement of positive feelings such as optimism and happiness; positive traits like perseverance and wisdom; positive abilities such as interpersonal skill and other talents; and group-directed virtues, including altruism and tolerance.

In the clinical arena, positive psychology suggests that practitioners can help people best by *promoting* positive development and psychological wellness. While researchers study and learn more about positive psychology in the laboratory, a growing number of clinicians are already beginning to apply its principles in their work. They are teaching people coping skills that may help protect them from stress and adversity and encouraging them to become more involved in personally meaningful activities and relationships (Compas & Gotlib, 2002). In this way, the clinicians are trying to promote mental health and prevent mental disorders.

As we shall see, promotion and prevention programs are now being applied in many clinical areas. Such programs have been offered during pregnancy, unemployment, divorce, and other periods of significant stress and have targeted such problem areas as substance abuse, violence, disaster trauma, and depression. Although programs of this kind are promising and important, we must keep in mind that the clinical field "has yet to effectively prevent any major form of psychopathology" (Compas & Gotlib, 2002, p. 291).

## The Growing Influence of Insurance Coverage

So many people now seek therapy that private insurance companies have changed their coverage for mental health patients. Today the dominant form of coverage is the **managed care program**—a program in which the insurance company determines such key issues as which therapists its clients may choose, the cost of sessions, and the number of sessions for which a client may be reimbursed (Rothbard et al., 2002; Manderscheid et al., 1999).

At least 75 percent of all privately insured persons in the United States are currently enrolled in managed care programs (Kiesler, 2000). The coverage for mental health treatment under such programs follows the same basic principles as coverage for medical treatment, including a limited pool of practitioners for patients to choose from, preapproval of treatment by the insurance company, strict standards for judging whether problems and treatments qualify for reimbursement, and ongoing reviews and assessments. In the mental health realm, both therapists and clients typically dislike the managed care programs. They fear that the programs inevitably shorten therapy (often for the worse), unfairly favor treatments whose results are not always lasting (for example, drug therapy), pose a special hardship for those

**PRIVATE PSYCHOTHERAPY** An arrangement in which a person directly pays a therapist for counseling services.

**PREVENTION** Interventions aimed at deterring mental disorders before they can develop.

**POSITIVE PSYCHOLOGY** The study and enhancement of positive feelings, traits, and abilities.

**MANAGED CARE PROGRAM** A system of health-care coverage in which the insurance company largely controls the nature, scope, and cost of medical or psychological services.



©The New Yorker Collection, 1995, J. B. Handelsman, from cartoonbank.com.

*"I wish I could help you. The problem is that you're too sick for managed care."*

**>>PSYCH•NOTES****Mental Health Finances**

The total economic cost of psychological disorders, including substance abuse, in the United States—direct treatment costs, lost wages, and the like—is more than \$400 billion each year (NIDA, 1998; Rice & Miller, 1998).<<

Thirty-three states in the United States mandate that every private health insurance policy must include coverage for mental health services.<<

Two-thirds of mental hospitals in the United States currently engage in “patient dumping”—denying care to patients or transferring them largely because they require costly care or are underinsured (Grinfeld, 1998; Schlesinger et al., 1997).<<

with severe mental disorders, and result in treatment determined by insurance companies rather than by therapists (Mowbray et al., 2002).

A special problem with insurance coverage—both managed care and other kinds of insurance programs—is that reimbursements for mental disorders tend to be lower than those for medical disorders. This disparity places persons with psychological difficulties at a distinct disadvantage in their efforts to overcome their problems and inevitably affects the quality and quantity of the treatment they seek (Feldman et al., 2002). Recently the federal government and 35 states have passed so-called parity laws that direct insurance companies to provide equal coverage for mental and medical problems. It is not yet clear, however, whether these laws will indeed lead to better coverage and whether they will improve the treatment picture for people with psychological problems (Feldman et al., 2002).

**What Are Today’s Leading Theories and Professions?**

One of the most important developments in the modern understanding and treatment of abnormal psychological functioning has been the growth of numerous theoretical perspectives that now coexist in the clinical field (Compas & Gotlib, 2002). Before the 1950s, the *psychoanalytic* perspective, with its emphasis on unconscious psychological problems as the cause of abnormal behavior, was dominant. Then the discovery of effective psychotropic drugs inspired new respect for the somatogenic, or *biological*, view. As we shall see in Chapter 3, other influential perspectives that have emerged since the 1950s are the *behavioral*, *cognitive*, *humanistic-existential*, and *sociocultural* schools of thought. At present no single viewpoint dominates the clinical field as the psychoanalytic perspective once did. In fact, the perspectives often conflict and compete with one another; yet, as we shall see, in some instances they complement each other and together provide more complete explanations and treatments for psychological disorders (Widiger & Sankis, 2000).

In addition, a variety of professionals now offer help to people with psychological problems (Compas & Gotlib, 2002). Before the 1950s, psychotherapy was offered only by *psychiatrists*, physicians who complete three to four additional years of training after medical school (a *residency*) in the treatment of abnormal mental functioning. After World War II, however, the demand for mental health services expanded so rapidly that other professional groups stepped in to fill the need (Humphreys, 1996).

Among those other groups are *clinical psychologists*—professionals who earn a doctorate in clinical psychology by completing four years of graduate training in abnormal functioning and its treatment and also complete a one-year internship at a mental hospital or mental health agency. Before their professional responsibilities expanded into the area of treatment, clinical psychologists were principally assessors and researchers of abnormal functioning. Some of them still specialize in those activities.

Psychotherapy and related services are also provided by *counseling psychologists*, *educational* and *school psychologists*, *psychiatric nurses*, *marriage therapists*, *family therapists*, and—the largest group—*psychiatric social workers* (see Table 1-2). Each of these specialties has its own graduate training program (Addis, 2000). Theoretically, each conducts therapy in a distinctive way, but in reality clinicians from the various specialties often use similar techniques. In fact, the individual differences within a professional group are sometimes greater than the general differences between groups.

One final important development in the study and treatment of mental disorders since World War II has been a growing appreciation of the need for effective research (Goodwin, 2002). As theories and forms of treatment have increased, *clinical researchers* have tried to determine which concepts best explain and predict abnormal behavior, which treatments are most effective, and what kinds of changes may be required. Today well-trained clinical researchers conduct studies in universities, medical schools, laboratories, mental hospitals, mental

**>>BY THE NUMBERS****Gender Shift**

28% Psychologists in 1978 who were female<<

37% Psychologists today who are female<<

75% Current undergraduate psychology majors who are female<<

66% Current psychology graduate students who are female<<

(Barber, 1999)

**Table 1-2****Profiles of Mental Health Professionals**

	DEGREE	BEGAN TO PRACTICE	CURRENT NUMBER	MEDIAN AGE	PERCENT MALE
Psychiatrists	M.D., D.O.	1840s	33,486	52	75
Psychologists	Ph.D., Psy.D., Ed.D.	Late 1940s	69,817	48	52
Social workers	M.S.W., D.S.W.	Early 1950s	188,792	47	23
Marriage and family therapists	Various	1940s	46,227	52	45

Source: Barber, 1999; Zarin et al., 1988; Peterson et al., 1996; Knowlton, 1995.

health centers, and other clinical settings throughout the world. Their work has already produced important discoveries and changed many of our ideas about abnormal psychological functioning.

**CROSSROADS:****A Work in Progress**

Since ancient times, people have tried to explain, treat, and study abnormal behavior. By examining the responses of past societies to such behaviors, we can better understand the roots of our present views and treatments. In addition, a look backward helps us appreciate just how far we have come—how humane our present views, how impressive our recent discoveries, and how important our current emphasis on research.

At the same time we must recognize the many problems in abnormal psychology today. The field has yet to agree on one definition of abnormality. It is currently made up of conflicting schools of thought and treatment whose members are often unimpressed by the claims and accomplishments of the others. And clinical practice is carried out by a variety of professionals trained in different ways.

As we proceed through the topics in this book and look at the nature, treatment, and study of abnormal functioning, we must keep in mind the field's current strengths and weaknesses, the progress that has been made, and the journey that lies ahead. Perhaps the most important lesson to be learned from our look at the history of this field is that our current understanding of abnormal behavior represents a work in progress. The clinical field stands at a crossroads, with some of the most important insights, investigations, and changes yet to come.

How, then, should we proceed in our examination of abnormal psychology? To begin with, we need to learn about the basic tools and perspectives that today's scientists and practitioners find most useful. This is the task we turn to in the next several chapters. Chapter 2 describes the research strategies that are currently adding to our knowledge of abnormal functioning. Chapter 3 then examines the range of views that influence today's clinical theorists and practitioners. Finally, Chapter 4 examines how abnormal behaviors are currently being assessed, diagnosed, and treated. Later chapters present the major categories of psychological abnormality as well as the leading explanations and treatments for each of them. In the final chapter we shall see how the science of abnormal psychology and its professionals address current social issues and interact with legal, social, and other institutions in our world.



## SUMMARY AND REVIEW

- **What is psychological abnormality?** Abnormal functioning is generally considered to be *deviant*, *distressful*, *dysfunctional*, and *dangerous*. Behavior must also be considered in the context in which it occurs, however, and the concept of abnormality depends on the *norms* and *values* of the society in question. pp. 2–5
- **What is treatment?** *Therapy* is a systematic process for helping people overcome their psychological difficulties. It typically requires a *patient*, a *therapist*, and a *series of therapeutic contacts*. pp. 6–8
- **How was abnormality viewed and treated in the past?** The history of psychological disorders stretches back to ancient times.

**PREHISTORIC SOCIETIES** Prehistoric societies apparently viewed abnormal behavior as the work of evil spirits. There is evidence that Stone Age cultures used *trephination*, a primitive form of brain surgery, to treat abnormal behavior. People of early societies also sought to drive out evil spirits by *exorcism*. p. 9

**GREEKS AND ROMANS** Physicians of the Greek and Roman empires offered more enlightened explanations of mental disorders. Hippocrates believed that abnormal behavior was due to an imbalance of the four bodily fluids, or *humors*: black bile, yellow bile, blood, and phlegm. Treatment consisted of correcting the underlying physical pathology through diet and lifestyle. pp. 9–10

**THE MIDDLE AGES** In the Middle Ages, Europeans returned to demonological explanations of abnormal behavior. The clergy was very influential and held that mental disorders were the work of the devil. As the Middle Ages drew to a close, such explanations and treatments began to decline, and people with mental disorders were increasingly treated in hospitals instead of by the clergy. pp. 10–12

**THE RENAISSANCE** Care of people with mental disorders continued to improve during the early part of the Renaissance. Certain religious shrines became dedicated to the humane treatment of such individuals. By the middle of the sixteenth century, however, persons with mental disorders were being warehoused in *asylums*. pp. 12–13

**THE NINETEENTH CENTURY** Care of those with mental disorders started to improve again in the nineteenth century. In Paris, Philippe Pinel started the movement toward *moral treatment*. Similar reforms were brought to England by William Tuke. Similarly, Dorothea Dix spearheaded a movement in the United States to ensure legal rights and protection for people with mental disorders and to establish state hospitals for their care. Unfortunately, the moral treatment movement disintegrated by the late nineteenth century, and mental hospitals again became warehouses where the inmates received minimal care. pp. 13–15

**THE EARLY TWENTIETH CENTURY** The turn of the twentieth century saw the return of the *somatogenic perspective*, the view that abnormal psychological functioning is caused primarily by physical factors. Key to this development were the work of Emil Kraepelin in the late 1800s and the finding that *general paresis* was caused by the organic disease syphilis. The same period saw the rise of the *psychogenic perspective*, the view that the chief causes of abnormal functioning are psychological. An important factor in its rise was the use of *hypnotism* to treat patients with *hysterical disorders*. Sigmund Freud's psychogenic approach, *psychoanalysis*, eventually gained wide acceptance and influenced future generations of clinicians. pp. 15–17

- **Current trends** The past 50 years have brought significant changes in the understanding and treatment of abnormal functioning. In the 1950s, researchers discovered a number of new *psychotropic medications*, drugs that mainly affect the brain and reduce many symptoms of mental dysfunctioning. Their success

### >>PSYCH•LISTINGS

#### Famous Psych Lines from the Movies

“Take baby steps.” (*What About Bob?* 1991) <<

“Rosebud.” (*Citizen Kane*, 1941) <<

“I see dead people.” (*The Sixth Sense*, 1999) <<

“Dave, my mind is going. . . . I can feel it.” (*2001: A Space Odyssey*, 1968) <<

“Uh oh.” (*Rain Man*, 1988) <<

“All right, Mr. DeMille, I'm ready for my close-up.” (*Sunset Boulevard*, 1950) <<

“I forgot my mantra.” (*Annie Hall*, 1977) <<

“I love the smell of napalm in the morning.” (*Apocalypse Now*, 1979) <<

“Snakes, why does it always have to be snakes?” (*Raiders of the Lost Ark*, 1981) <<

contributed to a policy of *deinstitutionalization*, under which hundreds of thousands of patients were released from public mental hospitals. In addition, *outpatient treatment* has become the primary approach for most persons with mental disorders, both mild and severe; *prevention programs* are growing in number and influence; and *insurance coverage* is having a significant impact on the way treatment is conducted. Finally, a variety of *perspectives* and *professionals* have come to operate in the field of abnormal psychology, and many well-trained *clinical researchers* now investigate the field's theories and treatments. pp. 17–23

### »» CRITICAL THOUGHTS ««

1. Why are movies and novels with themes of abnormal functioning so popular? Why do actresses and actors who portray characters with psychological disorders tend to receive more awards for their performances? pp. 1–2, 24
2. What behaviors might fit the criteria of deviant, distressful, dysfunctional, or dangerous, yet would not be considered abnormal by most people? pp. 2–7
3. People of the Stone Age did not leave written records, so archaeologists cannot be certain that trephination was in fact an ancient treatment for mental dysfunctioning. How else might we explain the holes found in the skulls recovered from early times? Why do you think historians have settled on mental illness as an explanation? p. 9
4. Have episodes of “mass madness” occurred in recent times? Might the Internet, cable television, or other forms of modern technology pose a special danger in the emergence and spread of new forms of mass madness? pp. 10–11
5. In addition to the evil eye and exorcism, what other demonological explanations or treatments are still around today? Why do they persist? pp. 10–12, 14

### ● CYBER STUDY

- ▲ *What did past hospital treatments for severe mental disorders look like?*
- ▲ *How might it have felt to receive or administer these treatments?* ▲ *Observe the predecessors of modern electroconvulsive therapy. Are the early treatments behind us?*

#### SEARCH THE ABNORMAL PSYCHOLOGY CD-ROM FOR

- ▲ Chapter 1 video case and discussion  
*Early Procedures in Mental Hospitals*
- ▲ Chapter 1 practice test and feedback
- ▲ Additional video case and discussion  
*Early Electroconvulsive Therapy*

#### LOG ON TO THE COMER WEB PAGE FOR

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# Research in Abnormal Psychology

## Topic Overview | :

### WHAT DO CLINICAL RESEARCHERS DO?

#### THE CASE STUDY

How Are Case Studies Helpful?

What Are the Limitations of Case Studies?

#### THE CORRELATIONAL METHOD

Describing a Correlation

When Can Correlations Be Trusted?

What Are the Merits of the Correlational Method?

Special Forms of Correlational Research

#### THE EXPERIMENTAL METHOD

The Control Group

Random Assignment

Blind Design

#### ALTERNATIVE EXPERIMENTAL DESIGNS

Quasi-Experimental Design

Natural Experiment

Analogue Experiment

Single-Subject Experiment

#### CROSSROADS: THE USE OF MULTIPLE RESEARCH METHODS

“The brain is an organ of minor importance.”

*Aristotle, Greek philosopher, fourth century B.C.*

“Woman may be said to be an inferior man.”

*Aristotle*

“[Louis Pasteur’s] theory of germs is a ridiculous fiction.”

*Pierre Pochet, professor of physiology, 1872*

“Everything that can be invented has been invented.”

*Charles Duell, U.S. Patent Office, 1899*

“The theory of relativity [is] worthless and misleading.”

*T. J. J. See, U.S. Government Observatory, 1924*

“If excessive smoking actually plays a role in the production of lung cancer, it seems to be a minor one.”

*W. C. Heuper, National Cancer Institute, 1954*

“Space travel is utter bilge.”

*Richard van der Riet Wooley, British Astronomer Royal, 1956*

“There is no reason for any individual to have a computer in their home.”

*Ken Olson, Digital Equipment Corp., 1977*

“The cloning of mammals . . . is biologically impossible.”

*James McGrath and Davor Solter, genetic researchers, 1984*

Each of these statements was once accepted as gospel. Had their validity not been tested, had they been judged on the basis of conventional wisdom alone, had new ideas not been proposed and investigated, human knowledge and progress would have been severely limited. What enabled thinkers to move beyond such misperceptions? The answer, quite simply, is research, the systematic search for facts through the use of careful observations and investigations.

Research is as important to the field of abnormal psychology as to any other field of study. Consider, for example, schizophrenia and the treatment procedure known as the lobotomy. *Schizophrenia* is a severe disorder that causes people to lose contact with reality. Their thoughts, perceptions, and emotions become distorted and disorganized, and their behavior may be bizarre and withdrawn. For the first half of the twentieth century, this condition was attributed to inappropriate parenting. Clinicians blamed *schizophrenogenic* (“schizophrenia-causing”) mothers for the disorder—women they described as cold and domineering, and impervious to their children’s



"I'm a social scientist, Michael. That means I can't explain electricity or anything like that, but if you ever want to know about people I'm your man."

needs. As we will see in Chapter 14, this widely held belief turned out to be wrong.

During the same era, practitioners developed a surgical procedure that supposedly cured schizophrenia. In this procedure, called a *lobotomy*, a pointed instrument was inserted into the frontal lobe of the brain and rotated, destroying a considerable amount of brain tissue. Early reports described lobotomized patients as showing near-miraculous improvement. This impression, too, turned out to be wrong, although the mistake wasn't discovered until tens of thousands of persons had been lobotomized. Far from curing schizophrenia, lobotomies caused irreversible brain damage that left many patients withdrawn and even stuporous.

These errors underscore the importance of sound research in abnormal psychology. Theories and treatments that seem reasonable and effective in individual instances may prove disastrous when applied to various people or situations. Only by rigorously testing a theory or technique on representative groups of subjects can clinicians evaluate the accuracy and usefulness of their ideas and techniques. Until clinical researchers conducted relevant studies, millions of parents, already heartbroken by their children's schizophrenia, were additionally stigmatized as the primary cause of the disorder; and countless people with schizophrenia, already debilitated by their symptoms, were made permanently apathetic and spiritless by a lobotomy.

Clinical researchers face certain challenges that make their investigations particularly difficult. They must, for example, figure out how to measure such elusive concepts as unconscious motives, private thoughts, mood change, and human potential (Schwarz, 1999). They must consider the different cultural backgrounds, races, and genders of the people they select as research subjects. And, as we are reminded in Box 2-1, they must always ensure that the rights of their subjects, both human and animal, are not violated (Kapp, 2002; Bersoff & Bersoff, 1999). Despite such difficulties, research in this field has taken giant steps forward, especially during the last 35 years. In the past, most clinical researchers were limited by lack of training and a paucity of useful techniques. Now graduate clinical programs train large numbers of students to conduct appropriate studies on clinical topics. Moreover, the development of new research methods has greatly improved our understanding of psychological dysfunction.

## What Do Clinical Researchers Do?

Clinical researchers, also called clinical scientists, try to discover universal laws, or principles, of abnormal psychological functioning. They search for general, or nomothetic, truths about the nature, causes, and treatments of abnormality ("nomothetic" is derived from the Greek *nomothetis*, "lawgiver"). They do not typically assess, diagnose, or treat individual clients; that is the job of clinical practitioners, who seek an idiographic, or individualistic, understanding of abnormal behavior (Suzuki et al., 2001; Stricker & Trierweiler, 1995). We shall explore the work of practitioners in later chapters.

To gain a **nomothetic understanding** of abnormal psychology, clinical researchers, like scientists in other fields, rely primarily on the **scientific method**—that is, they systematically collect and evaluate information through careful observations (Gould, 2002; Beutler et al., 1995). These observations in turn enable them to pinpoint and explain relationships between *variables*. Simply stated, a variable is any characteristic or event that can vary, whether from time to time, from place to place, or from person to person. Age, sex, and race are human variables. So are eye color, occupation, and social status. Clinical researchers are interested in variables such as childhood upsets, present life experiences, moods,

### »»PSYCH•NOTES

#### Science and Scientists

The word "scientist" did not exist until it was coined by the nineteenth-century English scholar William Whewell.◀◀

90 percent of all scientists who have ever lived are alive today.◀◀

More scientific papers were published in the past 40 years than were published in all the years before.◀◀

An estimated 20 million people were enrolled as subjects in medical or psychological studies in 2001.◀◀

(Shamoo, 2002; Asimov, 1997)

## BOX 2-1

## Animals Have Rights

For years researchers have learned about abnormal human behavior from experiments with animals. Animals have sometimes been shocked, prematurely separated from their parents, and starved. They have had their brains surgically changed and they have even been killed, or “sacrificed,” so that researchers could autopsy them. Are such actions always ethically acceptable?

Animal rights activists say no (Cohen & Regan, 2001). They have called the undertakings cruel and unnecessary and have fought many forms of animal research with legal protests and demonstrations. Some have even harassed scientists and vandalized their labs. In turn, some researchers accuse the activists of caring more about animals than about human beings.

In response to this controversy, a number of state courts have ruled that university researchers must publicly disclose their research proposals to

help ensure the well-being of animal subjects. Similarly, government agencies and the American Psychological Association have issued rules and guidelines for animal research. Still the battle goes on (Goodwin, 2002).

Where does the public stand on the issue? In a survey of British citizens, 64 percent of the respondents said that they disagree with animal research—71 percent of the women and 57 percent of the men (MORI, 1999). But such public disapproval appears tenuous. In the same survey, a mere reminder that animal research can hasten clinical progress led to expressions of approval by a slim majority of the respondents. People in animal rights surveys tend to approve of experiments that use mice or rats more than those that use monkeys. Most of them disapprove of experiments that bring pain to animals, except when the investigations are seeking a cure for childhood leukemia, AIDS, or other life-threatening problems.



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social and occupational functioning, and responses to treatment. They try to determine whether two or more such variables change together and whether a change in one variable causes a change in another. Will the death of a parent cause a child to become depressed? If so, will a given treatment reduce that depression?

Such questions cannot be answered by logic alone, because scientists, like all human beings, make frequent errors in thinking (NAMHC, 1996). Thus clinical researchers must depend mainly on three methods of investigation: the *case study*, which typically focuses on one individual, and the *correlational method* and *experimental method*, approaches that usually gather information about many individuals. Each is best suited to certain kinds of circumstances and questions (Beutler et al., 1995). Collectively, these methods enable scientists to form and test *hypotheses*, or hunches, that certain variables are related in certain ways—and to draw broad conclusions as to why. More properly, a hypothesis is a tentative explanation offered to provide a basis for an investigation.

## The Case Study

A **case study** is a detailed and often interpretive description of a person’s life and psychological problems. It describes the person’s history, present circumstances, and symptoms. It may also speculate about why the problems developed, and it may describe the application and results of a particular treatment.

In his famous case study of Little Hans (1909), Sigmund Freud discusses a 4-year-old boy who has developed a fear of horses. Freud gathered his material from detailed letters sent him by Hans’s father, a physician who had attended lectures

**NOMOTHETIC UNDERSTANDING** A general understanding of the nature, causes, and treatments of abnormal psychological functioning in the form of laws or principles.

**SCIENTIFIC METHOD** The process of systematically gathering and evaluating information through careful observations to gain an understanding of a phenomenon.

**CASE STUDY** A detailed account of a person’s life and psychological problems.

**>>PSYCH•NOTES****Sigmund Freud**

Freud's fee for one session of therapy was \$20—\$160 in today's dollars.<<

For almost 40 years Freud treated patients 10 hours per day, five or six days per week.<<

Little Hans's father was a great admirer of Freud and not entirely objective. He communicated to Freud only those events that he knew would interest the doctor and support his theory.<<

Freud's parents often favored the precociously intelligent Sigmund over his siblings—for example, by giving him his own room in which to study in peace.<<

Freud did not use the term "psychoanalysis" until 1896, when he was already 40.<<

(Gay, 1999; Asimov, 1997; Schwartz, 1993)

on psychoanalysis, and from his own limited interviews with the child. Freud's study runs 140 pages in his *Collected Papers*, so only key excerpts are presented here.

One day while Hans was in the street he was seized with an attack of morbid anxiety. . . . [Hans's father wrote:] "He began to cry and asked to be taken home. . . . In the evening he grew visibly frightened; he cried and could not be separated from his mother. . . . [When taken for a walk the next day], again he began to cry, did not want to start, and was frightened. . . . On the way back from Schönbrunn he said to his mother, after much internal struggling: 'I was afraid a horse would bite me.' . . . In the evening he . . . had another attack similar to that of the previous evening. . . ."

But the beginnings of this psychological situation go back further still. . . . The first reports of Hans date from a period when he was not quite three years old. At that time, by means of various remarks and questions, he was showing a quite peculiarly lively interest in that portion of his body which he used to describe as his "widdler" [his word for penis]. . . .

When he was three and a half his mother found him with his hand to his penis. She threatened him in these words: "If you do that, I shall send for Dr. A. to cut off your widdler. And then what'll you widdle with?" . . . This was the occasion of his acquiring [a] "castration complex." . . .

[At the age of four, Hans entered] a state of intensified sexual excitement, the object of which was his mother. The intensity of this excitement was shown by . . . two attempts at seducing his mother. [One such attempt, occurring just before the outbreak of his anxiety, was described by his father:] "This morning Hans was given his usual daily bath by his mother and afterwards dried and powdered. As his mother was powdering round his penis and taking care not to touch it, Hans said: 'Why don't you put your finger there?' . . ."

. . . The father and son visited me during my consulting hours. . . . Certain details which I now learnt—to the effect that [Hans] was particularly bothered by what horses wear in front of their eyes and by the black round their mouths—were certainly not to be explained from what we knew. But as I saw the two of them sitting in front of me and at the same time heard Hans's description of his anxiety-horses, a further piece of the solution shot through my mind. . . . I asked Hans jokingly whether his horses wore eyeglasses, to which he replied that they did not. I then asked him whether his father wore eyeglasses, to which, against all the evidence, he once more said no. Finally I asked him whether by "the black round the mouth" he meant a moustache; and I then disclosed to him that he was afraid of his father, precisely because he was so fond of his mother. It must be, I told him, that he thought his father was angry with him on that account; but this was not so, his father was fond of him in spite of it, and he might admit everything to him without any fear. Long before he was in the world, I went on, I had known that a little Hans would come who would be so fond of his mother that he would be bound to feel afraid of his father because of it. . . .

By enlightening Hans on this subject I had cleared away his most powerful resistance. . . . [T]he little patient summoned up courage to describe the details of his phobia, and soon began to take an active share in the conduct of the analysis.

. . . It was only then that we learnt [that Hans] was not only afraid of horses biting him—he was soon silent upon that point—but also of carts, of furniture-vans, and of buses . . . , of horses that started moving, of horses that looked big and heavy, and of horses that drove quickly. The meaning of these specifications was explained by Hans himself: he was afraid of horses falling down, and consequently incorporated in his phobia everything that seemed likely to facilitate their falling down.

It was at this stage of the analysis that he recalled the event, insignificant in itself, which immediately preceded the outbreak of the illness and may no doubt be regarded as the exciting cause of the outbreak. He went for a walk with his mother, and saw a bus-horse fall down and kick about with its feet. This made

a great impression on him. He was terrified, and thought the horse was dead; and from that time on he thought that all horses would fall down. His father pointed out to him that when he saw the horse fall down he must have thought of him, his father, and have wished that he might fall down in the same way and be dead. Hans did not dispute this interpretation. . . . From that time forward his behavior to his father was unconstrained and fearless, and in fact a trifle overbearing.

It is especially interesting . . . to observe the way in which the transformation of Hans's libido into anxiety was projected on to the principal object of his phobia, on to horses. Horses interested him the most of all the large animals; playing at horses was his favorite game with the older children. I had a suspicion—and this was confirmed by Hans's father when I asked him—that the first person who had served Hans as a horse must have been his father. . . . When repression had set in and brought a revulsion of feeling along with it, horses, which had till then been associated with so much pleasure, were necessarily turned into objects of fear.

[Hans later reported] two concluding phantasies, with which his recovery was rounded off. One of them, that of [a] plumber giving him a new and . . . bigger widdler, was . . . a triumphant wish-phantasy, and with it he overcame his fear of castration. . . . His other phantasy, which confessed to the wish to be married to his mother and to have many children by her . . . corrected that portion of those thoughts which was entirely unacceptable; for, instead of killing his father, it made him innocuous by promoting him to a marriage with Hans's grandmother. With this phantasy both the illness and the analysis came to an appropriate end.

(Freud, 1909)

Most clinicians take notes and keep records in the course of treating their patients, and some, like Freud, further organize such notes into a formal case study to be shared with other professionals. The clues offered by a case study may help a clinician better understand or treat the person under discussion (Stricker & Trierweiler, 1995). In addition, case studies may play nomothetic roles that go far beyond the individual clinical case (Goodwin, 2002; Beutler et al., 1995).

## How Are Case Studies Helpful?

Case studies can be a source of *new ideas* about behavior and “open the way for discoveries” (Bolgar, 1965). Freud's own theory of psychoanalysis was based mainly on the patients he saw in private practice. He pored over their case studies, such as the one he wrote about Little Hans, to find what he believed to be universal psychological processes and principles of development. In addition, a case study may offer *tentative support* for a theory. Freud used case studies in this way as well, regarding them as evidence for the accuracy of his ideas. Conversely, case studies may serve to *challenge a theory's assumptions* (Kratowill, 1992).

Case studies may also inspire *new therapeutic techniques* or describe unique applications of existing techniques. The psychoanalytic principle that says patients may benefit from discussing their problems and discovering underlying psychological causes, for example, has roots in the famous case study of Anna O., presented by Freud's collaborator Josef Breuer, a case we shall explore in Chapter 3. Similarly, Freud believed that the case study of Little Hans demonstrated the therapeutic potential of a verbal approach for children as well as for adults.

Finally, case studies may offer opportunities to study *unusual problems* that do not occur often enough to permit a large number of observations (Goodwin, 2002). For years information about multiple personality disorders was based almost exclusively on case studies, such as the famous *The Three Faces of Eve*, a clinical account of a woman who displayed three alternating personalities, each having a distinct set of memories, preferences, and personal habits (Thigpen & Cleckley, 1957).



**Case study, Hollywood style** Case studies often find their way into the arts or media and capture the public's attention. Unfortunately, as this movie poster of *The Three Faces of Eve* illustrates, the studies may be trivialized or sensationalized in those venues.



## What Are the Limitations of Case Studies?

Case studies, although useful in many ways, also have limitations. First, they are reported by *biased observers*, that is, by therapists who have a personal stake in seeing their treatments succeed (Goodwin, 2002; Stricker & Trierweiler, 1995). These

observers must choose what to include in a case study, and their choices may at times be self-serving. Second, case studies rely upon *subjective evidence*. Are a client's dysfunction and improvement really caused by the events that the therapist or client says are responsible? In fact, these are only a small subset of the events that may be contributing to the situation. When investigators are able to rule out all possible causes except one, a study is said to have internal accuracy, or **internal validity**. Obviously, case studies rate low on that score.

Another problem with case studies is that they provide *little basis for generalization*. Even if we agree that Little Hans developed a dread of horses because he was terrified of castration and feared his father, how can we be confident that other people's phobias are rooted in the same kinds of causes? Events or treatments that seem important in one case may be of no help at all in efforts to understand or treat others. When the findings of an

investigation can be generalized beyond the immediate study, the investigation is said to have external accuracy, or **external validity**. Case studies rate low on external validity, too (Goodwin, 2002).

The limitations of the case study are largely addressed by two other methods of investigation: the *correlational method* and the *experimental method*. They do not offer the richness of detail that makes case studies so interesting, but they do help investigators draw broad conclusions about abnormality in the population at large. Thus they are now the preferred methods of clinical investigation (Pincus et al., 1993). Three features of these methods enable clinical investigators to gain nomothetic insights: (1) The researchers typically observe many individuals. That way, they can collect enough information, or data, to support a conclusion. (2) The researchers apply procedures uniformly. Therefore other researchers can repeat, or *replicate*, a particular study to see whether it consistently gives the same findings. (3) The researchers use *statistical tests* to analyze the results of a study. These tests can help indicate whether broad conclusions are justified.

## The Correlational Method

**Correlation** is the degree to which events or characteristics vary with each other. The **correlational method** is a research procedure used to determine this "co-relationship" between variables. This method can, for example, answer the question "Is there a correlation between the amount of stress in people's lives and the degree of depression they experience?" That is, as people keep experiencing stressful events, are they increasingly likely to become depressed? To test this question, researchers have collected life stress scores (for example, the number of threatening events experienced during a certain period of time) and depression scores (for example, scores on a depression survey) from individuals and have correlated these scores.

The people who are chosen for a study are its *subjects*, or *participants*, collectively called the *sample*. A sample must be representative of the larger population that the researchers wish to understand. Otherwise the relationship found in the study may not apply elsewhere in the real world—it may not have external validity. If researchers were to find a correlation between life stress and depression in a sample consisting entirely of children, for example, they could not draw clear conclusions about what, if any, correlation exists among adults.

Courtesy of Edna Moriok



### Does mental dysfunctioning run in families?

One of the most celebrated case studies in abnormal psychology is a study of identical quadruplets dubbed the "Genain" sisters by researchers (after the Greek words for "dire birth"). All the sisters developed schizophrenia in their twenties.

**INTERNAL VALIDITY** The accuracy with which a study can pinpoint one of various possible factors as the cause of a phenomenon.

**EXTERNAL VALIDITY** The degree to which the results of a study may be generalized beyond that study.

**CORRELATION** The degree to which events or characteristics vary along with each other.

**CORRELATIONAL METHOD** A research procedure used to determine how much events or characteristics vary along with each other.

## Describing a Correlation

Suppose we use the correlational method to conduct a study of depression. We collect life stress scores and depression scores for 10 subjects, and we plot the scores on a graph, as shown in Figure 2-1 on the next page. As you can see, the subject named Jim has a recent life stress score of 7, meaning seven threatening events over the past three months; he also has a depression score of 25. Thus he is “located” at the point on the graph where these two scores meet. The graph provides a visual representation of our data. Here, notice that the data points all fall roughly along a straight line that slopes upward. We draw the line so that the data points are as close to it as possible. This line is called the *line of best fit*.

The line of best fit in Figure 2-1 slopes upward and to the right, indicating that the variables under examination are increasing or decreasing together. That is, the greater someone’s life stress score, the higher his or her score on the depression scale. When variables change the same way, their correlation is said to have a positive *direction* and is referred to as a *positive correlation*. Most studies of recent life stress and depression have indeed found a positive correlation between those two variables (Monroe & Hadjiyannakis, 2002; Paykel & Cooper, 1992).

Correlations can have a negative rather than a positive direction. In a *negative correlation*, the value of one variable increases as the value of the other variable decreases. Researchers have found, for example, a negative correlation between depression and activity level. The greater one’s depression, the lower the number of one’s activities. When the scores of a negative correlation are plotted, they produce a downward-sloping graph, like the one shown in Figure 2-2.

There is still a third possible outcome for a correlational study. The variables under study may be *unrelated*, meaning that there is no consistent relationship between them. As the measures of one variable increase, those of the other variable sometimes increase and sometimes decrease. The graph of this outcome looks like Figure 2-3. Here the line of best fit is horizontal, with no slope at all. Studies have found that depression and intelligence are unrelated, for example.

In addition to knowing the direction of a correlation, researchers need to know its *magnitude*, or strength. That is, how closely do the two variables correspond? Does one always vary along with the other, or is their relationship less exact? When two variables are found to vary together very closely in subject after subject, the correlation is said to be high, or strong.

Look again at Figure 2-1. In this graph of a positive correlation between depression and life stress, the data points all fall very close to the line of best fit. Researchers can predict each person’s score on one variable with a high degree of confidence if they know his or her score on the other. But what if the graph of the correlation between depression and life stress looked more like Figure 2-4? Now the data points are loosely scattered around the line of best fit rather than hugging it closely. In this case, researchers could not predict with as much accuracy a subject’s score on one variable from the score on the other variable. The correlation in Figure 2-1 is stronger, or greater in magnitude, than that in Figure 2-4.

The direction and magnitude of a correlation are often calculated numerically and expressed by a statistical term called the *correlation coefficient*, symbolized by the letter *r*. The correlation coefficient can vary from +1.00, which indicates a perfect positive correlation between two variables, down to -1.00, which represents a perfect negative correlation. The *sign* of the coefficient (+ or -) signifies the direction of the correlation; the *number* represents its magnitude. An *r* of .00 reflects a zero correlation, or no relationship between variables. The closer *r* is to .00, the weaker, or lower in magnitude, the correlation. Thus correlations of +.75



Monika Graff/The Image Works

**The impact of stress** On the day after the September 11, 2001, terrorist attacks on the World Trade Center, a New York City couple and their cat make their way out of downtown Manhattan, where acrid smoke from the burning collapsed buildings continued to loom over the area. Researchers have found that the stress produced by these attacks was accompanied by a significant rise in the onset of psychological symptoms and disorders.

### >>PSYCH•LISTINGS

#### Psychological Disorders Linked to Life Stress

Depression<<

Anxiety disorders<<

Eating disorders<<

Posttraumatic stress disorder<<

Substance abuse<<

Dissociative disorders<<

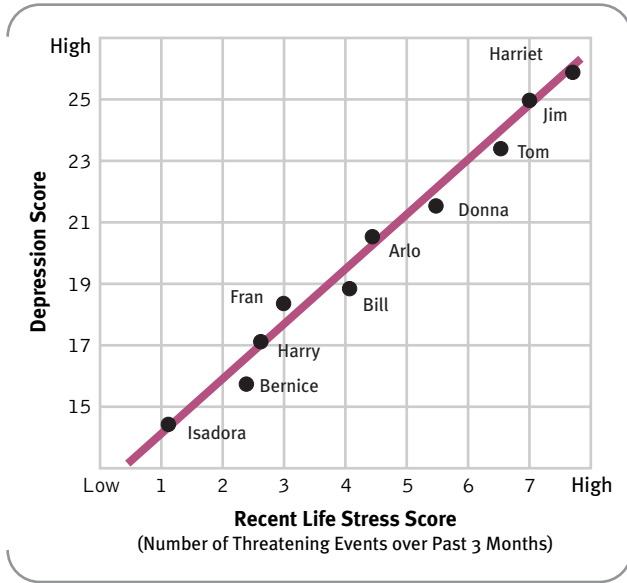
Sleep disorders<<

Psychophysiological disorders<<

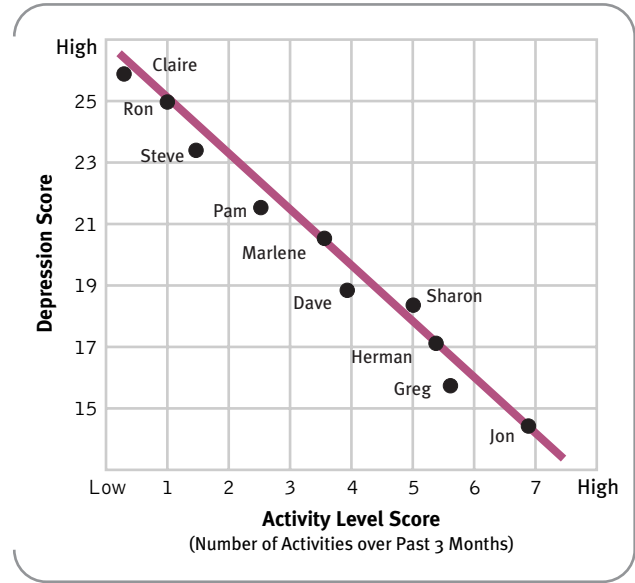
Sexual dysfunction<<

Suicide<<

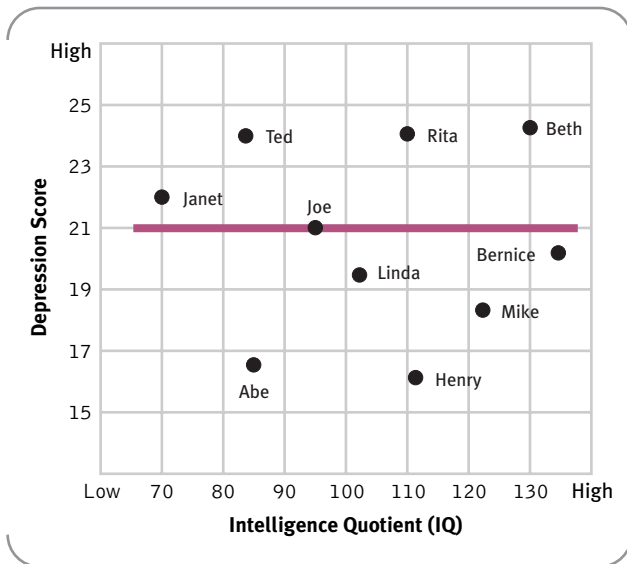
(Bremner, 2002; Fink 2000)



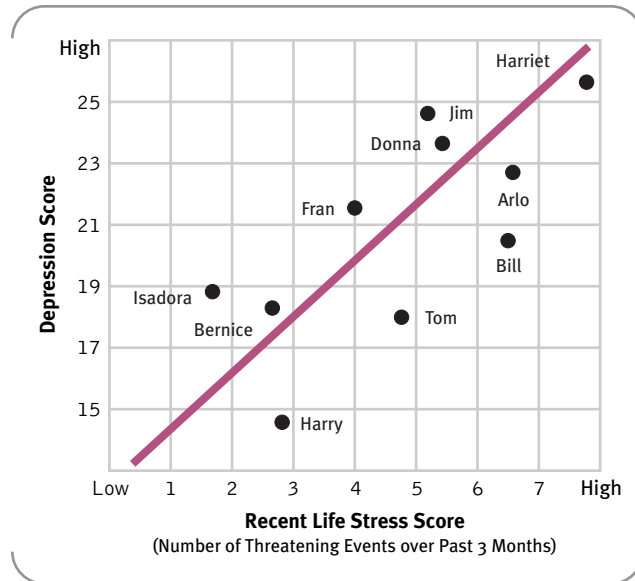
**FIGURE 2-1 Positive correlation** The relationship between amount of recent stress and feelings of depression shown by this hypothetical sample of 10 subjects is a near-perfect “positive” correlation.



**FIGURE 2-2 Negative correlation** The relationship between number of activities and feelings of depression shown by this hypothetical sample is a near-perfect “negative” correlation.



**FIGURE 2-3 No correlation** The relationship between intelligence and feelings of depression shown by this hypothetical sample is a “near-zero” correlation.



**FIGURE 2-4 Magnitude of correlation** The relationship between amount of recent stress and feelings of depression shown by this hypothetical sample is a “moderately positive” correlation.

and  $-.75$  are of equal magnitude and equally strong, whereas a correlation of  $+.25$  is weaker than either.

Everyone’s behavior is changeable, and many human responses can be measured only approximately. Most correlations found in psychological research, therefore, fall short of a perfect positive or negative correlation. One study of life stress and depression, with a sample of 68 adults, found a correlation of  $+.53$  (Miller, Ingraham, & Davidson, 1976). Although hardly perfect, a correlation of this magnitude is considered large in psychological research.

## When Can Correlations Be Trusted?

Scientists must decide whether the correlation they find in a given sample of subjects accurately reflects a real correlation in the general population. Could the observed correlation have occurred by mere chance? They can never know for certain, but they can test their conclusions by a *statistical analysis* of their data, using principles of probability. In essence, they ask how likely it is that the study's particular findings have occurred by chance. If the statistical analysis indicates that chance is unlikely to account for the correlation they found, researchers may conclude that their findings reflect a real correlation in the general population.

A cutoff point helps researchers make this decision. By convention, if there is less than a 5 percent probability that a study's findings are due to chance (signified as  $p < .05$ ), the findings are said to be *statistically significant* and are thought to reflect the larger population. In the life stress study described earlier, a statistical analysis indicated a probability of less than 5 percent that the  $+ .53$  correlation found in the sample was due to chance (Miller et al., 1976). Therefore, the researchers concluded with some confidence that among adults in general, depression does tend to rise along with the amount of recent stress in a person's life. Generally, our confidence increases with the size of the sample and the magnitude of the correlation. The larger they are, the more likely it is that a correlation will be statistically significant.

## What Are the Merits of the Correlational Method?

The correlational method has certain advantages over the case study (see Table 2-1). First, it possesses high *external validity*. Because researchers measure their variables, observe large samples, and apply statistical analyses, they are in a better position to generalize their correlations to people beyond the ones they have studied. Furthermore, researchers can easily repeat correlational studies using new samples of subjects to check the results of earlier studies.

On the other hand, correlational studies, like case studies, lack *internal validity* (Goodwin, 2002). Although correlations allow researchers to describe the relationship between two variables, they do not *explain* the relationship. When we look at the positive correlation found in many life stress studies, we may be tempted to conclude that increases in recent life stress cause people to feel more depressed. In fact, however, the two variables may be correlated for any one of three reasons: (1) Life stress may cause depression. (2) Depression may cause people to experience more life stress (for example, a depressive approach to life may cause people to mismanage their money or may interfere with social relationships). (3) Depression and life stress may each be caused by a third variable, such as poverty.

### >>PSYCH•LISTINGS

#### Most Investigated Correlations in Clinical Research

Stress and onset of mental disorders<<

Culture (or gender or race) and mental disorders<<

Wealth and mental disorders<<

Social skills and mental disorders<<

Social support and mental disorders<<

Family conflict and mental disorders<<

Culture and treatment responsiveness<<

Social support and treatment responsiveness<<

Which symptoms of a disorder appear together?<<

How common is a disorder in a particular population?<<

**Table 2-1**

### Relative Strengths and Weaknesses of Research Methods

	PROVIDES INDIVIDUAL INFORMATION (IDIOGRAPHIC)	PROVIDES GENERAL INFORMATION (NOMOTHETIC)	PROVIDES CAUSAL INFORMATION	STATISTICAL ANALYSIS IS POSSIBLE	REPLICABLE
Case study	Yes	No	No	No	No
Correlational method	No	Yes	No	Yes	Yes
Experimental method	No	Yes	Yes	Yes	Yes

Although correlations say nothing about causation, they can still be of great use to clinicians. Clinicians know, for example, that suicide attempts increase as people become more depressed. Thus, when they work with severely depressed clients, they keep on the lookout for signs of suicidal thinking. Perhaps depression directly causes suicidal behavior, or perhaps a third variable, such as a sense of hopelessness, causes both depression and suicidal thoughts. Whatever the cause, just knowing that there is a correlation may enable clinicians to take measures (such as hospitalization) to help save lives.

Of course, in other instances, clinicians do need to know whether one variable causes another. Do parents' marital conflicts cause their children to be more anxious? Does job dissatisfaction lead to feelings of depression? Will a given treatment help people to cope more effectively in life? Questions about causality call for the experimental method, as we shall see later.

## Special Forms of Correlational Research

Epidemiological studies and longitudinal studies are two kinds of correlational research used widely by clinical investigators. **Epidemiological studies** reveal the incidence and prevalence of a disorder in a particular population. **Incidence** is the number of new cases that emerge during a given period of time. **Prevalence** is the total number of cases in the population during a given time period; prevalence includes both existing and new cases. Many researchers also refer to epidemiological studies as “descriptive studies” because the goal of such investigations is largely to *describe* the incidence or prevalence of a disorder “without trying to predict or explain when or why it occurs” (Compas & Gotlib, 2002, p. 69).

Over the past 30 years clinical researchers throughout the United States have worked on the largest epidemiological study ever conducted, called the Epidemiologic Catchment Area Study. They have interviewed more than 20,000 people in five cities to determine the prevalence of many psychological disorders and the treatment programs used (Regier et al., 1993). Another large-scale epidemiological study in the United States, the National Comorbidity Survey, has questioned more than 8,000 individuals (Kessler & Zhao, 1999). Both studies have been further compared with epidemiological studies in other countries, to see how rates of mental disorders and treatment programs vary around the world (Alegria et al., 2000).

Such epidemiological studies have helped researchers identify groups at risk for particular disorders. Women, it turns out, have a higher rate of anxiety disorders and depression than men, while men have a higher rate of alcoholism than women. Elderly people have a higher rate of suicide than younger people. And persons in some non-Western countries (such as Taiwan) have a higher rate of mental disorders than those in Western countries. These trends may lead researchers to suspect that something unique about certain groups or settings is helping to cause particular disorders (Rogers & Holloway, 1990). Declining health in elderly people, for example, may make them more likely to commit suicide; cultural pressures or attitudes common in one country may be responsible for a rate of mental dysfunctioning that differs from the rate found in another country. Yet, like other forms of correlational research, epidemiological studies themselves cannot confirm such suspicions.

### Twins, correlation, and inheritance

*Correlational studies of many pairs of twins have suggested a link between genetic factors and certain psychological disorders. Identical twins (who have identical genes) display a higher correlation for some disorders than do fraternal twins (whose genetic makeup is not identical).*

Aaron Haupt/Stock Boston



In **longitudinal studies** (also called *high-risk* or *developmental studies*), researchers observe the same subjects on many occasions over a long period of time. In one such study, investigators have observed the progress over the years of normally functioning children whose mothers or fathers suffered from schizophrenia (Schiffman et al., 2002, 2001; Mednick, 1971). The researchers have found, among other things, that the children of the parents with the most severe cases of schizophrenia were more likely to develop a psychological disorder and to commit crimes at later points in their development. Because longitudinal studies document the order of events, their correlations provide clues about which events are more likely to be causes and which to be the consequences. Certainly, for example, the children's problems did not cause their parents' schizophrenia. But longitudinal studies still cannot pinpoint causation (Compas & Gotlib, 2002). Did the children who developed psychological problems inherit a genetic factor? Or did their problems result from their parents' inadequate coping behaviors, the parents' long absences due to hospitalization, or some other factor? Again, only experimental studies can supply an answer.

## The Experimental Method

An **experiment** is a research procedure in which a variable is manipulated and the manipulation's effect on another variable is observed. In fact, most of us perform experiments throughout our lives without knowing that we are behaving so scientifically. Suppose that we go to a party on campus to celebrate the end of midterm exams. As we mix with people at the party, we begin to notice many of them becoming quiet and depressed. It seems the more we talk, the more subdued the other guests become. As the party deteriorates before our eyes, we decide we have to do something, but what? Before we can eliminate the problem, we need to know what's causing it.

Our first hunch may be that something we're doing is responsible. Perhaps our remarks about academic pressures have been upsetting everyone. We decide to change the topic to skiing in the mountains of Colorado, and we watch for signs of depression in our next round of conversations. The problem seems to clear up; most people now smile and laugh as they chat with us. As a final check of our suspicions, we could go back to talking about school with the next several people we meet. Their dark and dismal reaction would probably convince us that our propensity to talk about school was indeed the cause of the problem.

We have just performed an experiment, testing our hypothesis about a causal relationship between our conversational gambits and the depressed mood of the people around us. We manipulated the variable that we suspected to be the cause (the topic of discussion) and then observed the effect of that manipulation on the other variable (the mood of the people around us). In scientific experiments, the manipulated variable is called the **independent variable** and the variable being observed is called the **dependent variable**.

To examine the experimental method more fully, let us consider a question that is often asked by clinicians: "Does a particular therapy relieve the symptoms of a particular disorder?" Because this question is about a causal relationship, it can be answered only by an experiment. That is, experimenters must give the therapy in question to people who are suffering from a disorder and then observe whether they improve. Here the therapy is the independent variable, and psychological improvement is the dependent variable.

If the true, or primary, cause of changes in the dependent variable cannot be separated from other possible causes, then an experiment gives us very little information. Thus, experimenters must try to eliminate all **confounds** from the study—variables other than the independent variable that may also be affecting the dependent variable. When there are confounds in an experiment, they, rather than the independent variable, may be causing the observed changes.

**EPIDEMIOLOGICAL STUDY** A study that measures the incidence and prevalence of a disorder in a given population.

**INCIDENCE** The number of new cases of a disorder occurring in a population over a specific period of time.

**PREVALENCE** The total number of cases of a disorder occurring in a population over a specific period of time.

**LONGITUDINAL STUDY** A study that observes the same subjects on many occasions over a long period of time.

**EXPERIMENT** A research procedure in which a variable is manipulated and the effect of the manipulation is observed.

**INDEPENDENT VARIABLE** The variable in an experiment that is manipulated to determine whether it has an effect on another variable.

**DEPENDENT VARIABLE** The variable in an experiment that is expected to change as the independent variable is manipulated.

**CONFOUND** In an experiment, a variable other than the independent variable that is also acting on the dependent variable.

### >>BY THE NUMBERS

#### Treatment Effectiveness

30% Percentage of clients with various psychological disorders who improve with placebo (i.e., pretend) treatments<<

85% Those with panic disorder who improve with leading treatments<<

65% Those with depression helped by leading treatments<<

70% Those with eating disorders who respond to leading treatments<<

55% Those with erectile disorder who profit from treatment<<

0% Those with Alzheimer's disease who eventually overcome their disorder<<

**Is laughter a good medicine?** Members of this laughter club in Bombay, India, practice therapeutic laughing, or Hasyayog, a relatively new group treatment based on the belief that laughing at least 15 minutes each day will drive away depression and other ills. As many as 400 different kinds of therapies are currently used for psychological problems. An experimental design is needed to determine whether this or any other form of treatment actively causes clients to improve.



Robert Nickelsberg/The Image Works

For example, situational variables, such as the location of the therapy office (say, a quiet country setting) or a soothing color scheme in the office, may have a therapeutic effect on participants in a therapy study. Or perhaps the participants are unusually motivated or have high expectations that the therapy will work, factors that thus account for their improvement. To guard against confounds, researchers include three important features in their experiments—a *control group*, *random assignment*, and a *blind design* (Goodwin, 2002).

## The Control Group

A **control group** is a group of subjects who are not exposed to the independent variable under investigation but whose experience is similar to that of the **experimental group**, the subjects who are exposed to the independent variable. By comparing the two groups, an experimenter can better determine the effect of the independent variable.

To study the effectiveness of a particular therapy, for example, experimenters typically divide subjects into two groups after obtaining their consent to participate in the experiment (see Box 2-2). The experimental group may come into an office and receive the therapy for an hour, while the control group may simply come into the office for an hour. If the experimenters find later that the people in the experimental group improve more than the people in the control group, they may conclude that the therapy was effective, above and beyond the effects of time, the office setting, and any other confounds. To guard against confounds, experimenters try to provide all participants, both control and experimental, with experiences that are identical in every way—except for the independent variable.

Of course, it is possible that the differences observed between an experimental group and control group have occurred simply by chance. Thus, as with correlational studies, investigators who conduct experiments must do a statistical analysis on their data and find out how likely it is that the observed differences are due to chance. If the likelihood is very low—less than 5 percent ( $p < .05$ )—the differences between the two groups are considered to be statistically significant, and the experimenter may conclude with some confidence that they are due to the independent variable. As a general rule, if the sample of subjects is large, if the difference observed between groups is great, and if the range of scores within each group is small, the findings of an experiment are likely to be statistically significant.

### >>Q & A

**What is the difference between statistical significance and clinical significance in treatment studies?**

**Statistical significance** indicates whether a subject's improvement in functioning—large or small—occurred because of treatment.

**Clinical significance** indicates whether the amount of improvement is meaningful in the individual's life. Even if the moods of depressed subjects improve because of treatment, the individuals may still be too unhappy to enjoy life. Thus, although experimenters can determine *statistical significance*, only individuals and their clinicians can evaluate *clinical significance*. <<

## BOX 2-2

## Clear as a Bell?

To ensure that subjects know what they are getting into when they sign up for a study and to guarantee that subjects feel free to leave the study at any time, researchers must inform them about the nature of the study and about their rights. This principle of “informed consent,” the foundation of all human research, is usually implemented with a form that spells out everything the subjects need to know. But how

clear are informed consent forms? Not very, according to some recent studies (Mathew & McGrath, 2002; Hochhauser, 1999; Uretsky, 1999).

Many such forms are written at an advanced college level, making them incomprehensible to a large percentage of subjects. When investigators used a readability scale to compare various writing samples (higher scores indicated greater reading difficulty), they discovered the following:

A past Ann Landers column earned a score of 7.67 (75 percent of the population can understand it).

*Reader's Digest* magazine earned 9.95 (69 percent can understand it).

*The New Yorker* magazine earned 13.3 (43 percent can understand it).

Typical informed consent forms earned 15.03 (37 percent can understand them).

## Random Assignment

Researchers must also watch out for differences in the makeup of the experimental and control groups, since those differences may also confound a study's results. In a therapy study, for example, it may happen that the experimenter has unintentionally put wealthier subjects in the experimental group and poorer subjects in the control group. This difference, rather than their therapy, could be the cause of the greater improvement later found among the experimental subjects. To reduce the effects of preexisting differences, experimenters typically use **random assignment**. This is the general term for any selection procedure that ensures that every subject in the experiment is as likely to be placed in one group as the other. We might, for example, try flipping a coin or picking names out of a hat.

## Blind Design

A final confound problem is *bias*. Participants may bias an experiment's results by trying to please or help the experimenter (Goodwin, 2002). In a therapy experiment, for example, those who receive the treatment, knowing the purpose of the study and knowing which group they are in, might actually work harder to feel better or fulfill the experimenter's expectations. If so, subject bias rather than therapy could be causing their improvement.

To avoid this bias, experimenters can prevent participants from finding out which group they are in. This experimental strategy is called a **blind design** because subjects are blind as to their assigned group. In a therapy study, for example, control subjects could be given a **placebo** (Latin for “I shall please”), something that looks or tastes like real therapy but has none of its key ingredients. This “imitation” therapy is called *placebo therapy*. If the experimental (true therapy) subjects then improve more than the control (placebo therapy) subjects, experimenters have more confidence that the true therapy has caused their improvement.

An experiment may also be confounded by *experimenter bias* (Margraf et al., 1991)—that is, experimenters may have expectations that they unintentionally transmit to their subjects. This bias is sometimes referred to as the *Rosenthal effect*, after the psychologist who first identified it (Rosenthal, 1966). Experimenters can eliminate their own bias by arranging to be blind themselves. In a drug therapy study, for example, an aide could make sure that the real medication and the placebo drug look identical. The experimenter could then administer treatment without knowing which participants were receiving true medications and which were receiving false medications.

**CONTROL GROUP** In an experiment, a group of subjects who are not exposed to the independent variable.

**EXPERIMENTAL GROUP** In an experiment, the subjects who are exposed to the independent variable under investigation.

**RANDOM ASSIGNMENT** A selection procedure that ensures that subjects are randomly placed either in the control group or in the experimental group.

**BLIND DESIGN** An experiment in which subjects do not know whether they are in the experimental or the control condition.

**PLACEBO THERAPY** A sham treatment that the subject in an experiment believes to be genuine.



**>>LOOKING BACK****Notorious Clinical Studies**

**Project MK-ULTRA (1953–1963)** In collaboration with the CIA, Army researchers gave unknowing human subjects (usually soldiers) repeated doses of LSD. **Goal:** To determine the psychological effects of LSD. **Violations:** Subjects uninformed and endangered.<<

(Goodwin, 2002; Thomas, 1995)

**Willowbrook Study (1956–1970)** Medical researchers deliberately infected with hepatitis 1 of every 10 children admitted to Willowbrook, an institution for persons with mental retardation. **Goal:** To develop a hepatitis vaccine. **Violations:** Subjects uninformed and endangered; parents pressured into giving consent; research goals not related directly to the children's disorders.<<

(Goodwin, 2002; Beauchamp & Childress, 1979)

While the participants or the experimenter may be kept blind in an experiment, it is best that both be blind (a *double-blind design*). In fact, most medication experiments now use double-blind designs to test promising drugs (Morin et al., 1995). Many experimenters also arrange for judges to assess the patients' improvement independently, and the judges, too, are blind to group assignments—a *triple-blind design*.

## Alternative Experimental Designs

It is not easy to devise an experiment that is both well controlled and enlightening. Control of every possible confound is rarely attained in practice. Moreover, because psychological experiments typically use living beings, ethical and practical considerations limit the kinds of manipulations one can do (Kapp, 2002; Bersoff & Bersoff, 1999) (see Box 2–3 on page 42). Thus clinical researchers must often settle for experimental designs that are less than ideal. The most common such variations are the *quasi-experimental design*, the *natural experiment*, the *analogue experiment*, and the *single-subject experiment*.

### Quasi-Experimental Design

In **quasi-experiments**, or **mixed designs**, investigators do not randomly assign subjects to control and experimental groups but instead make use of groups that already exist in the world at large (Goodwin, 2002). For example, because investigators of child abuse cannot actually abuse a randomly chosen group of children, they must instead compare children who already have a history of abuse with children who do not. Of course, such a strategy violates the rule of random assignment and so introduces possible confounds into the study. Children who receive physical punishment, for example, usually come from poorer and larger families than children who are punished verbally. Any differences found later in the moods or self-concepts of the two groups of children may be due to differences in wealth or family size rather than to the abuse.

Child-abuse researchers often try to address the confound problems of quasi-experiments by using *matched control subjects*. That is, they match the experimental subjects with control subjects who are similar in age, sex, race, number of children in the family, socioeconomic status, type of neighborhood, or other important characteristics. For every abused child in the experimental group, they choose an unabused child with similar characteristics to be included in the control group. When the data from studies of this kind have shown that abused children are typically sadder and think less of themselves than matched control subjects who have not been abused, the investigators have been able to conclude with some confidence that abuse is causing the differences (Kinard, 1982).

### Natural Experiment

In **natural experiments** nature itself manipulates the independent variable, while the experimenter observes the effects. Natural experiments must be used for studying the psychological effects of unusual and unpredictable events such as floods, earthquakes, plane crashes, and fires. Because their subjects in those studies are selected by an accident of fate rather than by conscious design, natural experiments are actually a kind of quasi-experiment.

On February 26, 1972, a dam gave way in the town of Buffalo Creek, West Virginia, releasing 132 million gallons of black slag, mud, and water into the valley below. The disaster killed 125 people, injured hundreds more, and left thousands homeless. Eighteen months later, the researcher Goldine Gleser and her colleagues (1981) collected data from 381 survivors and from a control group of people who lived elsewhere. The survivors of the flood scored significantly higher on anxiety and depression measures (dependent variables) than the controls did.

**QUASI-EXPERIMENT** An experiment in which investigators make use of control and experimental groups that already exist in the world at large. Also called a *mixed design*.

**NATURAL EXPERIMENT** An experiment in which nature, rather than an experimenter, manipulates an independent variable.

**ANALOGUE EXPERIMENT** A research method in which the experimenter produces abnormal-like behavior in laboratory subjects and then conducts experiments on the subjects.

Christopher Brown/Stock Boston



**Natural experiments** A man surveys the damage wrought by a hurricane upon his home and belongings. Natural experiments conducted in the aftermath of such catastrophes have found that many survivors experience lingering feelings of anxiety and depression.

The survivors also experienced more difficulty falling asleep or staying asleep and had more nightmares.

Because natural experiments rely on unexpected occurrences in nature, they cannot be repeated at will. Also, because each natural event is unique in some ways, broad generalizations drawn from a single study could be incorrect. Nevertheless, catastrophes have provided opportunities for hundreds of natural experiments over the years, and certain findings have been obtained repeatedly. As a result, clinical scientists have identified patterns of reactions that often occur in such situations. We shall observe these patterns—acute stress disorders and posttraumatic stress disorders—in Chapter 5.

## Analogue Experiment

There is one way in which investigators can manipulate independent variables relatively freely while avoiding many of the ethical and practical limitations of clinical research. They can induce laboratory subjects to behave in ways that seem to resemble real-life abnormal behavior and then conduct experiments on the subjects in the hope of shedding light on the real-life abnormality. This is called an **analogue experiment**.

Often analogue studies use animals as subjects. Animal subjects are easier to gather and manipulate than human subjects, and their use poses fewer ethical problems. While the needs and rights of animal subjects must be considered, most experimenters are willing to subject animals to more discomfort than human subjects. They believe that the insights gained from such experimentation outweigh the discomfort of the animals, as long as their distress is not excessive (Goodwin, 2002; Plous, 1996). In addition, experimenters can, and often do, use human subjects in analogue experiments.

As we shall see in Chapter 8, the investigator Martin Seligman has used analogue studies with great success to investigate the causes of human depression. Seligman has theorized that depression results when people believe they no longer have any control over the good and bad things that happen in their lives. To test this theory, he has produced depression-like symptoms in laboratory subjects by

**Similar enough?** Chimpanzees and human beings share more than 90 percent of their genetic material, but their brains and bodies are very different, as are their perceptions and experiences. Thus, abnormal-like behavior produced in animal analogue experiments may differ from the human abnormality under investigation.



Michael Nichols/National Geographic Image Collection

## B O X 2-3

## Human Subjects Have Rights, Too

When today's students get together and talk about studies in which they have participated, they quickly discover that their research experiences were similar: the participants were informed about the nature and foreseeable risks of the study; the experimenters obtained the consent of subjects and reminded them that they were free to leave at any time; and the experimenters debriefed the subjects about specific goals and findings at the conclusion of the study.

It is no coincidence that these and related procedures are now included in most studies involving human subjects. When the Project MK-ULTRA and Willowbrook studies (see p. 40), along with several other scandalous investigations, came to light in the 1970s, the United States Congress quickly passed the National Research Act of 1974. This law required every research institute to set up a review board to monitor and protect patients' well-being in all federally funded studies (Lemonick & Goldstein, 2002). The

Department of Health and Human Services created the Office for Human Research Protection to oversee the review boards and to establish rules and guidelines for all such studies. Other countries set up similar procedures and guidelines. Moreover, in the 1970s universities began to train ethicists, who conferred with philosophers, psychologists, physicians, civil rights experts, and people from all sectors of society in ongoing efforts to develop acceptable research guidelines.

These efforts have greatly improved the ethics of clinical research, but some serious problems remain (Kapp, 2002; Saks et al., 2002). In fact, the clinical field was rocked just a few years ago by a new series of reports that revealed that during the 1980s and 1990s, many patients with severe mental disorders had been harmed or placed at risk in clinical studies (Kong, 1998). The studies in question typically involved antipsychotic drug treatments for patients with psychosis (loss of contact with

reality). It appears that many patients in these studies had agreed to receive drug treatments (or not to receive them) without fully understanding the risks involved. In addition, the drugs used in these studies left some of the subjects with more intense psychotic symptoms. Four types of studies were cited:

- ❖ **New Drug Studies** Patients are administered an experimental drug to see whether it reduces their symptoms. The new drug is being tested for effectiveness, safety, undesired effects, and dosage, meaning that the patients may be helped, unaffected, or damaged by the drug.
- ❖ **Placebo Studies** When a new drug is being tested on a group of experimental subjects, researchers may administer a placebo drug to a group of control subjects. The improvement of the experimental subjects is then compared with that of the placebo control subjects to determine the new drug's effectiveness. Unfortunately, in such

repeatedly giving them negative reinforcements (shocks, loud noises, task failures) over which they have no control. In these "learned helplessness" studies, the participants seem to give up, lose their initiative, and become sad—suggesting to some clinicians that human depression itself may indeed be caused by loss of control over one's reinforcements in life.

It is important to remember that the laboratory-induced learned helplessness produced in Seligman's analogue experiments is not known with certainty to be analogous to human depression. If this laboratory phenomenon is actually only superficially similar to depression, then the clinical inferences drawn from such experiments may be wrong and misleading. This, in fact, is the major limitation of all analogue research (Vredenburg, Flett, & Krames, 1993): researchers can never be certain that the phenomena they see in the laboratory are the same as the psychological disorders they are investigating.

### Single-Subject Experiment

Sometimes scientists do not have the luxury of experimenting on many subjects. They may, for example, be investigating a disorder so rare that few subjects are available. Experimentation is still possible, however, with a **single-subject experimental design**. Here a single subject is observed both before and after the manipulation of an independent variable.

**SINGLE-SUBJECT EXPERIMENT** A research method in which a single subject is observed and measured both before and after the manipulation of an independent variable.

studies, the placebo control subjects—often people with severe disorders—are receiving no treatment at all. For this reason, many researchers believe it is better to administer an established medication, rather than a placebo drug, to subjects in a control group. Improvement on the experimental drug can then be compared with improvement on the established drug to determine the merits of the new drug (LaVaque & Rossiter, 2001).

- ❖ **Symptom-Exacerbation Studies**  
Patients are given drugs designed to intensify their symptoms, so that researchers may learn more about the biology of their disorder. For example, people suffering from psychotic disorders have been given apomorphine, amphetamine, ketamine, and other drugs that lead to more delusions, hallucinations, and the like.
- ❖ **Medication-Withdrawal Studies**  
Researchers prematurely stop medications for patients who have been symptom-free while taking

the medications. The researchers then follow the patients as they relapse, in the hope of learning more about how and when patients can be taken off particular medications.

Each of these kinds of studies seeks to increase understanding of the biology of certain disorders and to improve treatment. Yet at what risk? When does the benefit to many outweigh the suffering of a few? As the clinical community and the public have grown more aware of the risks involved in these studies, they have called for better safeguards to protect research subjects with mental disorders. In 1999 the National Institute of Mental Health suspended some of its symptom-exacerbation studies, and the presidentially appointed National Bioethics Advisory Commission issued a list of recommendations. Moreover, the Office for Human Research Protection has recently undergone sweeping changes designed to make the agency more aggressive in its pro-

tection of human subjects (Lemonick & Goldstein, 2002). And Congress is currently preparing to introduce legislation that will protect the rights of human subjects in all studies, not just those receiving federal funding. Nevertheless, this important issue is far from being resolved.



**Furthering the cause of science** A subject drinks various substances to help determine whether the effects of alcohol are linked to genetic factors.

James Aronovski/Picture Group

Single-subject experiments first rely on baseline data—information gathered prior to any manipulations. These data set a standard with which later changes may be compared. The experimenter next introduces the independent variable and again observes the subject's behavior. Any changes in behavior are attributed to the effects of the independent variable. Common single-subject experimental designs are the ABAB and the *multiple-baseline designs* (Goodwin, 2002).

**ABAB DESIGN** In an ABAB, or *reversal, design*, a subject's reactions are measured and compared not only during a baseline period (condition A) and after the introduction of the independent variable (condition B) but also after the independent variable has been removed (condition A) and yet again after it has been reintroduced (condition B). If the subject's responses change back and forth along with changes in the independent variable, the experimenter may conclude that the independent variable is causing the shifting responses (Kratowill, 1992). Essentially, in an ABAB design a subject is compared with himself or herself under different conditions rather than with control subjects. Subjects, therefore, serve as their own controls (Compas & Gotlib, 2002).

One researcher used an ABAB design to determine whether the systematic use of rewards was helping to reduce a teenage boy's habit of disrupting his special education class with loud talk (Deitz, 1977). The treatment program consisted of rewarding the boy, who suffered from mental retardation, with extra teacher time

### >> IN THEIR WORDS

**“The temptation to form premature theories upon insufficient data is the bane of our profession.”**<<

Sherlock Holmes in *The Valley of Fear*, 1914

**“Life is the art of drawing sufficient conclusions from insufficient premises.”**<<

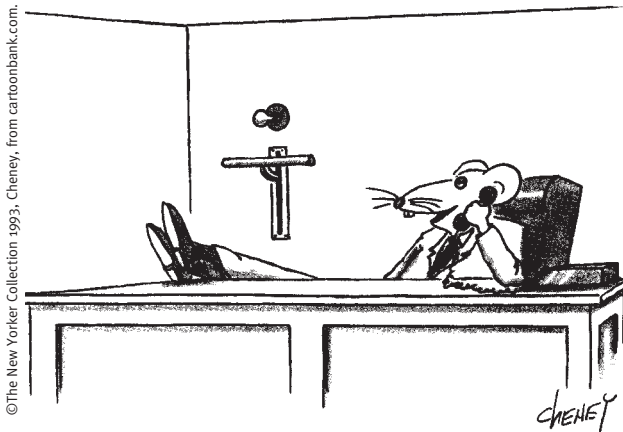
Samuel Butler

**“Find out the cause of this effect  
Or rather say, the cause of this defect,  
For this effect defective comes by cause.”**<<

William Shakespeare, *Hamlet*

**“Every individual is the exception to the rule.”**<<

C. G. Jung, 1921



“Oh, not bad. The light comes on, I press the bar, they write me a check. How about you?”

whenever he went 55 minutes without interrupting the class more than three times. When observed during a baseline period, the student was found to disrupt the class frequently with loud talk. Next the boy was given a series of teacher reward sessions (the independent variable); his loud talk decreased dramatically, as expected. Then the rewards from the teacher were stopped, and the student’s loud talk increased once again. Apparently the independent variable had indeed been the cause of the improvement. To be still more confident about this conclusion, the researcher had the teacher apply reward sessions yet again. Once again the subject’s behavior improved.

**MULTIPLE-BASELINE DESIGN** A *multiple-baseline design* does not employ the reversals found in an ABAB design. Instead, the experimenter selects two or more behaviors (two dependent variables) displayed by a subject and observes the effect that the manipulation of an independent variable has on each behavior (Balk, 1995; Herz et al., 1992). Let us say that the teenage boy in the ABAB study displayed two kinds of

inappropriate behavior—the disruptive talk during class and odd grimaces. In a multiple-baseline design, the experimenter would first collect baseline data on both the frequency of the boy’s disruptive talk and the frequency of his facial grimaces during a 55-minute period. In the next phase of the experiment, the experimenter would reward the boy with extra teacher time whenever he cut down his verbalizations but not when he cut down his grimaces. The experimenter would then measure changes in the boy’s verbal and grimacing behaviors, expecting the verbal interruptions to decrease but the grimacing to remain about the same as before. In the final phase of the experiment, the experimenter would also reward the boy with extra teacher attention whenever he reduced his grimacing, expecting that this manipulation would now reduce the grimacing as well. If the expected pattern of changes was observed, it would be reasonable to conclude that the manipulation of the independent variable (attention from the teacher), rather than some other factor, was responsible for the changes in the two behaviors.

Obviously, single-subject experiments—both ABAB and multiple-baseline designs—are similar to individual case studies in their focus on one subject. In single-subject experiments, however, the independent variable is manipulated systematically so that the investigator can confidently draw conclusions about the cause of an observed effect (Compas & Gotlib, 2002). The single-subject experiment therefore has greater internal validity than the case study. At the same time, single-subject experiments, like case studies, have only limited external validity. Because only one subject is studied, the experimenter cannot be sure that the subject’s reaction to the independent variable is typical of people in general (Goodwin, 2002).

## CROSSROADS: The Use of Multiple Research Methods

We began this discussion by noting that clinical scientists look for general laws that will help them understand, prevent, and treat psychological disorders. Various obstacles interfere with their progress, however (de Groot & Kennedy, 1995; Stricker & Trierweiler, 1995). We have already observed some of them. The most fundamental are summarized below.

1. *Clinical scientists must respect the rights of both human subjects and animal subjects.* Ethical considerations greatly limit the kinds of investigations that clinical scientists can conduct (Kapp, 2002; Sigmon, 1995).
2. *The causes of human functioning are very complex.* Because human behavior generally results from multiple factors working together, it is difficult to pinpoint specific causes. So many factors can influence human

functioning that it has actually been easier to unravel the complexities of energy and matter than to understand human sadness, stress, and anxiety.

3. *Human beings are changeable.* Moods, behaviors, and thoughts fluctuate. Is the person under study today truly the same as he or she was yesterday? Variability in a single person, let alone from person to person, limits the kinds of conclusions researchers can draw about abnormal functioning (Schwarz, 1999).
4. *Human self-awareness may influence the results of clinical investigations.* When human subjects know they are being studied, that knowledge influences their behavior. They may try to respond as they think researchers expect them to or to present themselves in a favorable light. Similarly, the attention they receive from investigators may itself increase their optimism and improve their mood. It is an axiom of science that the very act of measuring an object distorts the object to some degree. Nowhere is this more true than in the study of human beings.
5. *Clinical investigators have a special link to their subjects.* Clinical scientists, too, experience mood changes, troubling thoughts, and family problems. They may identify with the pain of their subjects or have personal opinions about their problems. These feelings can bias an investigator's attempts to understand abnormality (Rogler, 1999).

In short, human behavior is so complex that clinical scientists must use a variety of methods to study it. Each method addresses some of the inherent problems, but no one approach overcomes them all. Case studies allow investigators to consider a broader range of causes, but experiments pinpoint causes more precisely. Similarly, correlational studies allow broad generalizations, but case studies are richer in detail. It is best to view each research method as part of a team of approaches that together may shed considerable light on abnormal human functioning. When more than one method has been used to investigate a disorder, it is important to ask whether all the results seem to point in the same direction. If they do, we are probably making progress toward understanding and treating that disorder. Conversely, if the various methods seem to produce conflicting results, we must admit that our knowledge in that particular area is still tentative.

Before accepting any research findings, however, students of the clinical field must review the details of the studies with a very critical eye. Were the variables properly controlled? Was the choice of subjects representative, was the sample large enough to be meaningful, and has bias been eliminated? Are the investigator's conclusions justified? How else might the results be interpreted? Only after painstaking scrutiny can we conclude that a truly informative investigation has taken place.

### >>LAB NOTES

**Normal controls?** Researchers often compare subjects with a psychological disorder to control subjects who do not have the disorder. However, control subjects may not always be as free from disorder as this design requires. When one research team examined its pool of potential control subjects, it found that 30 percent currently had a psychological disorder and another 42 percent had a history of psychological disorders.<<

(Schecter et al., 1998)

**Unbiased researchers?** Only about 25 percent of studies that measure the effectiveness of various drug treatments take place in academic settings or medical centers. The rest are conducted by private researchers who contract with pharmaceutical companies.<<

(Whitaker, 1998)

## SUMMARY AND REVIEW

- **What do clinical researchers do?** Researchers use the *scientific method* to uncover *nomothetic* principles of abnormal psychological functioning. They attempt to identify and examine relationships between variables and depend primarily on three methods of investigation. pp. 28–29
- **The case study** A *case study* is a detailed account of a person's life and psychological problems. It can serve as a source of ideas about behavior, provide support for theories, challenge theories, clarify new treatment techniques, or offer an opportunity to study an unusual problem. Yet case studies may be reported by biased observers and rely on subjective evidence. In addition, they tend to have low *internal validity* and low *external validity*. pp. 29–32

### >>> PSYCH • LISTINGS

#### Most Investigated Causal Questions in Clinical Research

Does factor X cause a disorder? <<

Is cause A more influential than cause B? <<

How does family communication and structure affect family members? <<

How does a disorder affect the quality of a person's life? <<

How does a person's disorder affect family members? <<

Does treatment X alleviate a disorder? <<

Is treatment A more helpful than treatment B? <<

Why does treatment X work? <<

Does greater therapist expertise lead to greater progress in treatment? <<

Can an intervention prevent abnormal functioning? <<

- **The correlational method** Correlational studies systematically observe the degree to which events or characteristics vary together. This method allows researchers to draw broad conclusions about abnormality in the population at large.

A *correlation* may have a *positive* or *negative direction* and may be high or low in *magnitude*. It can be calculated numerically and expressed by the *correlation coefficient* ( $r$ ). Researchers perform a *statistical analysis* to determine whether the correlation found in a study is truly characteristic of the larger population or due to chance. Correlational studies generally have high external validity but lack internal validity. Two widely used forms of the correlation method are *epidemiological studies* and *longitudinal studies*. pp. 32–37

- **The experimental method** In *experiments*, researchers manipulate suspected causes to see whether expected effects will result. The variable that is manipulated is called the *independent variable*, and the variable that is expected to change as a result is called the *dependent variable*.

*Confounds* are variables other than the independent variable that are also acting on the dependent variable. To minimize their possible influence, experimenters use *control groups*, *random assignment*, and *blind designs*. The findings of experiments, like those of correlational studies, must be analyzed statistically. pp. 37–40

- **Alternative experimental designs** Clinical experimenters must often settle for experimental designs that are less than ideal, including the *quasi-experiment*, the *natural experiment*, the *analogue experiment*, and the *single-subject experiment*. pp. 40–44

- **The use of multiple research methods** Because human subjects have rights that must be respected, because the origins of behavior are complex, because behavior varies, and because the very act of observing a subject's behavior influences that behavior, it can be difficult to assess the findings of clinical research. Also, researchers must take into account their own biases and a study's unintended impact on subjects' usual behavior. To help address such obstacles, clinical investigators must use multiple research approaches. pp. 44–45

### >>> CRITICAL THOUGHTS <<<

1. Can you think of important beliefs, beyond those stated on page 27, that were once accepted as gospel but are now considered false?
2. Which are you more likely to be influenced by in your life—a case study (or similar anecdotal offering) or a research write-up? What features of anecdotal presentations make them particularly influential? pp. 28–32
3. Even when there are credible, well-known research findings to the contrary, many people hold on to false beliefs about human behavior, particularly abnormal behavior. Why does research fail to change their views? pp. 27–28, 44–45
4. How would you interpret the sizable correlation found between life stress and depression? How would you decide which of various possible interpretations is the most accurate? p. 35
5. In drug therapy studies, some control subjects who receive placebo pills actually show improvement. Why might sugar pills or other kinds of placebo treatments help people feel better? pp. 37, 39
6. What arguments might animal rights activists offer to support the position that the use of animals in experiments is often cruel and unnecessary? How might animal researchers counter such arguments? p. 29
7. Do outside restrictions on research—either animal or human—interfere with necessary investigations and thus limit potential gains for human beings? pp. 29, 42, 44



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STUDY**

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## Topic Overview:

### THE BIOLOGICAL MODEL

How Do Biological Theorists Explain Abnormal Behavior?

Biological Treatments

Assessing the Biological Model

### THE PSYCHODYNAMIC MODEL

How Did Freud Explain Normal and Abnormal Functioning?

How Do Other Psychodynamic Explanations Differ from Freud's?

Psychodynamic Therapies

Assessing the Psychodynamic Model

### THE BEHAVIORAL MODEL

How Do Behaviorists Explain Abnormal Functioning?

Behavioral Therapies

Assessing the Behavioral Model

### THE COGNITIVE MODEL

How Do Cognitive Theorists Explain Abnormal Functioning?

Cognitive Therapies

Assessing the Cognitive Model

### THE HUMANISTIC-EXISTENTIAL MODEL

Rogers's Humanistic Theory and Therapy

Gestalt Theory and Therapy

Spiritual Views and Interventions

Existential Theories and Therapy

Assessing the Humanistic-Existential Model

### THE SOCIOCULTURAL MODEL

How Do Sociocultural Theorists Explain Abnormal Functioning?

Sociocultural Treatments

Assessing the Sociocultural Model

### CROSSROADS: INTEGRATION OF THE MODELS

Philip Berman, a 25-year-old single unemployed former copy editor for a large publishing house, . . . had been hospitalized after a suicide attempt in which he deeply gashed his wrist with a razor blade. He described [to the therapist] how he had sat on the bathroom floor and watched the blood drip into the bathtub for some time before he telephoned his father at work for help. He and his father went to the hospital emergency room to have the gash stitched, but he convinced himself and the hospital physician that he did not need hospitalization. The next day when his father suggested he needed help, he knocked his dinner to the floor and angrily stormed to his room. When he was calm again, he allowed his father to take him back to the hospital.

The immediate precipitant for his suicide attempt was that he had run into one of his former girlfriends with her new boyfriend. The patient stated that they had a drink together, but all the while he was with them he could not help thinking that "they were dying to run off and jump in bed." He experienced jealous rage, got up from the table, and walked out of the restaurant. He began to think about how he could "pay her back."

Mr. Berman had felt frequently depressed for brief periods during the previous several years. He was especially critical of himself for his limited social life and his inability to have managed to have sexual intercourse with a woman even once in his life. As he related this to the therapist, he lifted his eyes from the floor and with a sarcastic smirk said, "I'm a 25-year-old virgin. Go ahead, you can laugh now." He has had several girlfriends to date, whom he described as very attractive, but who he said had lost interest in him. On further questioning, however, it became apparent that Mr. Berman soon became very critical of them and demanded that they always meet his every need, often to their own detriment. The women then found the relationship very unrewarding and would soon find someone else.

During the past two years Mr. Berman had seen three psychiatrists briefly, one of whom had given him a drug, the name of which he could not remember, but that had precipitated some sort of unusual reaction for which he had to stay in a hospital overnight. . . . Concerning his hospitalization, the patient said that "It was a dump," that the staff refused to listen to what he had to say or to respond to his needs, and that they, in fact, treated all the patients "sadistically." The referring doctor corroborated that Mr. Berman was a difficult patient who demanded that he be treated as special, and yet was hostile to most staff members throughout his stay. After one angry exchange with an aide, he left the hospital without leave, and subsequently signed out against medical advice.

Mr. Berman is one of two children of a middle-class family. His father is 55 years old and employed in a managerial position for an insurance company. He perceives his father as weak and ineffectual, completely dominated by the patient's overbearing and cruel mother. He states that he hates his mother with "a passion I can barely control." He claims that his mother used to call him names like "pervert" and "sissy" when he was growing up, and that in an argument she once "kicked me in the balls." Together, he sees his parents as rich, powerful, and selfish, and, in turn, thinks that they see him as lazy, irresponsible, and a behavior problem. When his parents called the therapist to discuss their son's treatment, they stated that his problem began with the birth of his younger brother, Arnold, when Philip was 10 years old. After

Arnold's birth Philip apparently became an "ornery" child who cursed a lot and was difficult to discipline. Philip recalls this period only vaguely. He reports that his mother once was hospitalized for depression, but that now "she doesn't believe in psychiatry."

Mr. Berman had graduated from college with average grades. Since graduating he had worked at three different publishing houses, but at none of them for more than one year. He always found some justification for quitting. He usually sat around his house doing very little for two or three months after quitting a job, until his parents prodded him into getting a new one. He described innumerable interactions in his life with teachers, friends, and employers in which he felt offended or unfairly treated, . . . and frequent arguments that left him feeling bitter . . . and spent most of his time alone, "bored." He was unable to commit himself to any person, he held no strong convictions, and he felt no allegiance to any group.

The patient appeared as a very thin, bearded, and bespectacled young man with pale skin who maintained little eye contact with the therapist and who had an air of angry bitterness about him. Although he complained of depression, he denied other symptoms of the depressive syndrome. He seemed preoccupied with his rage at his parents, and seemed particularly invested in conveying a despicable image of himself. . . .

(Spitzer et al., 1983, pp. 59–61)

Philip Berman is clearly a troubled person, but how did he come to be that way? How do we explain and correct his many problems? In confronting these questions, we must first look at the wide range of complaints we are trying to understand: Philip's depression and anger, his social failures, his lack of employment, his distrust of those around him, and the problems within his family. Then we must sort through all kinds of potential causes, internal and external, biological and interpersonal, past and present. Which is having the biggest impact on his behavior?

Although we may not realize it, we all use theoretical frameworks as we read about Philip. Over the course of our lives, each of us has developed a perspective that helps us make sense of the things other people say and do. In science, the perspectives used to explain phenomena are known as **models**, or **paradigms**. Each model spells out the scientist's basic assumptions, gives order to the field under study, and sets guidelines for its investigation (Kuhn, 1962). It influences what the investigators observe as well as the questions they ask, the information they seek, and how they interpret this information (Sharf, 2000). To understand how a clinician explains or treats a specific set of symptoms, such as Philip's, we must know which model shapes his or her view of abnormal functioning.

Until recently, clinical scientists of a given place and time tended to agree on a single model of abnormality—a model greatly influenced by the beliefs of their culture. The demonological model that was used to explain abnormal functioning during the Middle Ages, for example, borrowed heavily from medieval society's concerns with religion, superstition, and warfare. Medieval practitioners would have seen the devil's guiding hand in Philip Berman's efforts to commit suicide and his feelings of depression, rage, jealousy, and hatred. Similarly, their treatments for him—from prayers to whippings—would have sought to drive foreign spirits from his body.

Today several models are used to explain and treat abnormal functioning. This variety has resulted from shifts in values and beliefs over the past half-century, as well as improvements in clinical research. At one end of the spectrum is the *biological model*, which sees physical processes as the key to human behavior. At the other end is the *sociocultural model*, which examines the effects of society and culture on individual behavior. In between are four models that focus on more psychological and personal aspects of human functioning: the *psychodynamic*

#### »»BY THE NUMBERS

##### Attitudes toward Therapy

19% People who believe that psychotherapy is primarily for "people with serious psychological difficulties"«

13% Those who think psychotherapy is "a waste of time"«

49% Those who have positive feelings when they find out that an acquaintance is seeing a therapist«

10% Those who have negative feelings when they find out that an acquaintance is seeing a therapist«

(Fetto, 2002)

*model* looks at people's unconscious internal processes and conflicts; the *behavioral model* emphasizes behavior and the ways in which it is learned; the *cognitive model* concentrates on the thinking that underlies behavior; and the *humanistic-existential model* stresses the role of values and choices in human functioning.

Given their different assumptions and concepts, the models are sometimes in conflict. Those who follow one perspective often scoff at the "naive" interpretations, investigations, and treatment efforts of the others. Yet none of the models are complete in themselves. Each focuses mainly on one aspect of human functioning, and none can explain all aspects of abnormality.

**MODEL** A set of assumptions and concepts that help scientists explain and interpret observations. Also called a *paradigm*.

**NEURON** A nerve cell.

## The Biological Model

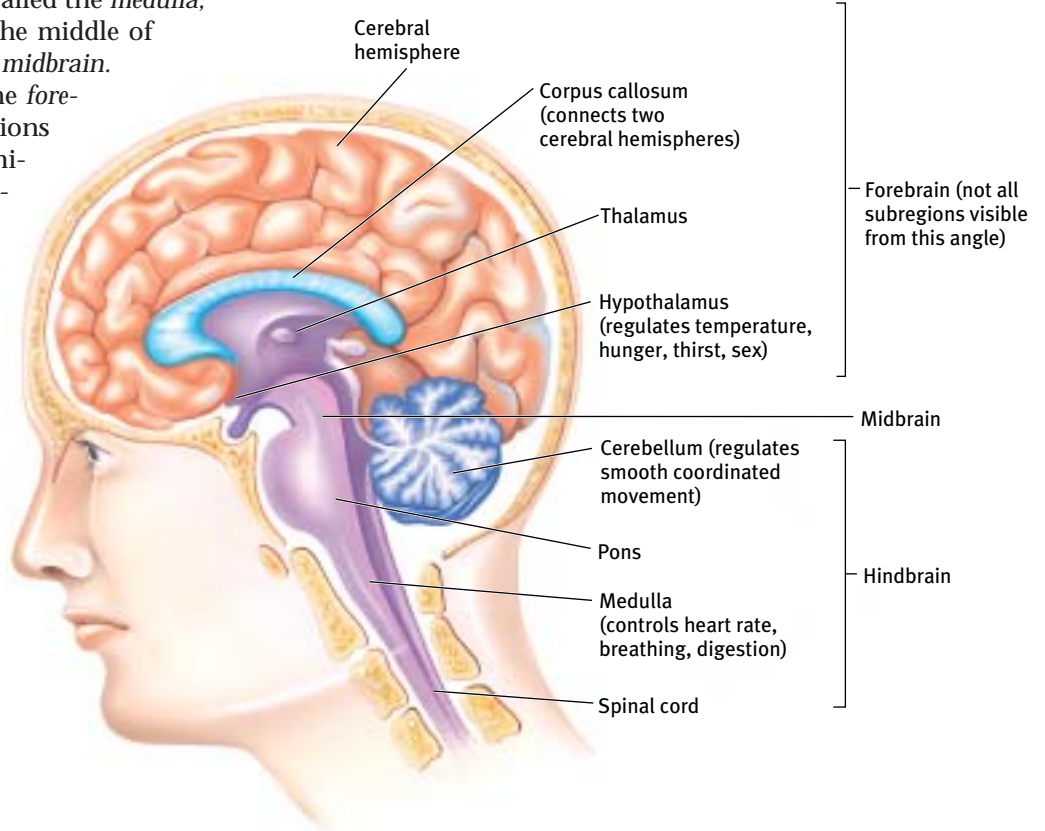
Philip Berman is a biological being. His thoughts and feelings are the results of biochemical and bioelectrical processes throughout his brain and body. Proponents of the *biological model* believe that a full understanding of his thoughts, emotions, and behavior must therefore include an understanding of their biological basis. Not surprisingly, they believe that the most effective treatments for Philip's problems will then be biological ones.

### How Do Biological Theorists Explain Abnormal Behavior?

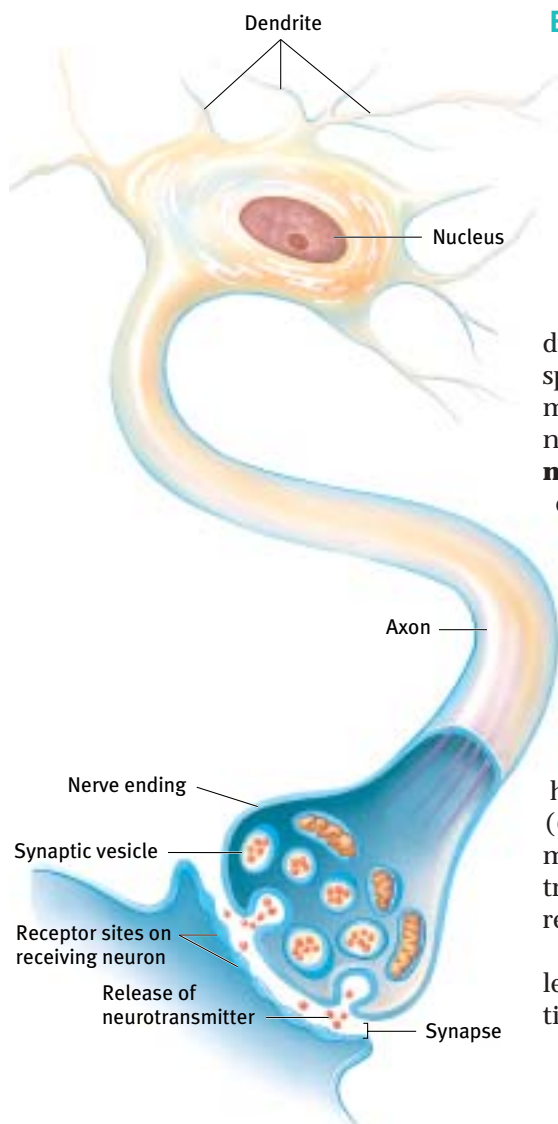
Adopting a medical perspective, biological theorists view abnormal behavior as an illness brought about by malfunctioning parts of the organism. Typically, they point to a malfunctioning brain as the cause of abnormal behavior, focusing particularly on problems in brain anatomy or brain chemistry (Andreasen, 2001).

**BRAIN ANATOMY AND ABNORMAL BEHAVIOR** The brain is made up of approximately 100 billion nerve cells, called **neurons**, and thousands of billions of support cells, called *glia* (from the Greek meaning "glue"). Within the brain large groups of neurons form distinct areas, or *brain regions*. To identify the regions of the brain more easily, let us imagine them as continents, countries, and states.

At the bottom of the brain is the "continent" known as the *hindbrain*, which is in turn made up of countrylike regions called the *medulla*, *pons*, and *cerebellum* (see Figure 3-1). In the middle of the brain is the "continent" called the *midbrain*. And at the top is the "continent" called the *forebrain*, which consists of countrylike regions called the *cerebrum* (the two cerebral hemispheres), the *thalamus*, and the *hypothalamus*, each in turn made up of statelike regions. The cerebrum, for instance, consists of the *cortex*, *corpus callosum*, *basal ganglia*, *hippocampus*, and *amygdala*. The neurons in each of these brain regions control important functions. The hippocampus helps control emotions and memory, for example. Clinical researchers have discovered connections between certain psychological disorders and problems in specific areas of the brain. One such disorder is *Huntington's disease*, a disorder marked by violent emotional outbursts, memory loss, suicidal thinking, involuntary body movements, and absurd beliefs. This disease has been traced to a loss of cells in the basal ganglia.



**FIGURE 3-1** The human brain A slice through the center of the brain reveals its major divisions and regions. Each region, composed of numerous neurons, is responsible for certain functions.



**FIGURE 3-2** A typical neuron A message travels down the neuron's axon to the nerve ending, where neurotransmitters carry the message across the synaptic space to a receiving neuron. (Adapted from Bloom, Lazerson, & Hofstadter, 1985, p. 35.)

**BRAIN CHEMISTRY AND ABNORMAL BEHAVIOR** Biological researchers have also learned that psychological disorders can be related to problems in the transmission of messages from neuron to neuron. Information spreads throughout the brain in the form of electrical impulses that travel from one neuron to one or more others. An impulse is first received by a neuron's *dendrites*, antenna-like extensions located at one end of the neuron. From there it travels down the neuron's axon, a long fiber extending from the neuron body. Finally, it is transmitted to other neurons through the nerve endings, at the far end of the neuron (see Figure 3-2).

But how do messages get from the nerve endings of one neuron to the dendrites of another? After all, the neurons do not actually touch each other. A tiny space, called the **synapse**, separates one neuron from the next, and the message must somehow move across that space. When an electrical impulse reaches a neuron's ending, the nerve ending is stimulated to release a chemical, called a **neurotransmitter**, that travels across the synaptic space to **receptors** on the dendrites of the adjacent neurons. Upon reception, some neurotransmitters tell the receiving neurons to "fire," that is, to trigger their own electrical impulse. Other neurotransmitters carry an inhibitory message; they tell receiving neurons to stop all firing. Obviously, neurotransmitters play a key role in moving information through the brain (see Table 3-1).

Researchers have identified dozens of neurotransmitters in the brain, and they have learned that each neuron uses only certain kinds (Andreassen, 2001). Studies indicate that abnormal activity by certain neurotransmitters can lead to specific mental disorders. Certain anxiety disorders, for example, have been linked to low activity of the neurotransmitter *gamma-aminobutyric acid* (GABA), schizophrenia has been linked to excessive activity of the neurotransmitter *dopamine*, and depression has been linked to low activity of the neurotransmitters *serotonin* and *norepinephrine*. Perhaps low serotonin activity is responsible for Philip Berman's pattern of depression and rage.

In addition to focusing on neurons and neurotransmitters, researchers have learned that mental disorders are sometimes related to abnormal chemical activity in the body's *endocrine system*. Endocrine glands, located throughout the

**Table 3-1**

### Brain Matters

- ✘ Around 95 percent of what is known about the brain has been learned in the past 10 years.
- ✘ A worm's brain has 23 neurons.
- ✘ An ostrich's brain is smaller than its eye.
- ✘ The average human brain weighs 3 pounds; the human liver weighs around 4 pounds.
- ✘ While the brain accounts for only about 2 percent of the total human body weight, it requires about 25 percent of the oxygen intake.
- ✘ Aristotle believed that the brain served merely as a cooling organ for the blood.
- ✘ 80 percent of the human brain is water.
- ✘ Messages travel to the brain at 224 miles per hour.
- ✘ One neuron may connect to as many as 25,000 others.
- ✘ The brain of the Neanderthal was bigger than that of the modern man.

Source: Ash, 1999; Jordon, 1998; Asimov, 1997; Roan, 1995.

body, work along with neurons to control such vital activities as growth, reproduction, sexual activity, heart rate, body temperature, energy, and responses to stress. The glands release chemicals called **hormones** into the bloodstream, and these chemicals then propel body organs into action. During times of stress, for example, the *adrenal glands*, located on top of the kidneys, secrete the hormone cortisol. Abnormal secretions of this chemical have been tied to anxiety and mood disorders.

**SOURCES OF BIOLOGICAL ABNORMALITIES** Why do some people have brain structures or biochemical activities that differ from the norm? A range of factors can contribute to biological dysfunctioning, from head injuries to poor nutrition to vascular diseases (which may affect the flow of blood to the brain). Three sources of biological abnormalities have received particular attention from clinical theorists in recent years—*genetics*, *evolution*, and *viral infections*.

**GENETICS AND ABNORMAL BEHAVIOR** Abnormalities in brain anatomy or chemistry are sometimes the result of genetic inheritance. Each cell in the human brain and body contains 23 pairs of *chromosomes*, with each chromosome in a pair inherited from one of the person's parents. Every chromosome contains numerous **genes**—segments that control the characteristics and traits a person inherits. Altogether, each cell contains between 30,000 and 40,000 genes (Andreasen, 2001). Scientists have known for years that genes help determine such physical characteristics as hair color, height, and eyesight. Genes can make people more prone to heart disease, cancer, or diabetes, and perhaps to possessing artistic or musical skill. In recent years, researchers have discovered that genes may also influence behavior, including abnormal behavior.

Studies suggest that inheritance plays a part in mood disorders, schizophrenia, mental retardation, Alzheimer's disease, and other mental disorders. Yet, with few exceptions, researchers have not been able to identify the specific genes that are the culprits. Nor do they yet know the extent to which genetic factors contribute to various mental disorders. It appears that in most cases no single gene is responsible for a particular behavior or mental disorder. Instead, many genes combine to help produce our actions and reactions, both functional and dysfunctional.

The precise contributions of various genes to mental disorders should become clearer in coming years, thanks in large part to the completion of the *Human Genome Project* in 2000. In this major research undertaking, which cost billions of dollars, scientists used the tools of molecular biology to *map*, or *sequence*, all of the genes in the human body in great detail. With this information in hand, they are now trying to identify which genes help cause various human disorders—medical and psychological. They hope eventually to be able to prevent or change genes that are problematic (Andreasen, 2001).

**EVOLUTION AND ABNORMAL BEHAVIOR** Genes that contribute to mental disorders are typically viewed as unfortunate occurrences—almost mistakes of inheritance. The responsible gene may be a *mutation*, an abnormal form of the appropriate gene that emerges by accident. Or the problematic gene may be inherited by an individual after it has initially entered the family line as a mutation (Andreasen, 2001). According to some theorists, however, many of the genes that contribute to abnormal functioning are actually the result of normal *evolutionary* principles (Fábrega, 2002; Caporael, 2001).

Evolutionary theorists argue that we can best understand why people behave the way they do—why certain genes are inherited—by examining our evolutionary history—the millions of years during which the human species evolved “from DNA sludge to upright primate” (Gilbert et al., 2000, p. 4). The theorists believe that various human reactions and the genes responsible for them have survived over the course of time because they have helped individuals to thrive and adapt.



Thomas A. Kelly/Gail Mooney/Corbis

**More than coincidence?** *Studies of twins suggest that some aspects of behavior and personality are influenced by genetic factors. Many identical twins, like these musicians, are found to have similar tastes, behave in similar ways, and make similar life choices. Some even develop similar abnormal behaviors.*

**SYNAPSE** The tiny space between the nerve ending of one neuron and the dendrite of another.

**NEUROTRANSMITTER** A chemical that, released by one neuron, crosses the synaptic space to be received at receptors on the dendrites of neighboring neurons.

**RECEPTOR** A site on a neuron that receives a neurotransmitter.

**HORMONES** The chemicals released by glands into the bloodstream.

**GENE** Chromosome segments that control the characteristics and traits we inherit.

AP Photo/Ron Edwards



Society will reap the benefits of the remarkable Human Genome Project for years to come. Here one of the project's directors casts a shadow against the detailed map of all genes in the human body, successfully completed in 2000.

● **PSYCHOTROPIC MEDICATIONS** Drugs that primarily affect the brain and reduce many symptoms of mental dysfunctioning.

● **ANTI-ANXIETY DRUGS** Psychotropic drugs that help reduce tension and anxiety. Also called *minor tranquilizers* or *anxiolytics*.

● **ANTIDEPRESSANT DRUGS** Psychotropic drugs that improve the moods of people with depression.

● **ANTIBIPOLAR DRUGS** Psychotropic drugs that help stabilize the moods of people suffering from a bipolar mood disorder. Also called *mood stabilizers*.

● **ANTIPSYCHOTIC DRUGS** Psychotropic drugs that help correct the confusion, hallucinations, and delusions found in psychotic disorders.

Those people who displayed such reactions in the past were more likely to fit in with their environment, survive, reproduce, and pass on the genes responsible for the reactions.

The evolutionary argument is straightforward with regard to many behaviors. Ancestors who had the ability to run fast, for example, or the craftiness to hide, were most able to escape predators and to reproduce. In turn, the genes responsible for effective walking, running, or problem solving were particularly likely to be passed on from generation to generation to the present day.

The evolutionary position is less apparent, however, with regard to abnormal functioning. Why, for example, would genes that produce excessive fear responses—genes that may predispose people to anxiety disorders—be passed on from generation to generation? According to evolutionary theorists, the capacity to experience fear was, and in many instances still is, adaptive. Fear alerted

individuals to dangers, threats, and losses, so that persons could avoid or escape potential problems. People who were particularly sensitive to danger—those with greater fear responses—were more likely to survive catastrophes, battles, and the like, and to reproduce, and so to pass on their fear genes. Of course, in today's world pressures and changes are more numerous, subtle, and complex than they were in the past, thus relegating many individuals with such genes to a near-endless stream of fear and arousal responses. However, say evolutionary theorists, such mismatches between genes and present-day environmental events should not hide the adaptive roots of the fear predispositions.

Actually, today's evolutionary theorists are interested in a combination of variables—adaptive behaviors of the past, genes, and the interaction between genes and current environmental events (Caporael, 2001). Despite this broad scope, the evolutionary perspective is controversial in the clinical field and has been rejected by many biological and nonbiological theorists. Imprecise and at times impossible to research, this explanation requires leaps of faith that many scientists find unacceptable. Nevertheless, as genetic discoveries and insights have grown, interest in the possible causes of genetic differences and how they relate to current circumstances has grown as well, and evolutionary theories have received considerable attention.

**VIRAL INFECTIONS AND ABNORMAL BEHAVIOR** Another possible source of abnormal brain structure or biochemical dysfunctioning is *viral infections*. As we shall see in Chapter 14, for example, research suggests that *schizophrenia*, a disorder marked by delusions, hallucinations, or other departures from reality, may be related to exposure to certain viruses in utero, before birth (de Messias et al., 2001; Torrey, 2001, 1991). Studies have found that the mothers of many individuals with this disorder contracted influenza or related viruses during their pregnancy. This and related pieces of circumstantial evidence suggest that a damaging virus may enter the fetus's brain and remain dormant there until the individual reaches puberty or young adulthood. At that time, activated by hormone changes or by another infection, the virus may produce the symptoms of schizophrenia. Interest in viral explanations of psychological disorders has been growing during the past decade, and, in fact, researchers have sometimes linked viruses to anxiety and mood disorders, as well as to psychotic disorders.

### Biological Treatments

Biological practitioners look for certain kinds of clues when they try to understand abnormal behavior. Does the person's family have a history of that behavior, and hence a possible genetic predisposition to it? (Philip Berman's case history mentions that his mother was once hospitalized for depression.) Does the



**Worldwide phenomenon** *The psychotropic drug revolution has spread throughout the world. Here a nurse gives medications to patients at Cambodia's largest mental health facility.*

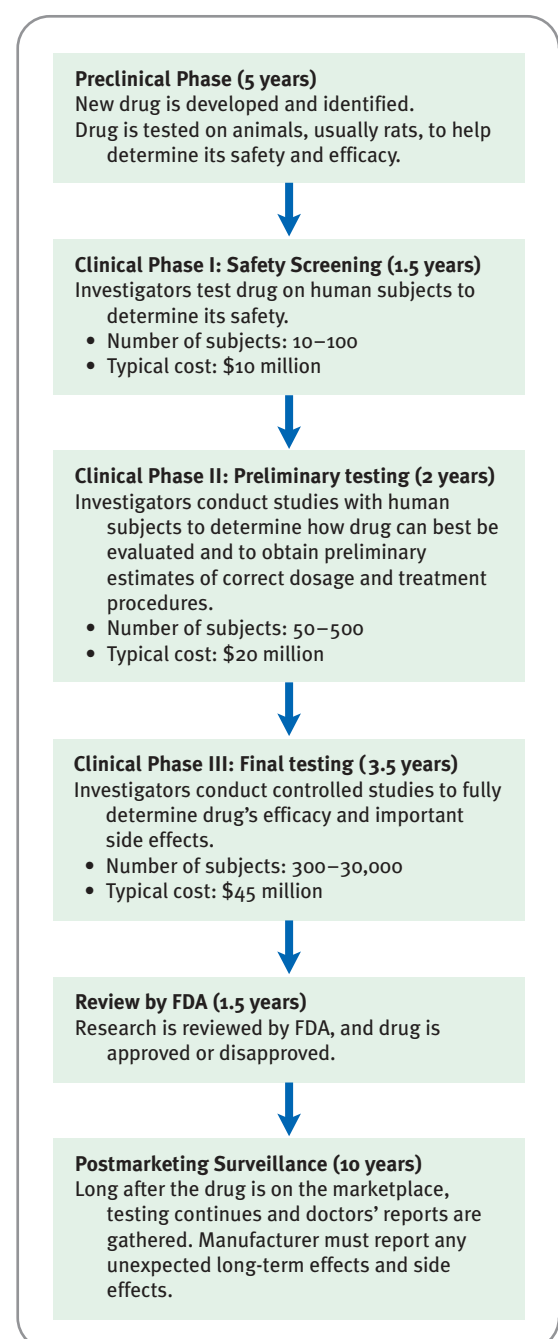
disorder seem to follow its own course? (Philip's depressed feelings were described as periodic; they seemed to come and go over the course of several years.) Is the behavior aggravated by factors that could have had a physiological effect? (Philip was having a drink when he flew into a jealous rage at the restaurant.)

Once the clinicians have pinpointed physical sources of dysfunctioning, they are in a better position to choose a biological course of treatment. The three leading kinds of biological treatments used today are *drug therapy*, *electroconvulsive therapy*, and *psychosurgery*. Drug therapy is by far the most common of these approaches; psychosurgery is infrequent.

In the 1950s, researchers discovered several effective **psychotropic medications**, drugs that mainly affect emotions and thought processes (see Figure 3-3). These drugs have greatly changed the outlook for a number of mental disorders and today are used widely, either alone or with other forms of therapy. However, the psychotropic drug revolution has also produced some major problems. Many people believe, for example, that the drugs are overused. Moreover, while drugs are effective in many cases, they do not help everyone.

Four major psychotropic drug groups are used in therapy: antianxiety, antidepressant, antibipolar, and antipsychotic drugs. **Antianxiety drugs**, also called **minor tranquilizers** or **anxiolytics**, help reduce tension and anxiety. These drugs include *alprazolam* (trade name Xanax) and *diazepam* (Valium). **Antidepressant drugs** help improve the mood of people who are depressed. These drugs, which include *fluoxetine* (Prozac) and *sertraline* (Zoloft), are able to help around 60 percent of those with depression (Grilly, 2002; Parker et al., 2001). **Antibipolar drugs**, also called **mood stabilizers**, help stabilize the moods of those with a bipolar disorder, a condition marked by mood swings from mania to depression. One of the most widely used of these drugs is *lithium*, which, like the antidepressants, is helpful in approximately 60 percent of cases (Grilly, 2002).

Finally, **antipsychotic drugs** help reduce the confusion, hallucinations, and delusions of *psychotic disorders*, disorders marked by a loss of contact with reality. Common antipsychotic drugs are *haloperidol* (Haldol) and *risperidone* (Risperdal). Research has shown that these drugs are more effective than any other single form of treatment for schizophrenia and other psychotic disorders, reducing symptoms in at least 65 percent of patients (Breier, 2001).



**FIGURE 3-3** **How does a new drug reach the marketplace?** *It takes an average of 14 years and tens of millions of dollars for a pharmaceutical company in the United States to bring a newly discovered drug to market. The company must carefully follow steps that are mandated by law. (Adapted from Lemonick & Goldstein, 2002; Andreasen, 2001; Zivin, 2000.)*



**Not that long ago** Before effective psychotropic drugs were developed, clinicians in mental institutions used techniques such as the “wet pack,” designed for calming excited patients.

The second form of biological treatment, used primarily on depressed patients, is **electroconvulsive therapy (ECT)**. Two electrodes are attached to a patient’s forehead and an electrical current of 65 to 140 volts is passed briefly through the brain. The current causes a brain seizure that lasts up to a few minutes. After seven to nine ECT sessions, spaced two or three days apart, many patients feel considerably less depressed. The treatment is able to improve the mood of approximately 60 percent of depressed subjects (Glass, 2001; Rey & Walters, 1997). It is used on tens of thousands of depressed persons annually, particularly those whose depression fails to respond to other treatments (Johnstone, 2000).

A third form of biological treatment is **psychosurgery**, brain surgery for mental disorders. It is thought to have roots as far back as trephining, the prehistoric practice of chipping a hole in the skull of a person who behaved strangely. Modern procedures are derived from a technique first developed in the late 1930s by a Portuguese neuropsychiatrist, Antonio de Egas Moniz. In this procedure, known as a *lobotomy*, a surgeon cuts the connections between the brain’s frontal lobes and the lower centers of the brain.

Today’s brain surgery procedures are much more precise than the lobotomies of the past (Weingarten & Cummings, 2001). They have fewer unwanted effects and are apparently helpful in some cases of severe depression, anxiety, and obsessive-compulsive disorder. Even so, they are considered experimental and are used only after certain severe disorders have continued for years without responding to any other form of treatment.

### Assessing the Biological Model

Today the biological model enjoys considerable respect. Biological research constantly produces valuable new information. And biological treatments often bring great relief when other approaches have failed. At the same time, this model has its shortcomings. Some of its proponents seem to expect that all human behavior can be explained in biological terms and treated with biological methods. This view can limit rather than enhance our understanding of abnormal functioning (Kosslyn et al., 2002). Our mental life is an interplay of biological and nonbiological factors, and it is important to understand that interplay rather than to focus on biological variables alone.

A second shortcoming is that much of the evidence for biological explanations is incomplete or inconclusive. Many brain studies, for example, are conducted on animals in whom symptoms of depression, anxiety, or some other abnormality have been produced by drugs, surgery, or experimental manipulation. Researchers can never be certain that the animals are experiencing the human disorder under investigation.

Finally, several of today’s biological treatments are capable of producing significant undesirable effects. Antipsychotic drugs, for example, may produce movement problems such as severe shaking, bizarre-looking contractions of the face and body, and extreme restlessness. Clearly such costs must be addressed and weighed against the drug’s benefits.

### The Psychodynamic Model

The *psychodynamic model* is the oldest and most famous of the modern psychological models. Psychodynamic theorists believe that a person’s behavior, whether normal or abnormal, is determined largely by underlying psychological forces of which he or she is not consciously aware. These internal forces are described as *dynamic*—that is, they interact with one another; and their interaction gives rise

**ELECTROCONVULSIVE THERAPY (ECT)** A form of biological treatment, used primarily on depressed patients, in which a brain seizure is triggered as an electric current passes through electrodes attached to the patient’s forehead.

**PSYCHOSURGERY** Brain surgery for mental disorders.

**ID** According to Freud, the psychological force that produces instinctual needs, drives, and impulses.

**EGO** According to Freud, the psychological force that employs reason and operates in accordance with the reality principle.

**EGO DEFENSE MECHANISMS** According to psychoanalytic theory, strategies developed by the ego to control unacceptable id impulses and to avoid or reduce the anxiety they arouse.



to behavior, thoughts, and emotions. Abnormal symptoms are viewed as the result of conflicts between these forces.

Psychodynamic theorists would view Philip Berman as a person in conflict. They would want to explore his past experiences because, in their view, psychological conflicts are tied to early relationships and to traumatic experiences that occurred during childhood. Psychodynamic theories rest on the *deterministic* assumption that no symptom or behavior is “accidental”: all behavior is determined by past experiences. Thus Philip’s hatred for his mother, his memories of her as cruel and overbearing, the weakness and ineffectiveness of his father, and the birth of a younger brother when Philip was 10 may all be important to the understanding of his current problems.

The psychodynamic model was first formulated by the Viennese neurologist Sigmund Freud (1856–1939) at the turn of the twentieth century. First, Freud worked with the physician Josef Breuer (1842–1925), conducting experiments on hypnosis and hysterical illnesses—mysterious physical ailments with no apparent medical cause. In a famous case, Breuer had treated a woman he called “Anna O.,” whose hysterical symptoms included paralysis of the legs and right arm, deafness, and disorganized speech. Breuer placed the woman under hypnosis, expecting that suggestions made to her in that state would help rid her of her hysterical symptoms. While she was under hypnosis, however, she began to talk about traumatic past events and to express deeply felt emotions. This venting of repressed memories seemed to enhance the effectiveness of the treatment. Anna referred to it as her “talking cure.”

Building on this early work, Freud developed the theory of *psychoanalysis* to explain both normal and abnormal psychological functioning as well as a corresponding method of treatment, a conversational approach also called psychoanalysis. During the early 1900s, Freud and several of his colleagues in the Vienna Psychoanalytic Society—including Carl Gustav Jung (1875–1961) and Alfred Adler (1870–1937)—became the most influential clinical theorists in the Western world. Freud’s 24 volumes on psychoanalytic theory and treatment are still widely studied today.



**Freud and Freud** Anna Freud, the last of Sigmund Freud’s six children, studied psychoanalysis with her father and then opened a practice next door to his. (They shared a waiting room.) Her work on defense mechanisms, other ego activities, and child development made her a major figure in her own right.

### How Did Freud Explain Normal and Abnormal Functioning?

Freud believed that three central forces shape the personality—instinctual needs, rational thinking, and moral standards. All these forces, he believed, operate at the unconscious level, unavailable to immediate awareness; and he believed them to be dynamic, or interactive. Freud called the forces the *id*, *ego*, and *superego*.

**THE ID** Freud used the term **id** to denote instinctual needs, drives, and impulses. The id operates in accordance with the *pleasure principle*; that is, it always seeks gratification. Freud also believed that all id instincts tend to be sexual, noting that from the very earliest stages of life a child’s pleasure is obtained from nursing, defecating, masturbating, or engaging in other activities that he considered to have sexual overtones. He further suggested that a person’s *libido*, or sexual energy, fuels the id.

**THE EGO** During our early years we come to recognize that our environment will not meet every instinctual need. Our mother, for example, is not always available to do our bidding. A part of the id separates off and becomes the **ego**. Like the id, the ego unconsciously seeks gratification, but it does so in accordance with the *reality principle*, the knowledge we acquire through experience that it can be unacceptable to express our id impulses outright. The ego, employing reason, guides us to know when we can and cannot express those impulses.

The ego develops basic strategies, called **ego defense mechanisms**, to control unacceptable id impulses and avoid or reduce the anxiety they arouse. The most

#### >>Q & A

##### Does the unconscious differ from the subconscious?

Yes. The **unconscious** consists of deep-seated thoughts, needs, or desires that are not organized into conscious awareness. Often they are thoughts that have been repressed because the person cannot accept them. The **subconscious** consists of thoughts and needs that lie much closer to conscious awareness. They are unnoticed, rather than repressed, and can be brought to the surface relatively easily (Padwa, 1996).<<

basic defense mechanism, *repression*, prevents unacceptable impulses from ever reaching consciousness. There are many other ego defense mechanisms, and each of us tends to favor some over others (see Table 3-2).

Table 3-2

### Defense Mechanisms to the Rescue

DEFENSE	OPERATION	EXAMPLE
Repression	Person avoids anxiety by simply not allowing painful or dangerous thoughts to become conscious.	An executive's desire to run amok and attack his boss and colleagues at a board meeting is denied access to his awareness.
Denial	Person simply refuses to acknowledge the existence of an external source of anxiety.	You are not prepared for tomorrow's final exam, but you tell yourself that it's not actually an important exam and that there's no good reason not to go to a movie tonight.
Fantasy	Person imagines events as a means of satisfying unacceptable, anxiety-producing desires that would otherwise go unfulfilled.	An aggressive driver cuts in front of you and pulls into the last remaining parking space. You later fantasize about getting out of your car and beating the person to a pulp in front of admiring onlookers.
Projection	Person attributes own unacceptable impulses, motives, or desires to other individuals.	The executive who repressed his destructive desires may project his anger onto his boss and claim that it is actually the boss who is hostile.
Rationalization	Person creates a socially acceptable reason for an action that actually reflects unacceptable motives.	A student explains away poor grades by citing the importance of the "total experience" of going to college and claiming that too much emphasis on grades would actually interfere with a well-rounded education.
Reaction formation	Person adopts behavior that is the exact opposite of impulses he or she is afraid to acknowledge.	A man experiences homosexual feelings and responds by taking a strong antihomosexual stance.
Displacement	Person displaces hostility away from a dangerous object and onto a safer substitute.	After your parking spot was taken, you released your pent-up anger by starting a fight with your roommate.
Intellectualization (isolation)	Person represses emotional reactions in favor of overly logical response to a problem.	A woman who has been beaten and raped gives a detached, methodical description of the effects that such attacks may have on victims.
Undoing	Person tries to make up for unacceptable desires or acts, frequently through ritualistic behavior.	A woman who has aggressive feelings toward her husband dusts and straightens their wedding photograph every time such thoughts occur to her.
Regression	Person retreats from an upsetting conflict to an early developmental stage at which no one is expected to behave maturely or responsibly.	A boy who cannot cope with the anger he feels toward his rejecting mother regresses to infantile behavior, soiling his clothes and no longer taking care of his basic needs.
Overcompensation	Person tries to cover up a personal weakness by focusing on another, more desirable trait.	A very shy young woman overcompensates for her weak social skills by spending many hours in the gym trying to perfect her physical condition.
Sublimation	Person expresses sexual and aggressive energy in ways that are acceptable to society.	Athletes, artists, surgeons, and other highly dedicated and skilled people may be reaching their high levels of accomplishment by directing otherwise potentially harmful energies into their work.



Laura Dwight, New York, NY

**Critical training** Freud believed that toilet training is a critical developmental experience. Children whose training is too harsh may become “fixated” at the anal stage and develop an “anal character”—stubborn, contrary, stingy, or controlling.



Catherine Kamow/Woodfin Camp &amp; Associates

**Like mother, like daughter** According to Freud, boys become attracted to their mothers and girls to their fathers during the phallic stage. Children repress these taboo impulses and identify instead with the parent of the same sex, acting like that parent in every way.

**THE SUPEREGO** The **superego** grows from the ego, just as the ego grows out of the id. As we learn from our parents that many of our id impulses are unacceptable, we unconsciously adopt, or *introject*, our parents’ values. We identify with our parents and judge ourselves by their standards. When we uphold their values, we feel good; when we go against them, we feel guilty. In short, we develop a *conscience*.

According to Freud, these three parts of the personality—the id, ego, and superego—are often in some degree of conflict. A healthy personality is one in which an effective working relationship, an acceptable compromise, has formed among the three forces. If the id, ego, and superego are in excessive conflict, the person’s behavior may show signs of dysfunction.

Freudians would therefore view Philip Berman as someone whose personality forces have a poor working relationship. His ego and superego are unable to control his id impulses, which lead him repeatedly to act in impulsive and often dangerous ways—suicide gestures, jealous rages, job resignations, outbursts of temper, frequent arguments.

**DEVELOPMENTAL STAGES** Freud proposed that at each stage of development, from infancy to maturity, new events and pressures challenge individuals and require adjustments in their id, ego, and superego. If the adjustments are successful, they lead to personal growth. If not, the person may become **fixated**, or entrapped, at an early stage of development. Then all subsequent development suffers, and the individual may well be headed for abnormal functioning in the future. Because parents are the key environmental figures during the early years of life, they are often seen as the cause of improper development.

Freud named each stage of development after the body area, or erogenous zone, that he considered most important to the child at that time. For example, he referred to the first 18 months of life as the *oral stage*. During this stage, children fear that the mother who feeds and comforts them will disappear. Children whose mothers consistently fail to gratify their oral needs may become fixated at the oral stage and display an “oral character” throughout their lives, marked by extreme dependence or extreme mistrust. Such persons are particularly prone to

**SUPEREGO** According to Freud, the psychological force that represents a person’s values and ideals.

**FIXATION** According to Freud, a condition in which the id, ego, and superego do not mature properly and are frozen at an early stage of development.

**>>BY THE NUMBERS****Honoring the Mother-Child Relationship**

74% Adult children who give a gift to their mother on Mother's Day<<

44% Adult children who visit their mother on Mother's Day<<

38% Adult children who call their mother on Mother's Day<<

95% Mothers who prefer personal contact or communication over a gift on Mother's Day<<

(Fetto, 2002)

develop depression. As we shall see in later chapters, Freud linked fixations at the other stages of development—*anal* (18 months to 3 years of age), *phallic* (3 to 5 years), *latency* (5 to 12 years), and *genital* (12 years to adulthood)—to yet other kinds of psychological dysfunction.

### How Do Other Psychodynamic Explanations Differ from Freud's?

Personal and professional differences between Freud and his colleagues led to a split in the Vienna Psychoanalytic Society early in the twentieth century. Carl Jung, Alfred Adler, and others developed new theories. Although the new theories departed from Freud's ideas in important ways, each held on to Freud's belief that human functioning is shaped by dynamic (interacting) psychological forces. Thus all such theories, including Freud's, are referred to as *psychodynamic*.

Three of today's most influential psychodynamic theories are ego theory, self theory, and object relations theory. **Ego theorists** emphasize the role of the ego and consider it a more independent and powerful force than Freud did (Compas & Gotlib, 2002). **Self theorists**, in contrast, give greatest attention to the role of the *self*—the unified personality—rather than to any one component of the personality. They believe that the basic human motive is to save and strengthen the wholeness of the self (Lerner & Herlich, 2001; Kohut, 1984, 1977). **Object relations theorists** propose that people are motivated mainly by a need to have relationships with others, and that severe problems in the relationships between children and their caregivers may lead to abnormal development and psychological difficulties (Kernberg, 2001, 1997; St. Claire, 2000).

### Psychodynamic Therapies

Psychodynamic therapies range from Freudian psychoanalysis to modern therapies based on self theory or object relations theory. All seek to uncover past traumas and the inner conflicts that have resulted from them. All try to help clients resolve, or settle, those conflicts and to resume personal development.

According to most psychodynamic therapists, the search for insight cannot be rushed or imposed. Therapists must subtly guide the explorations so that the patients discover their underlying problems for themselves. To aid in the process, the therapists rely on such techniques as *free association*, *therapist interpretation*, *catharsis*, and *working through*.

**FREE ASSOCIATION** In psychodynamic therapies, the patient is responsible for starting and leading each discussion. The therapist tells the patient to describe any thought, feeling, or image that comes to mind, even if it seems unimportant or irrelevant. This practice is known as **free association**. The therapist expects that the patient's associations will eventually uncover unconscious events and underlying dynamics. Notice how free association helps this New Yorker to discover threatening impulses and conflicts within herself:

**Patient:** So I started walking, and walking, and decided to go behind the museum and walk through Central Park. So I walked and went through a back field and felt very excited and wonderful. I saw a park bench next to a clump of bushes and sat down. There was a rustle behind me and I got frightened. I thought of men concealing themselves in the bushes. I thought of the sex perverts I read about in Central Park. I wondered if there was someone behind me exposing himself. The idea is repulsive, but exciting too. I think of father now and feel excited. I think of an erect penis. This is connected with my father. There is something about this pushing in my mind. I don't know what it is, like on the border of my memory. (Pause)

**Therapist:** Mm-hmm. (Pause) On the border of your memory?

**Patient:** (The patient breathes rapidly and seems to be under great tension)  
As a little girl, I slept with my father. I get a funny feeling. I get a funny feeling over my skin, tingly-like. It's a strange feeling, like a blindness, like not seeing something. My mind blurs and spreads over anything I look at. I've had this feeling off and on since I walked in the park. My mind seems to blank off like I can't think or absorb anything.

(Wolberg, 1967, p. 662)

**THERAPIST INTERPRETATION** Psychodynamic therapists listen carefully as patients talk, looking for clues, drawing tentative conclusions, and sharing interpretations when they think the patient is ready to hear them. Interpretations of three phenomena are particularly important—*resistance*, *transference*, and *dreams*.

Patients are showing **resistance**, an unconscious refusal to participate fully in therapy, when they suddenly cannot free associate or when they change a subject to avoid a painful discussion. They demonstrate **transference** when they act and feel toward the therapist as they did or do toward important persons in their lives, especially their parents, siblings, and spouses. Consider again the woman who walked in Central Park. As she continues talking, the therapist helps her to explore her transference:

**Patient:** I get so excited by what is happening here. I feel I'm being held back by needing to be nice. I'd like to blast loose sometimes, but I don't dare.

**Therapist:** Because you fear my reaction?

**Patient:** The worst thing would be that you wouldn't like me. You wouldn't speak to me friendly; you wouldn't smile; you'd feel you can't treat me and discharge me from treatment. But I know this isn't so, I know it.

**Therapist:** Where do you think these attitudes come from?

**Patient:** When I was nine years old, I read a lot about great men in history. I'd quote them and be dramatic. I'd want a sword at my side; I'd dress like an Indian. Mother would scold me. Don't frown, don't talk so much. Sit on your hands, over and over again. I did all kinds of things. I was a naughty child. She told me I'd be hurt. Then at fourteen I fell off a horse and broke my back. I had to be in bed. Mother then told me on the day I went riding not to, that I'd get hurt because the ground was frozen. I was a stubborn, self-willed child. Then I went against her will and suffered an accident that changed my life, a fractured back. Her attitude was, "I told you so." I was put in a cast and kept in bed for months.

(Wolberg, 1967, p. 662)

**EGO THEORY** The psychodynamic theory that emphasizes the role of the ego and considers it an independent force.

**SELF THEORY** The psychodynamic theory that emphasizes the role of the self—our unified personality.

**OBJECT RELATIONS THEORY** The psychodynamic theory that views the desire for relationships as the key motivating force in human behavior.

**FREE ASSOCIATION** A psychodynamic technique in which the patient describes any thought, feeling, or image that comes to mind, even if it seems unimportant.

**RESISTANCE** An unconscious refusal to participate fully in therapy.

**TRANSFERENCE** According to psychodynamic theorists, a process that occurs during psychotherapy, in which patients act toward the therapist as they did or do toward important figures in their lives.

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"I think what Polly really want is approval."

● **DREAM** A series of ideas and images that form during sleep.

● **CATHARSIS** The reliving of past repressed feelings in order to settle internal conflicts and overcome problems.

● **WORKING THROUGH** The psychoanalytic process of facing conflicts, reinterpreting feelings, and overcoming one's problems.

Finally, many psychodynamic therapists try to help patients interpret their **dreams**. Freud (1924) called dreams the “royal road to the unconscious.” He believed that repression and other defense mechanisms operate less completely during sleep and that dreams, correctly interpreted, can reveal unconscious instincts, needs, and wishes (see Box 3–1). Freud identified two kinds of dream content, manifest and latent. *Manifest content* is the consciously remembered dream; *latent content* its symbolic meaning. To interpret a dream, therapists must translate its manifest content into its latent content.

**CATHARSIS** Insight must be an emotional as well as intellectual process. Psychodynamic therapists believe that patients must experience **catharsis**, a reliving of

### BOX 3-1

#### Perchance to Dream

All people dream; so do dogs, and maybe even fish. In fact, although they may not remember them, people average close to 1,500 dreams per year. Some claim that dreams reveal the future; others see them as inner journeys or alternate realities. Sigmund Freud (1900) believed that we express and attempt to fulfill unsatisfied desires with our dreams. His colleague Alfred Adler believed that dreams prepare us for waking life by allowing us to rehearse new behaviors or alerting us to internal problems (Oberst, 2002; Kramer, 1992).

Biological theorists offer a different, though not entirely incompatible, view (Solms, 2002; Titone, 2002; Reiser, 2001). Some propose that random signals come from various areas of the brain as we sleep. The brain's cortex, the seat of higher cognitive functioning, attempts to make sense of this random bombardment of electrical activity. The result is a dream, often irrational or weird. Many biological theorists believe that the resulting dream may also be influenced by the person's drives, fears, and ambitions. Research also suggests that dreams influence the moods and functioning of individuals (Kramer, 2000).

According to surveys and studies, two-thirds of people's dreams involve unpleasant material, such as aggression, threats, rejection, confusion, or an inability to communicate (Van de Castle, 1993). Commonly, a dreamer is chased or attacked by a threatening

figure, suggesting to some theorists that the dreamer is running from real-life fears, unpleasant issues, or distrusted persons.

Eighty percent of college students report having had dreams of falling. Such dreams are thought to occur when our sense of security is threatened or when we are in fear of losing control. Many people say falling dreams are the first ones they can remember, although people can have them at any stage of life (Van de Castle, 1993; Cartwright & Lamborg, 1992).

Another common theme is public nudity. One study found that 43 percent of American college-age subjects reported having such dreams, compared to 18 percent of Japanese subjects (Vieira, 1993). Freud (1900) viewed dreams of nudity as an unconscious wish to exhibit oneself. Others argue that people who have these dreams may be afraid of being seen for who they really are (Van de Castle, 1993).

Dreams also may differ by gender. In a landmark study in 1951, the researcher Calvin Hall found that men dreamed twice as often about men as they did about women, whereas women dreamed about men and women in equal proportions. In addition, most male dreams took place outdoors, while female dreams were more often set in the home or elsewhere indoors. Men's sexual dreams were more likely to include women



Ursula Edelmann, Frankfurt

**The Nightmare by Johann Heinrich Füssli**

they did not know, whereas women dreamed more often about men they cared for. A later study in 1980 found no significant changes in these patterns (Van de Castle, 1993). However, more recent studies find that men's and women's dreams are becoming more androgynous, that women's dreams now take place outdoors more than they did in the past, and that women are now as likely as men to behave aggressively in their dreams (Krippner & Weinhold, 2002; Kramer, 2000, 1989).

past repressed feelings, if they are to settle internal conflicts and overcome their problems.

**WORKING THROUGH** A single episode of interpretation and catharsis will not change the way a person functions. The patient and therapist must examine the same issues over and over in the course of many sessions, each time with greater clarity. This process, called **working through**, usually takes a long time, often years. When psychodynamic treatment is scheduled once a week—as most forms of it now are—it is properly known as *psychodynamic*, or *psychoanalytic therapy*. The term *psychoanalysis*, or simply *analysis*, is reserved for therapy given on a daily basis.

**SHORT-TERM PSYCHODYNAMIC THERAPIES** In several short versions of psychodynamic therapy, developed over the past few decades, patients choose a single problem—a dynamic focus—to work on, such as difficulty getting along with other people (Bein et al., 2000; Sifneos, 1992, 1987; Davanloo, 1980). The therapist and patient focus on this problem throughout the treatment and work only on the psychodynamic issues that relate to it (such as unresolved oral needs). Only a limited number of studies have tested the effectiveness of these short-term psychodynamic therapies, but their findings do suggest that the approaches are sometimes quite helpful to patients (Leichsenring, 2001; Messer, 2001).

### Assessing the Psychodynamic Model

Freud and his followers have helped change the way abnormal functioning is understood (Corey, 2001; Nietzel et al., 1994). Largely because of their work, a wide range of theorists today look for answers and explanations outside biological processes. Psychodynamic theorists have also helped us to understand that abnormal functioning may be rooted in the same processes as normal functioning. Psychological conflict is a common experience; it leads to abnormal functioning only if the conflict becomes excessive.

Freud and his many followers have also had a monumental impact on treatment. They were the first to apply theory and techniques systematically to treatment. They were also the first to demonstrate the potential of psychological, as opposed to biological, treatment, and their ideas have served as starting points for many other psychological treatments.

At the same time, the psychodynamic model has shortcomings. Its concepts are hard to define and to research (Nietzel et al., 1994; Erdelyi, 1992, 1985). Because processes such as id drives, ego defenses, and fixation are abstract and supposedly operate at an unconscious level, there is no way of knowing for certain if they are occurring. Not surprisingly, then, psychodynamic explanations and treatments have received limited research support, and psychodynamic theorists have been forced to rely largely on evidence provided by individual case studies (Prochaska & Norcross, 2003).

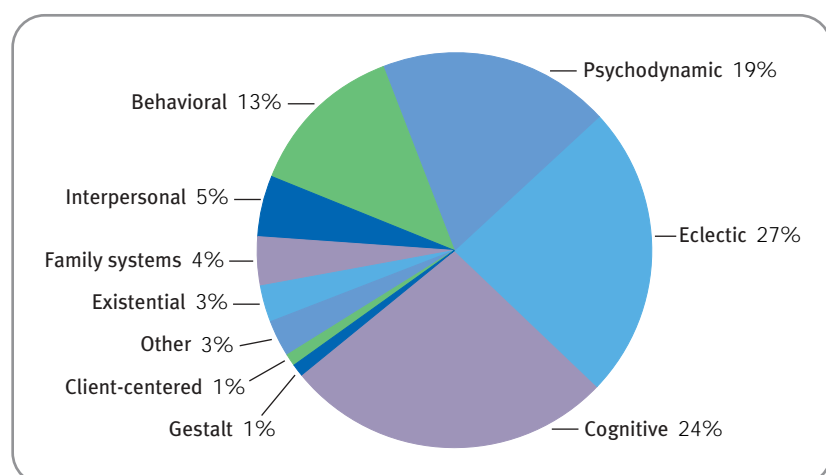
Partly in reaction to these problems, other models of abnormality have been developed over the past several decades. Nevertheless, as we can see in Figure 3-4, 19 percent of today's clinical psychologists identify themselves as psychodynamic therapists (Prochaska & Norcross, 2003). And, interestingly, many practitioners of other models report that when they seek help for their own problems, psychodynamic therapy is their choice (Norcross & Prochaska, 1984).



Syracuse Newspapers/Stephanie Welch/The Image Works

**The father factor** Because mothers provided almost all infant care in his day, Freud looked largely to maternal influences for explanations of psychological developments and problems. Today, however, many fathers also actively care for their children, causing psychodynamic theorists to adjust their explanations.

**FIGURE 3-4 Theoretical orientations of today's clinical psychologists** In one survey, 27 percent of clinical psychologists labeled themselves as "eclectic," 24 percent considered themselves "cognitive," and 19 percent called their orientation "psychodynamic." (Adapted from Prochaska & Norcross, 2003; Norcross et al., 1997.)



• **CONDITIONING** A simple form of learning.

• **OPERANT CONDITIONING** A process of learning in which behavior that leads to satisfying consequences is likely to be repeated.

• **MODELING** A process of learning in which an individual acquires responses by observing and imitating others.

• **CLASSICAL CONDITIONING** A process of learning by temporal association in which two events that repeatedly occur close together in time become fused in a person's mind and produce the same response.

• **SYSTEMATIC DESENSITIZATION** A behavioral treatment in which clients with phobias learn to react calmly instead of with intense fear to the objects or situations they dread.

## The Behavioral Model

Like psychodynamic theorists, behavioral theorists believe that our actions are determined largely by our experiences in life. However, the *behavioral model* concentrates wholly on *behaviors*, the responses an organism makes to its environment. Behaviors can be external (going to work, say) or internal (having a feeling or thought). In the behavioral view, people are the sum total of their learned behaviors. Behavioral theorists, therefore, base their explanations and treatments on *principles of learning*, the processes by which these behaviors change in response to the environment.

Many learned behaviors help people to cope with daily challenges and to lead happy, productive lives. However, abnormal behaviors also can be learned. Behaviorists who try to explain Philip Berman's problems might view him as a man who has received improper training: he has learned behaviors that offend others and repeatedly work against him.

Whereas the psychodynamic model had its beginnings in the clinical work of physicians, the behavioral model began in laboratories where psychologists were running experiments on **conditioning**, simple forms of learning. The researchers manipulated *stimuli* and *rewards*, then observed how their manipulations affected their subjects' responses.

During the 1950s, many clinicians became frustrated with what they viewed as the vagueness and slowness of the psychodynamic model. Some of them began to apply the principles of learning to the study and treatment of psychological problems (Poppen, 2001). Their efforts gave rise to the behavioral model of abnormality.

### How Do Behaviorists Explain Abnormal Functioning?

Learning theorists have identified several forms of conditioning, and each may produce abnormal behavior as well as normal behavior. In **operant conditioning**, for example, humans and animals learn to behave in certain ways as a result of receiving *rewards*—any satisfying consequences—whenever they do so. In **modeling**, individuals learn responses simply by observing other individuals and repeating their behaviors.

In a third form of conditioning, **classical conditioning**, learning occurs by *temporal association*. When two events repeatedly occur close together in time, they become fused in a person's mind, and before long the person responds in the same way to both events. If one event produces a response of joy, the other brings joy as well; if one event brings feelings of relief, so does the other. A closer look at this form of conditioning illustrates how the behavioral model can account for abnormal functioning.

Ivan Pavlov (1849–1936), a famous Russian physiologist, first demonstrated classical conditioning with animal studies. He placed a bowl of meat powder before a dog, producing the natural response that all dogs have to meat: they start to salivate (see Figure 3-5). Next Pavlov added a step: just before presenting the dog with meat powder, he sounded a metronome. After several such pairings of metronome tone and presentation of meat powder, Pavlov noted that the dog began to salivate as soon as it heard the metronome. The dog had learned to salivate in response to a sound.

In the vocabulary of classical conditioning, the meat in this demonstration is an *unconditioned stimulus (US)*. It elicits the *unconditioned response (UR)* of salivation, that is, a natural response with which the dog is born. The sound of the metronome is a *conditioned stimulus (CS)*, a previously neutral stimulus that comes to be linked with meat in the dog's mind. As such, it too produces a salivation response. When the salivation response is produced by the conditioned stimulus rather than by the unconditioned stimulus, it is called a *conditioned response (CR)*.

**FIGURE 3-5 Working for Pavlov** In Ivan Pavlov's experimental device, the dog's saliva was collected in a tube as it was secreted, and the amount was recorded on a revolving cylinder called a kymograph. The experimenter observed the dog through a one-way glass window.





**BEFORE CONDITIONING**

CS: Tone → No response

US: Meat → UR: Salivation

**AFTER CONDITIONING**

CS: Tone → CR: Salivation

US: Meat → UR: Salivation

If, after conditioning, the conditioned stimulus is repeatedly presented alone, without being paired with the unconditioned stimulus, it will eventually stop eliciting the conditioned response. When Pavlov stopped pairing the metronome tone and meat powder, for example, the dog salivated less and less in response to the tone. The conditioned response was undergoing *extinction*.

Classical conditioning explains many familiar behaviors. The romantic feelings a young man experiences when he smells his girlfriend's perfume, say, may represent a conditioned response. Initially this perfume may have had limited emotional effect on him, but because the fragrance was present during several romantic encounters, it too came to elicit a romantic response.

Abnormal behaviors, too, can be acquired by classical conditioning. Consider a young boy who is repeatedly frightened by a neighbor's large German shepherd dog. Whenever the child walks past the neighbor's front yard, the dog barks loudly and lunges at him, stopped only by a rope tied to the porch. In this unfortunate situation, the boy's parents are not surprised to discover that he develops a fear of dogs. They are stumped, however, by another intense fear the child displays, a fear of sand. They cannot understand why he cries whenever they take him to the beach and screams in fear if sand even touches his skin.

Where did this fear of sand come from? Classical conditioning. It turns out that a big sandbox is set up in the neighbor's front yard for the dog to play in. Every time the dog barks and lunges at the boy, the sandbox is there too. After repeated pairings of this kind, the child comes to fear sand as much as he fears the dog.

## Behavioral Therapies

Behavioral therapy aims to identify the behaviors that are causing a person's problems and then tries to replace them with more appropriate ones, by applying the principles of classical conditioning, operant conditioning, or modeling. The therapist's attitude toward the client is that of teacher rather than healer. A person's early life matters only for the clues it can provide to current conditioning processes.

Classical conditioning treatments, for example, may be used to change abnormal reactions to particular stimuli. **Systematic desensitization** is one such method, often applied in cases of *phobia*—a specific and unreasonable fear. In this step-by-step procedure, clients learn to react calmly instead of with intense fear to the objects or situations they dread (Wolpe, 1997, 1995, 1990). First, they are taught the skill of relaxation over the course of several sessions. Next, they construct a *fear hierarchy*, a list of feared objects or situations, starting with those that are less feared and ending with the ones that are most dreaded. Here is the hierarchy developed by a man who was afraid of criticism, especially about his mental stability:

1. Friend on the street: "Hi, how are you?"
2. Friend on the street: "How are you feeling these days?"
3. Sister: "You've got to be careful so they don't put you in the hospital."
4. Wife: "You shouldn't drink beer while you are taking medicine."
5. Mother: "What's the matter, don't you feel good?"
6. Wife: "It's just you yourself, it's all in your head."
7. Service station attendant: "What are you shaking for?"



A. Bandura, Stanford University.



**See and do** Modeling may account for some forms of abnormal behavior. A well-known study by Albert Bandura and his colleagues (1963) demonstrated that children learned to abuse a doll by observing an adult hit it. Children who had not been exposed to the adult model did not mistreat the doll.



**Desensitization** Joseph Wolpe, the psychiatrist who developed the behavioral treatment of systematic desensitization, first teaches a client to relax, then guides her to confront feared objects or situations, real or imagined, while she remains relaxed.

**Conditioning for fun and profit** Pet owners have discovered that they can teach animals a wide assortment of tricks by using the principles of conditioning. Only 3 percent of all dogs have learned to “sing,” while 21 percent know how to sit, the most common dog trick (Pet Food Institute).



8. Neighbor borrows rake: “Is there something wrong with your leg? Your knees are shaking.”

9. Friend on the job: “Is your blood pressure okay?”

10. Service station attendant: “You are pretty shaky, are you crazy or something?”

(Marquis & Morgan, 1969, p. 28)

Desensitization therapists next have their clients either imagine or actually confront each item on the hierarchy while in a state of relaxation. In step-by-step pairings of feared items and relaxation, clients move up the hierarchy until at last they can face every one of the items without experiencing fear. As we shall see in Chapter 6, research has shown systematic desensitization and other classical conditioning techniques to be effective in treating phobias (Compas &

Gotlib, 2002; Wang & Chen, 2000).

### Assessing the Behavioral Model

The number of behavioral clinicians has grown steadily since the 1950s, and the behavioral model has become a powerful force in the clinical field. Various behavioral theories have been proposed over the years, and many treatment techniques have been developed. Approximately 13 percent of today’s clinical psychologists report that their approach is mainly behavioral (Prochaska & Norcross, 2003).

Perhaps the greatest appeal of the behavioral model is that it can be tested in the laboratory, whereas psychodynamic theories generally cannot. The behaviorists’ basic concepts—stimulus, response, and reward—can be observed and measured. Even more important, the results of research have lent considerable support to the behavioral model. Experimenters have successfully used the principles of learning to create clinical symptoms in laboratory subjects, suggesting that psychological disorders may indeed develop in the same way. In addition, research has found that behavioral treatments can be helpful to people with specific fears, compulsive behavior, social deficits, mental retardation, and other problems (Compas & Gotlib, 2002; Christoph, 1998).

At the same time, research has also revealed weaknesses in the model. Certainly behavioral researchers have produced specific symptoms in subjects. But are these symptoms *ordinarily* acquired in this way? There is still no indisputable evidence that most people with psychological disorders are victims of improper conditioning. Similarly, behavioral therapies have limitations. The improvements noted in the therapist’s office do not always extend to real life. Nor do they necessarily last without continued therapy.

Finally, some critics hold that the behavioral view is too simplistic, that its concepts fail to account for the complexity of behavior (see Box 3–2). In 1977 Albert Bandura, the behaviorist who earlier had identified modeling as a key conditioning process, argued that in order to feel happy and function effectively people must develop a positive sense of **self-efficacy**. That is, they must know that they can master and perform needed behaviors whenever necessary. Other behaviorists of the 1960s and 1970s similarly recognized that human beings engage in *cognitive behaviors*, such as anticipating or interpreting—ways of thinking that until then had been largely ignored in behavioral theory and therapy. These individuals developed *cognitive-behavioral theories* that took unseen cognitive behaviors into greater account (Meichenbaum, 1993; Goldiamond, 1965).

Cognitive-behavioral theorists bridge the behavioral model and the cognitive model, the view we turn to next. On the one hand, their explanations are based squarely on learning principles. These

## BOX 3-2

## Maternal Instincts

On an August day in 1996, a 3-year-old boy climbed over a barrier at the Brookfield Zoo in Illinois and fell 24 feet onto the cement floor of the gorilla compound. An 8-year-old 160-pound gorilla named Binti-Jua picked up the child and cradled his limp body in her arms. The child's mother, fearing the worst, screamed out, "The gorilla's got my baby!" But Binti protected the boy as if he were her own. She held off the other gorillas, rocked him gently, and carried him to the entrance of the gorilla area, where rescue workers were waiting. Within hours, the incident was seen on videotape replays around the world, and Binti was being hailed for her maternal instincts.

When Binti was herself an infant, she had been removed from her mother, Lulu, who did not have enough milk. To make up for this loss, keepers at the zoo worked around the clock to nurture Binti; she was always being held in someone's arms. When Binti became pregnant at age 6, train-

ers were afraid that the early separation from her mother would leave her ill prepared to raise an infant of her own. So they gave her mothering lessons and taught her to nurse and carry around a stuffed doll.

Clinical theorists have had a field day interpreting the gorilla's gentle and nurturing care for the child, each within his or her preferred theory.

Many *evolutionary theorists*, for example, view the behavior as an expression of the maternal instincts that have helped the gorilla's species to survive and evolve. *Object relations theorists* suggest that the gorilla was expressing feelings of attachment and bonding, already experienced with her own 17-month-old daughter. And *behaviorists* hold that the gorilla may have been imitating the nurturing behavior

that she had observed in human models during her own infancy, or enacting the parenting training that she had received during her pregnancy. While the clinical field tries frantically to sort out this issue, Binti-Jua, the heroic gorilla, has returned to her relatively quiet and predictable life at the zoo.



Robert Allison/Contact Press Images

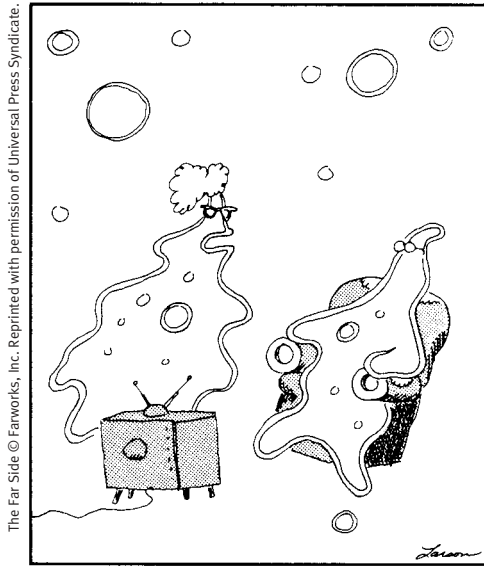
theorists believe, for example, that cognitive processes are learned by classical conditioning, operant conditioning, and modeling. On the other hand, cognitive-behavioral theorists share with other kinds of cognitive theorists a belief that the ability to think is the most important aspect of human functioning (Compas & Gotlib, 2002; Dougher, 1997).

## The Cognitive Model

Philip Berman, like the rest of us, has *cognitive* abilities—special intellectual capacities to think, remember, and anticipate. These abilities can help him accomplish a great deal in life. Yet they can also work against him. As he thinks about his experiences, Philip may develop false ideas. He may misinterpret experiences in ways that lead to poor decisions, maladaptive responses, and painful emotions.

In the early 1960s two clinicians, Albert Ellis (1962) and Aaron Beck (1967), proposed that cognitive processes are at the center of behavior, thought, and emotions and that we can best understand abnormal functioning by looking to cognition—a perspective known as the *cognitive model*. Ellis and Beck claimed that clinicians must ask questions about the assumptions and attitudes that color a client's perceptions, the thoughts running through that person's mind, and the conclusions they are leading to. Other theorists and therapists soon embraced and expanded their ideas and techniques.

**SELF-EFFICACY** The belief that one can master and perform needed behaviors whenever necessary.



"Stimulus, response! Stimulus, response!  
Don't you ever think?"

The Far Side © Farworks, Inc. Reprinted with permission of Universal Press Syndicate.

## How Do Cognitive Theorists Explain Abnormal Functioning?

To cognitive theorists, we are all artists. We reproduce and create the world in our minds as we try to understand the events going on around us. If we are effective artists, our cognitions tend to be accurate (they agree with the perceptions of others) and useful. If we are ineffective artists, we may create a cognitive inner world that is painful and harmful to ourselves.

Abnormal functioning can result from several kinds of cognitive problems. Some people may make *assumptions* and adopt *attitudes* that are disturbing and inaccurate (Brown & Beck, 2002; Dryden & Ellis, 2001). Philip Berman, for example, often seems to assume that his past history has locked him in his present situation. He believes that he was victimized by his parents and that he is now forever doomed by his past. He seems to approach all new experiences and relationships with expectations of failure and disaster.

*Illogical thinking processes* are another source of abnormal functioning, according to cognitive theorists. Beck (2002, 1993, 1991, 1967), for example, has found that some people consistently think in illogical ways and keep arriving at self-defeating conclusions. As we shall see in Chapter 8, he has identified a number of illogical thought processes regularly found in depression, such as *overgeneralization*, the drawing of broad negative conclusions on the basis of a single insignificant event. One depressed student couldn't remember the date of Columbus's third voyage to America during a history class. Overgeneralizing, she spent the rest of the day in despair over her invincible ignorance.

## Cognitive Therapies

According to cognitive therapists, people with psychological disorders can overcome their problems by developing new, more functional ways of thinking. Because different forms of abnormality may involve different kinds of cognitive dysfunctioning, cognitive therapists have developed a number of strategies. Beck (1997, 1996, 1967), for example, has developed an approach that is widely used in cases of depression.

In Beck's approach, called simply **cognitive therapy**, therapists help clients recognize the negative thoughts, biased interpretations, and errors in logic that dominate their thinking and, according to Beck, cause them to feel depressed. Therapists also guide clients to challenge their dysfunctional thoughts, try out new interpretations, and ultimately apply the new ways of thinking in their daily lives. As we shall see in Chapter 9, people with depression who are treated with Beck's approach improve much more than those who receive no treatment (DeRubeis et al., 2001; Young et al., 2001).

In the excerpt that follows, a cognitive therapist guides a depressed 26-year-old graduate student to recognize the link between the way she interprets her experiences and the way she feels and to begin questioning the accuracy of her interpretations:

**Therapist:** How do you understand it?

**Patient:** I get depressed when things go wrong. Like when I fail a test.

**Therapist:** How can failing a test make you depressed?

**Patient:** Well, if I fail I'll never get into law school.

**Therapist:** So failing the test means a lot to you. But if failing a test could drive people into clinical depression, wouldn't you expect everyone who failed the test to have a depression? . . . Did everyone who failed get depressed enough to require treatment?

**Patient:** No, but it depends on how important the test was to the person.

**Therapist:** Right, and who decides the importance?

**Patient:** I do.

**Therapist:** And so, what we have to examine is your way of viewing the test (or

**COGNITIVE THERAPY** A therapy developed by Aaron Beck that helps people recognize and change their faulty thinking processes.

the way that you think about the test) and how it affects your chances of getting into law school. Do you agree?

**Patient:** Right. . . .

**Therapist:** Now what did failing mean?

**Patient:** (Tearful) That I couldn't get into law school.

**Therapist:** And what does that mean to you?

**Patient:** That I'm just not smart enough.

**Therapist:** Anything else?

**Patient:** That I can never be happy.

**Therapist:** And how do these thoughts make you feel?

**Patient:** Very unhappy.

**Therapist:** So it is the meaning of failing a test that makes you very unhappy. In fact, believing that you can never be happy is a powerful factor in producing unhappiness. So, you get yourself into a trap—by definition, failure to get into law school equals “I can never be happy.”

(Beck et al., 1979, pp. 145–146)

### Assessing the Cognitive Model

The cognitive model has had very broad appeal. In addition to the behaviorists who now include cognitive concepts in their theories about learning, there are a great many clinicians who believe that thinking processes are in fact much more than conditioned reactions. Cognitive theory, research, and treatments have developed in so many interesting ways that the model is now viewed as separate from the behavioral school that gave birth to it.

Approximately 24 percent of today's clinical psychologists identify their approach as cognitive (Prochaska & Norcross, 2003). There are several reasons for the model's popularity. First, it focuses on a process unique to human beings, the process of human thought. Just as our special cognitive abilities are responsible for so many human accomplishments, they may also be responsible for the special problems found in human functioning. Thus many theorists from varied backgrounds find themselves drawn to a model that sees thought as the primary cause of normal and abnormal behavior.

Cognitive theories also lend themselves to research. Investigators have found that many people with psychological disorders do indeed make the kinds of assumptions and errors in thinking the theorists claim (Brown & Beck, 2002; Whisman & McGarvey, 1995). Yet another reason for the popularity of the cognitive model is the impressive performance of cognitive therapies. They have proved to be very effective for treating depression, panic disorder, and sexual dysfunctions, for example (Barlow, 2001; DeRubeis et al., 2001). They also adapt well to new technologies (see Box 3–3).

Nevertheless, the cognitive model, too, has its drawbacks (Holmes, 2002). First, although disturbed cognitive processes are found in many forms of abnormality, their precise role has yet to be determined. The cognitions seen in psychologically troubled people could well be a result rather than a cause of their difficulties. Second, although cognitive therapies are clearly of help to many people, they do not help everyone. Is it enough to change the cognitive habits of a person with a serious psychological dysfunction? Can such specific changes make a general and lasting difference in the way the person feels and behaves?

Furthermore, like the other models we have examined, the cognitive model is narrow in certain ways. Although cognition is a very special human dimension, it is still only one part of human functioning. Aren't human beings more than the sum total of their thoughts, emotions, and behaviors? Shouldn't explanations

**A clinical pioneer** Aaron Beck proposes that many forms of abnormal behavior can be traced to cognitive factors, such as upsetting thoughts and illogical thinking.



Leif Skogsför/Woodfin Camp & Associates

## BOX 3-3

## Cybertherapy

In this age of the Internet, it is hardly surprising that thousands of therapists are setting up on-line services, inviting persons with problems to e-mail their questions and concerns (Castelnuovo et al., 2001; Moskowitz, 2001). Such services, often called *e-therapy*, can cost as much as \$2 per minute. They have raised concerns about confidentiality and the quality of care (Landau, 2001; Gorman, 1998). Many e-therapists do not even have advanced clinical training. In fact, several health provider groups have developed ethical and practical guidelines for such therapists to follow (Budman, 2000).

Similarly, there are now thousands of chat groups and “virtual” support groups available around the clock on the Internet for everything from depression to substance abuse, anxiety, and eating disorders (Moskowitz, 2001). These groups provide opportunities for people with similar problems to communicate with each other, freely trading advice and empathy (Bresnahan & Murray-Johnson, 2002; Landau, 2001). Of course, people who choose “chat group therapy” do not know who is on the other end of the computer connection or whether the advice they receive is at all appropriate. Distasteful or insulting messages

are not uncommon (Ehrman, 1995).

Another new computer-age development is software programs that profess to offer help for emotional distress (Jacobs et al., 2001; Oldenburg, 1995; Wiegner, 1995).

Advocates suggest that people may find it easier to reveal sensitive personal information to a computer than to a therapist. The computer offers them the freedom to express their thoughts and emotions without fear of being judged. It is never tired, angry, or bored and does not make grimaces, gestures, or harrumphing noises that signal surprise, disapproval, or dismay. Moreover, the computer therapist is always available, it can reach a large number of people, and its fees are modest. These are all attractive attributes in a therapist.

One such computer program simulates a *client-centered therapy* session. The patient types in a response to a question, and the computer selects the next question on the basis of key words that appear in the response. Another helps people articulate their



“Please dear! I need my own cyberspace.”

©2002 The New Yorker Collection from cartoonbank.com.

problems in “if-then” statements, a basic technique used by *cognitive therapists*. Still other programs offer cognitive therapy for depression, in the process quoting therapists and authors such as Leo Tolstoy and Bertrand Russell.

Research indicates that some of these programs are indeed helpful (Jacobs et al., 2001; Elias, 2000, 1995). Computers may never substitute fully for the judgment of a trained therapist. Yet, as more complex and humanlike computer programs are developed, Internet and computer services may indeed find a place as adjuncts to other forms of treatment.

of human functioning also consider broader issues such as how people approach life, what value they extract from it, and how they deal with the question of life’s meaning? This is the position of the humanistic-existential perspective.

## The Humanistic-Existential Model

Philip Berman is more than the sum of his psychological conflicts, learned behaviors, or cognitions. Being human, he also has the ability to pursue philosophical goals such as self-awareness, strong values, a sense of meaning in life, and freedom of choice. According to humanistic and existential theorists, Philip’s problems can be understood only in the light of such complex goals (Cain, 2002). Humanistic and existential theorists are usually grouped together—in an approach known as the *humanistic-existential model*—because of their common focus on these broader dimensions of human existence. At the same time, there are important differences between them.

**SELF-ACTUALIZATION** The humanistic process by which people fulfill their potential for goodness and growth.

*Humanists*, the more optimistic of the two groups, believe that human beings are born with a natural tendency to be friendly, cooperative, and constructive. People, these theorists propose, are driven to **self-actualize**—that is, to fulfill this potential for goodness and growth. They can do so, however, only if they honestly recognize and accept their weaknesses as well as their strengths and establish satisfying personal values to live by. Humanists further suggest that self-actualization leads naturally to a concern for the welfare of others and to behavior that is loving, courageous, spontaneous, and independent (Maslow, 1970).

*Existentialists* agree that human beings must have an accurate awareness of themselves and live meaningful—they say “authentic”—lives in order to be psychologically well adjusted. These theorists do not believe, however, that people are naturally inclined to live constructively. They believe that from birth we have total freedom, either to face up to our existence and give meaning to our lives or to shrink from that responsibility. Those who choose to “hide” from responsibility and choice will view themselves as helpless and weak and may live empty, inauthentic, and dysfunctional lives as a result.

The humanistic and existential views of abnormality both date back to the 1940s (Cain, 2002). At that time Carl Rogers (1902–1987), often considered the pioneer of the humanistic perspective, developed *client-centered therapy*, a warm and supportive approach that contrasted sharply with the psychodynamic techniques of the day. He also proposed a theory of personality that paid little attention to irrational instincts and conflicts.

The existential view of personality and abnormality appeared during this same period. Many of its principles came from the ideas of nineteenth-century European existential philosophers who held that human beings are constantly defining and so giving meaning to their existence through their actions (Walsh & McElwain, 2002). In the late 1950s a book titled *Existence* described a number of major existential ideas and treatment approaches and helped them gain recognition (May, Angel, & Ellenberger, 1958).

The humanistic and existential theories, and their uplifting and sometimes spiritual implications, were extremely popular during the 1960s and 1970s, years of considerable soul-searching and social upheaval in Western society. They have since lost some of their popularity, but they continue to influence the ideas and work of many clinicians.

### Rogers’s Humanistic Theory and Therapy

According to Carl Rogers (2000, 1987, 1951), the road to dysfunction begins in infancy. We all have a basic need to receive *positive regard* from the important people in our lives (primarily our parents). Those who receive *unconditional* (non-judgmental) *positive regard* early in life are likely to develop *unconditional self-regard*. That is, they come to recognize their worth as persons, even while recognizing that they are not perfect. Such people are in a good position to actualize their positive potential.

Unfortunately, some children are repeatedly made to feel that they are not worthy of positive regard. As a result, they acquire *conditions of worth*, standards that tell them they are lovable and acceptable only when they conform to certain guidelines. In order to maintain positive self-regard, these people have to look at themselves very selectively, denying or distorting thoughts and actions that do not measure up to their conditions of worth. They thus acquire a distorted view of themselves and their experiences. They do not know what they are truly feeling, what they genuinely need, or what values and goals would be meaningful for them. Problems in functioning are then inevitable.



David Burnett/Contact Press Images

**Actualizing the self** Humanists suggest that self-actualized people, such as this hospital volunteer who works with drug-addicted babies, show concern for the welfare of humanity. They are also thought to be highly creative, spontaneous, independent, and humorous.

#### >>BY THE NUMBERS

##### Charitable Acts

**\$150 BILLION** Amount contributed to charity each year in the United States<<

**57%** Percentage of charitable donations contributed to religious organizations<<

**43%** Percentage of donations directed to education, human services, health, and the arts<<

**75%** Percentage of incoming college freshmen who have done volunteer work in the past year.<<

(Kate, 1998; Reese, 1998)

**CLIENT-CENTERED THERAPY** The humanistic therapy developed by Carl Rogers in which clinicians try to help clients by conveying acceptance, accurate empathy, and genuineness.

**GESTALT THERAPY** The humanistic therapy developed by Fritz Perls in which clinicians actively move clients toward self-recognition and self-acceptance by using techniques such as role playing and self-discovery exercises.

Rogers might view Philip Berman as a man who has gone astray. Rather than striving to fulfill his positive human potential, he drifts from job to job, relationship to relationship, and outburst to outburst. In every interaction he is defending himself, trying to interpret events in ways he can live with, usually blaming his problems on other people. Yet his constant efforts at self-defense and self-enhancement are only partly successful. His basic negative self-image continually reveals itself. Rogers would probably link this problem to the critical ways Philip was treated by his mother throughout his childhood.

Clinicians who practice Rogers's **client-centered therapy** try to create a supportive climate in which clients feel able to look at themselves honestly and acceptingly (Sachse & Elliott, 2002; Rogers, 2000, 1992, 1957). The therapist must display three important qualities throughout the therapy—unconditional positive regard for the client, accurate empathy, and genuineness.

Therapists show *unconditional positive regard* by offering full and warm acceptance no matter what clients say, think, or feel. They show *accurate empathy* by accurately hearing what clients are saying and sensitively communicating it back to them. Finally, therapists must convey *genuineness*, also referred to as *congruence*. Unless therapists' communications are honest and genuine, clients may perceive them as mechanical and false. The following interaction shows the therapist using all these qualities to move the client toward greater self-awareness:

**Client:** Yes, I know I shouldn't worry about it, but I do. Lots of things—money, people, clothes. In classes I feel that everyone's just waiting for a chance to jump on me. . . . When I meet somebody I wonder what he's actually thinking of me. Then later on I wonder how I match up to what he's come to think of me.

**Therapist:** You feel that you're pretty responsive to the opinions of other people.

**Client:** Yes, but it's things that shouldn't worry me.

**Therapist:** You feel that it's the sort of thing that shouldn't be upsetting, but they do get you pretty much worried anyway.

**Client:** Just some of them. Most of those things do worry me because they're true. The ones I told you, that is. But there are lots of little things that aren't true. . . . Things just seem to be piling up, piling up inside of me. . . . It's a feeling that things were crowding up and they were going to burst.

**Therapist:** You feel that it's a sort of oppression with some frustration and that things are just unmanageable.

**Client:** In a way, but some things just seem illogical. I'm afraid I'm not very clear here but that's the way it comes.

**Therapist:** That's all right. You say just what you think.

(Snyder, 1947, pp. 2–24)

In such an atmosphere, persons are expected to feel accepted by their therapists. They then may be able to look at themselves with honesty and acceptance—a process called *experiencing*. That is, they begin to value their own emotions, thoughts, and behaviors, and so they are freed from the insecurities and doubts that prevent self-actualization.

Client-centered therapy has not fared very well in research (Patterson, 2000; Greenberg et al., 1998, 1994). Although some studies show that people who receive this therapy improve more than control subjects, many other studies have failed to find any such advantage. All the same, Rogers's therapy has had a positive influence on clinical practice (Bozarth et al., 2002). It was one of the first major alternatives to psychodynamic therapy, and it helped open up the field to new approaches. Rogers also helped pave the way for psychologists to practice psychotherapy; it had previously been considered the exclusive territory of psychiatrists. And his commitment to clinical research helped promote the systematic



study of treatment. Approximately 1 percent of today's clinical psychologists, 2 percent of social workers, and 4 percent of counseling psychologists report that they employ the client-centered approach (Prochaska & Norcross, 2003).

## Gestalt Theory and Therapy

**Gestalt therapy**, another humanistic approach, was developed in the 1950s by a charismatic clinician named Frederick (Fritz) Perls (1893–1970). Gestalt therapists, like client-centered therapists, guide their clients toward self-recognition and self-acceptance (Corey, 2001). But unlike client-centered therapists, they often try to achieve this goal by challenging and even frustrating their clients. Some of Perls's favorite techniques were skillful frustration, role playing, and numerous rules and exercises.

In the technique of *skillful frustration*, gestalt therapists refuse to meet their clients' expectations or demands. This use of frustration is meant to help people see how often they try to manipulate others into meeting their needs. In the technique of *role playing*, the therapists instruct clients to act out various roles. A person may be told to be another person, an object, an alternative self, or even a part of the body (Polster, 1997, 1992). Role playing can become intense, as individuals are encouraged to fully express emotions. Many cry out, scream, kick, or pound. Through this experience they may come to "own" (accept) feelings that previously made them uncomfortable.

Perls also developed a list of *rules* to ensure that clients will look at themselves more closely. In some versions of gestalt therapy, for example, clients may be required to use "I" language rather than "it" language. They must say, "I am frightened" rather than "The situation is frightening." Yet another common rule requires clients to stay in the *here and now*. They have needs now, are hiding their needs now, and must observe them now.

Approximately 1 percent of clinical psychologists and other kinds of clinicians describe themselves as gestalt therapists (Prochaska & Norcross, 2003). Because they believe that subjective experiences and self-awareness cannot be measured objectively, controlled research has not often been done on the gestalt approach (Strumpfel & Goldman, 2002; Greenberg et al., 1998, 1994).

## Spiritual Views and Interventions

For most of the twentieth century, clinical scientists viewed religion as a negative—or at best neutral—factor in mental health (Bergin & Richards, 2001; Richards & Bergin, 2000). Anxious to distance themselves from the demonological explanations and treatments offered by the clergy during the Middle Ages and beyond, twentieth-century theorists and clinicians held that religious beliefs were potentially damaging.

In the early 1900s, for example, Freud argued that religious beliefs were defense mechanisms, "born from man's need to make his helplessness tolerable" (1961, p. 23). Subsequently clinical theorists proposed that people with strong religious beliefs were more suspicious, irrational, guilt-ridden, and unstable than others, and less able to cope with life's difficulties. Correspondingly, spiritual principles and issues were considered a taboo topic in most forms of therapy.

The alienation between the clinical field and religion now seems to be ending. During the past decade, numerous articles and books linking spiritual issues to clinical treatment have been published, and the ethical codes of psychologists, psychiatrists, and counselors have each concluded that religion is a type of diversity that mental health professionals are obligated to respect (Richards & Bergin, 2000). Researchers have systematically studied possible links between religious faith and mental health and have learned that spirituality can, in fact, be of psychological benefit to people. In particular, studies have examined the mental



Leif Skoogstor/Woodfin Camp & Associates

**Techniques of gestalt therapy** Gestalt therapists may guide their clients to express their needs and feelings in their full intensity through role playing, banging on pillows, and other exercises. In a gestalt therapy group, members may help each other to "get in touch" with their needs and feelings.



**Human aftershocks** *These Armenian citizens seek solace in church after a devastating earthquake. Strong religious beliefs and institutional and social ties can help reduce individual stress reactions after traumatic events such as natural disasters.*

health of people who are devout and who view God as warm, caring, helpful, and dependable. Repeatedly, these individuals are found to be less lonely, pessimistic, depressed, or anxious than people without any religious beliefs or those who view God as cold and unresponsive (Koenig, 2002; Bergin & Richards, 2001; Clay, 1996). Such individuals also seem to cope better with major life stresses—from illness to war—and to attempt suicide less often. In addition, they are less likely to abuse drugs.

In line with such findings, and noting that 44 percent of the general population turn to prayer for help with medical and psychological problems, many therapists now make a point of focusing on spiritual issues when treating religious clients (Fetto, 2001; Worthington & Sandage, 2001; Richards & Bergin, 2000). At the very least, they try to identify and respect how religious beliefs and values are affecting their clients' lives and psychological functioning and to include such beliefs in their therapy discussions. Some therapists further encourage clients to use their spiritual resources to help them cope with current stresses and dysfunctioning.

### Existential Theories and Therapy

Like humanists, existentialists believe that psychological dysfunctioning is caused by self-deception; but existentialists are talking about a kind of self-deception in which people hide from life's responsibilities and fail to recognize that it is up to them to give meaning to their lives. According to existentialists, many people become overwhelmed by the pressures of present-day society and so look to others for explanations, guidance, and authority. They overlook their personal freedom of choice and avoid responsibility for their lives and decisions (May & Yalom, 1995, 1989). Such people are left with empty, inauthentic lives. Their dominant emotions are anxiety, frustration, boredom, alienation, and depression.

Existentialists might view Philip Berman as a man who feels overwhelmed by the forces of society. He sees his parents as "rich, powerful, and selfish," and he perceives teachers, acquaintances, and employers as abusive and oppressing. He fails to appreciate his choices in life and his capacity for finding meaning and direction. Quitting becomes a habit with him—he leaves job after job, ends every romantic relationship, flees difficult situations, and even attempts suicide.

In **existential therapy** people are encouraged to accept responsibility for their lives and for their problems. They are helped to recognize their freedom so that they may choose a different course and live with greater meaning and stronger values (Walsh & McElwain, 2002). For the most part, existential therapists care more about the goals of therapy than the use of specific techniques; methods vary greatly from clinician to clinician. At the same time, most do place great emphasis on the *relationship* between therapist and client and try to create an atmosphere of candor, hard work, and shared learning and growth (Walsh & McElwain, 2002).

**Patient:** I don't know why I keep coming here. All I do is tell you the same thing over and over. I'm not getting anywhere.

**Doctor:** I'm getting tired of hearing the same thing over and over, too.

**Patient:** Maybe I'll stop coming.

**Doctor:** It's certainly your choice.

**Patient:** What do you think I should do?

**Doctor:** What do you want to do?

**Patient:** I want to get better.

**Doctor:** I don't blame you.

**Patient:** If you think I should stay, ok, I will.

**Doctor:** You want me to tell you to stay?

**Patient:** You know what's best; you're the doctor.

**Doctor:** Do I act like a doctor?

(Keen, 1970, p. 200)

Existential therapists do not believe that experimental methods can adequately test the effectiveness of their treatments (Walsh & McElwain, 2002; May & Yalom, 1995, 1989). To them, research dehumanizes individuals by reducing them to test measures or scale scores. Not surprisingly, then, very little controlled research has been devoted to the effectiveness of this approach. Nevertheless, around 3 percent of today's therapists use an approach that is primarily existential (Prochaska & Norcross, 2003).

**EXISTENTIAL THERAPY** A therapy that encourages clients to accept responsibility for their lives and to live with greater meaning and values.

### Assessing the Humanistic-Existential Model

The humanistic-existential model appeals to many people in and out of the clinical field. In recognizing the special challenges of human existence, humanistic and existential theorists tap into an aspect of psychological life that is typically missing from the other models (Seeman, 2002). Moreover, the factors that they say are essential to effective functioning—self-acceptance, personal values, personal meaning, and personal choice—are certainly lacking in many people with psychological disturbances.

The optimistic tone of the humanistic-existential model is also an attraction. Theorists who follow these principles offer great hope when they assert that despite the often overwhelming pressures of modern society, we can make our own choices, determine our own destiny, and accomplish much. Still another attractive feature of the model is its emphasis on health. Unlike clinicians from some of the other models who see individuals as patients with psychological illnesses, humanists and existentialists view them simply as people whose special potential has yet to be fulfilled. Moreover, they believe that a person's behavior can be influenced by his or her own innate goodness and potential, and by a willingness to take responsibility, more than by any factor in the past.

At the same time, the humanistic-existential focus on abstract issues of human fulfillment gives rise to a major problem from a scientific point of view: these issues are difficult to research. In fact, with the notable exception of Rogers, who tried to carefully investigate his clinical methods, humanists and existentialists have rejected the use of empirical research methods over the years. Typically, they have argued the merits of their views using logic, introspection, and individual case histories. In consequence, the model has received limited empirical examination or support.

This anti-research position is just now beginning to change, at least in the treatment realm. Several recent studies have been conducted by humanistic researchers to determine whether humanistic and existential therapies are in fact of help to clients. These studies, which use appropriate control groups and statistical analyses, do, in fact, suggest that such therapies can often be beneficial (Elliott, 2002). This newfound interest in research by proponents of the humanistic-existential model and the clinical field's growing concern with religious issues should lead to important insights about the merits of this model in the coming years.

### The Sociocultural Model

Philip Berman is also a social being. He is surrounded by people and by institutions, he is a member of a family and a society, and he participates in both social and professional relationships. Thus social forces are always operating upon Philip, setting boundaries and expectations that guide and at times pressure him, helping to shape his behavior, thoughts, and emotions as surely as any internal mechanism.

According to the *sociocultural model*, abnormal behavior is best understood in light of the social and cultural forces that influence an individual (Eaton, 2001; López & Guarnaccia, 2000). What are the norms of the society? What roles does the person play in the social environment? What kind of cultural background or

#### >>BY THE NUMBERS

##### Pressures of Poverty

90 Number of victims of violent crime per 1,000 poor persons<<

50 Number of victims per 1,000 middle-income people<<

40 Number of victims per 1,000 wealthy people<<

(U.S. Bureau of Justice Statistics)

**FAMILY SYSTEMS THEORY** A theory that views the family as a system of interacting parts whose interactions exhibit consistent patterns and unstated rules.

family structure is the person a part of? And how do other people view and react to him or her? The model borrows concepts and principles from two fields: *sociology*, the study of human relationships and social groups, and *anthropology*, the study of human cultures and institutions.

### How Do Sociocultural Theorists Explain Abnormal Functioning?

Because behavior is shaped by social forces, sociocultural theorists hold, we must examine a person's social and cultural surroundings if we are to understand abnormal behavior. Sociocultural explanations focus on *family structure and communication, cultural influences, social networks, societal conditions, and societal labels and roles*.

**FAMILY STRUCTURE AND COMMUNICATION** According to **family systems theory**, the family is a system of interacting parts—the family members—who interact with one another in consistent ways and conform to rules unique to each family (Alexander et al., 2001). The parts interact in ways that enable the system to maintain itself and survive—a state known as *homeostasis*. Family systems theorists believe that the structure and communication patterns of some families actually force individual members to behave in a way that otherwise seems abnormal. If the members were to behave normally, they would severely strain the family's homeostasis and usual manner of operation, and would actually increase their own and their family's turmoil. The natural responses by other family members would in fact defend against such “normal” behavior.

Family systems theory holds that certain family systems are particularly likely to produce abnormal functioning in individual members. Some families, for example, have an *enmeshed* structure in which the members are grossly overinvolved in each other's activities, thoughts, and feelings. Children from this kind of family may have great difficulty becoming independent in life (Santisteban et al., 2001). Some families display *disengagement*, which is marked by very rigid boundaries between the members. Children from these families may find it hard to function in a group or to give or request support (Corey, 2001).

In the sociocultural model, Philip Berman's angry and impulsive personal style might be seen as the product of a disturbed family structure. According to family systems theorists, the whole family—mother, father, Philip, and his brother Arnold—relate in such a way as to maintain Philip's behavior. Family theorists might be particularly interested in the conflict between Philip's mother and father and the imbalance between their parental roles. They might see Philip's behavior as both a reaction to and stimulus for his parents' behaviors. With Philip acting out the role of the misbehaving child, or scapegoat, his parents may have little need or time to question their own relationship.

Family systems theorists would also seek to clarify the precise nature of Philip's relationship with each parent. Is he enmeshed with his mother and/or disengaged from his father? They would look too at the rules governing the sibling relationship in the family, the relationship between the parents and Philip's brother, and the nature of parent-child relationships in previous generations of the family.

**CULTURE** *Culture* refers to the set of values, attitudes, beliefs, history, and behaviors shared by a group of people and communicated from one generation to the next (Matsumoto, 1994). In Chapter 1 we observed that culture often influences which behaviors are considered abnormal and how other people react to such behaviors. If, for example, a person's friends and family value and en-

**TV's favorite family** Unlike the 1950s, when problem-free families like the Nelsons (*Ozzie and Harriet*) ruled the airwaves, today's viewers prefer reality-based families, like the *Osbornes*, whose interactions, and behaviors are, on occasion, complex, problematic, and perhaps dysfunctional.



Tom Wagner/Corbis SABA

courage drinking large quantities of alcoholic beverages, the individual may be more inclined to turn to alcohol at times of stress and to drift into a pattern of alcohol abuse; relatives and friends may be less able to recognize a pattern of problem drinking; and interventions for such a pattern may be avoided.

During the past two decades, sociocultural researchers have greatly increased their focus on possible ties between culture and abnormal behavior. They have learned that some of the disorders we shall be coming across in this textbook—*anorexia nervosa*, *agoraphobia*, *borderline personality disorder*—are much less common in non-Western countries (Cooper, 2001; Paris, 2001). It may be that key Western values—such as the importance of a thin appearance, emphasis on high mobility, and endorsement of emotional expression—help set the stage for such disorders.

**SOCIAL NETWORKS AND SUPPORTS** Sociocultural theorists are also concerned with the social networks in which people operate, including their social and professional relationships. How well do they communicate with others? What kind of signals do they send to or receive from others? Researchers have often found ties between deficiencies in social networks and a person's functioning (Segrin, 2001; Paykel & Cooper, 1992). They have noted, for example, that people who are isolated and lack social support or intimacy in their lives are more likely to become depressed when under stress and to remain depressed longer than are people with supportive spouses or warm friendships.

**SOCIETAL CONDITIONS** Wide-ranging societal conditions may create special stresses and increase the likelihood of abnormal functioning in some members. Researchers have learned, for example, that psychological abnormality, especially severe psychological abnormality, is more common in the lower socioeconomic classes than in the higher ones (Draine et al., 2002; Eaton & Muntaner, 1999). Perhaps the special pressures of lower-class life explain this relationship. That is, the higher rates of crime, unemployment, overcrowding, and homelessness, the inferior medical care, and the limited educational opportunities of lower-class life may place great stress on members of these groups. Conversely, it may be that people who suffer from severe mental disturbances are less effective at work and earn less money and, as a result, *drift downward* to a lower socioeconomic class.

Sociocultural researchers have noted that racial and sexual prejudice and discrimination may also contribute to certain forms of abnormal functioning (Simons et al., 2002). Women in Western society receive diagnoses of anxiety and depressive disorders at least twice as often as men (Nolen-Hoeksema, 2002). Similarly, African Americans experience unusually high rates of anxiety disorders (Blazer et al., 1991). Hispanic persons, particularly young men, have higher rates of alcoholism than members of most other ethnic groups (Helzer, Burnman, & McEvoy, 1991). And Native Americans display exceptionally high alcoholism and suicide rates (Kinzie et al., 1992). Although many factors may combine to produce these differences, racial and sexual prejudice and the problems they pose may contribute to abnormal patterns of tension, unhappiness, low self-esteem, and escape (Prochaska & Norcross, 2003).

**SOCIETAL LABELS AND ROLES** Sociocultural theorists also believe that abnormal functioning is influenced greatly by the labels and roles assigned to troubled people (Link et al., 2001; Szasz, 2000, 1970; Scheff, 1999). When people stray from the norms of their society, the society calls them deviant and, in many cases,



James Nachtwey/Magnum Photos

**The dysfunctional society** *The pressures and uncertainty of living in a war-torn environment may contribute to the development of psychological problems. The environment's ongoing violence may leave some individuals feeling numb and confused. This child seems hardly to notice the burning bombed truck behind him as he bicycles through Northern Ireland.*

“mentally ill.” Such labels tend to stick. Moreover, when people are viewed in particular ways, reacted to as “crazy,” and perhaps even encouraged to act sick, they gradually learn to accept and play the assigned role. Ultimately the label seems appropriate.

A famous study by the clinical investigator David Rosenhan (1973) supports this position. Eight normal people presented themselves at various mental hospitals, complaining that they had been hearing voices say the words “empty,” “hollow,” and “thud.” On the basis of this complaint alone, each was diagnosed as having schizophrenia and admitted. As the sociocultural model would predict, the “pseudopatients” had a hard time convincing others that they were well once they had been given the diagnostic label. Their hospitalizations ranged from 7 to 52 days, even though they behaved normally as soon as they were admitted. In addition, the label kept influencing the way the staff viewed and dealt with them. For example, one pseudopatient who paced the corridor out of boredom was, in clinical notes, described as “nervous.” Finally, the pseudopatients reported that the staff’s behavior toward them and other patients was often authoritarian, limited, and counterproductive. Overall, the pseudopatients came to feel powerless, invisible, and bored.

### Sociocultural Treatments

Sociocultural theories have helped spur the growth of several treatment approaches. In *culture-sensitive therapy*, therapists seek to fully understand the cultural background of their clients and address cultural issues that may be linked to the individuals’ problems (Lee & Sue, 2001). In *group therapy*, therapists meet with a group of clients who all share similar problems. In *family and couple therapy*, the therapist and client are joined by other family members. And in *community treatment*, the meetings take place in or near the client’s everyday environment.

Therapists of any orientation may work with clients in these various formats, applying the techniques and principles of their preferred models. In culture-sensitive therapy, for example, a psychodynamic therapist may continue to view a client’s problems as manifestations of underlying conflicts yet also pay attention to the individual’s cultural background and its impact on current functioning. Similarly, group therapists may follow the principles of psychodynamic, behavioral, cognitive, or humanistic therapy in their work with group members. In such instances the therapy approach is not purely sociocultural. However, more and more of the clinicians who use these formats believe that psychological problems emerge in a social setting and are best treated in such a setting, and they include special sociocultural strategies in their work.

**CULTURE-SENSITIVE THERAPY** A number of recent studies have found that people from ethnic and racial minority groups improve less in clinical

treatment than members of majority groups (Lee & Sue, 2001; Whaley, 1998). In other studies, minority clients improve as much as majority clients, but in no study do they improve more. Similarly, studies conducted throughout the world have found that minority clients use mental health services less often than members of majority groups (Gaw, 2001; Lee & Sue, 2001). Several factors may contribute to this underuse of services. In some cases, cultural beliefs, a language barrier, or lack of information about available services prevents minority individuals from seeking help. In other cases, members of minority groups do not trust



**Victims of hate** This memorial service for Matthew Shepard, brutally beaten to death in 1998 because of his gay orientation, is a powerful reminder of the prejudice, discrimination, and even danger that members of minority groups can confront in our society. Culture-sensitive therapies seek to address the special impact of such stressors upon individual, as well as other psychological issues.

the establishment, relying instead on traditional remedies that are available in their immediate social environment.

Research also indicates that members of minority groups stop therapy sooner than persons from majority groups. In the United States, African Americans, Native Americans, Asian Americans, and Hispanic Americans all have higher therapy dropout rates than white Americans (Lee & Sue, 2001). Members of such groups may stop treatment because they do not feel they are benefiting from it or because ethnic and racial differences prevent the development of a strong rapport with their therapist (Whaley, 1998).

How can clinicians be more helpful to people from minority groups? A number of studies suggest that two features of treatment can increase a therapist's effectiveness with minority clients: (1) greater therapist sensitivity to cultural issues and (2) inclusion of cultural morals and models in treatment, especially in therapies for children and adolescents (Lee & Sue, 2001; Whaley, 1998). Given such findings, clinicians have developed **culture-sensitive therapies**, approaches that seek to address the unique issues faced by members of minority groups (Prochaska & Norcross, 2003; Lee & Sue, 2001; Trujillo, 2000). These approaches often include such features as (1) raising the consciousness of minority-group clients about the impact of the dominant culture and of their own culture on their self-views and behaviors, (2) helping clients to express suppressed anger and pain, and (3) helping clients to make choices that work for them and to achieve a bicultural balance that feels right for them. Therapies geared to the special pressures of being a woman in Western society, called **gender-sensitive** or **feminist therapies**, follow similar principles (Sweeney, 2003).

**GROUP THERAPY** Thousands of therapists specialize in **group therapy**, and countless others run therapy groups as part of a more varied practice. A survey of clinical psychologists, for example, revealed that almost one-third of them devoted some portion of their practice to group therapy (Norcross et al., 1993). Typically, members of a therapy group meet together with a therapist and discuss the problems of one or more of the people in the group. Together they develop important insights, build social skills, strengthen feelings of self-worth, and share useful information or advice (Vinogradov & Yalom, 1994). Many groups are created with particular client populations in mind; for example, there are groups for people with alcoholism, for those who are physically handicapped, and for people who are divorced, abused, or bereaved (Corey & Corey, 2002).

Research suggests that group therapy is of help to many clients, often as helpful as individual therapy (McDermut et al., 2001; Bednar & Kaul, 1994). The group format has also been used for purposes that are educational rather than therapeutic, such as “consciousness raising” and spiritual inspiration.

A format similar to group therapy is the **self-help group** (or **mutual help group**). Here people who have similar problems (bereavement, substance abuse, illness, unemployment, divorce) come together to help and support one another without the direct leadership of a professional clinician (Moskowitz, 2001; Felix et al., 2000). These groups have become very popular since the 1970s (see Box 3–4). According to estimates, there are now between 500,000 and 3 million of them in the United States alone, attended each year by 3 to 4 percent of the population. Indeed, it is estimated that 25 million Americans will participate in self-help groups at some point in their lives (Davison et al., 2000). Self-help groups tend to offer more direct advice than is provided in group therapy and to encourage more exchange of information or “tips.”

**FAMILY THERAPY** **Family therapy** was first introduced in the 1950s. A therapist meets with all members of a family, points out problem behaviors and interactions, and helps the whole family to change (Corey, 2001; Minuchin, 1997; Bowen, 1960). Here, the entire family is viewed as the unit under treatment, even if only one of the members receives a clinical diagnosis. The following is a typical interaction between family members and a therapist:

## >>LOOKING AROUND

### Gender Issues in the Workplace

According to the Bureau of Labor Statistics, women today earn 76 cents for every \$1 earned by a man.<<

-----<<  
Around 62 percent of young adult men believe that men and women are currently paid the same for similar work; only 30 percent of young adult women agree.<<

-----<<  
Around 42 percent of young adult women believe that women have to outperform men at work to get the same rewards; only 11 percent of young adult men agree.<<

-----<<  
(Yin, 2002)

#### CULTURE-SENSITIVE THERAPIES

Approaches that seek to address the unique issues faced by members of minority groups.

#### GENDER-SENSITIVE THERAPIES

Approaches geared to the special pressures of being a woman in Western society. Also called *feminist therapies*.

**GROUP THERAPY** A therapy format in which a group of people with similar problems meet together with a therapist to work on those problems.

**SELF-HELP GROUP** A group made up of people with similar problems who help and support one another without the direct leadership of a clinician. Also called a *mutual help group*.

**FAMILY THERAPY** A therapy format in which the therapist meets with all members of a family and helps them to change in therapeutic ways.

Tommy sat motionless in a chair gazing out the window. He was fourteen and a bit small for his age. . . . Sissy was eleven. She was sitting on the couch between her Mom and Dad with a smile on her face. Across from them sat Ms. Fargo, the family therapist.

Ms. Fargo spoke. “Could you be a little more specific about the changes you have seen in Tommy and when they came about?”

Mrs. Davis answered first. “Well, I guess it was about two years ago. Tommy started getting in fights at school. When we talked to him at home he said it was none of our business. He became moody and disobedient. He wouldn’t do anything that we wanted him to. He began to act mean to his sister and even hit her.”

“What about the fights at school?” Ms. Fargo asked.

This time it was Mr. Davis who spoke first. “Ginny was more worried about them than I was. I used to fight a lot when I was in school and I think it is normal. . . . But I was very respectful to my parents, especially my Dad. If I ever got out of line he would smack me one.”

“Have you ever had to hit Tommy?” Ms. Fargo inquired softly.

“Sure, a couple of times, but it didn’t seem to do any good.”

All at once Tommy seemed to be paying attention, his eyes riveted on his father. “Yeah, he hit me a lot, for no reason at all!”

“Now, that’s not true, Thomas.” Mrs. Davis has a scolding expression on her face. “If you behaved yourself a little better you wouldn’t get hit. Ms. Fargo, I can’t say that I am in favor of the hitting, but I understand sometimes how frustrating it may be for Bob.”

“You don’t know how frustrating it is for me, honey.” Bob seemed upset. “You don’t have to work all day at the office and then come home to contend with all of this. Sometimes I feel like I don’t even want to come home.”

Ginny gave him a hard stare. “You think things at home are easy all day? I could use some support from you. You think all you have to do is earn the money and I will do everything else. Well, I am not about to do that anymore.” . . .

Mrs. Davis began to cry. “I just don’t know what to do anymore. Things just seem so hopeless. Why can’t people be nice in this family anymore? I don’t think I am asking too much, am I?”

Ms. Fargo spoke thoughtfully. “I get the feeling that people in this family would like things to be different. Bob, I can see how frustrating it must be for you to work so hard and not be able to relax when you get home. And, Ginny, your job is not easy either. You have a lot to do at home and Bob can’t be there to help because he has to earn a living. And you kids sound like you would like some things to be different too. It must be hard for you, Tommy, to be catching so much flack these days. I think this also makes it hard for you to have fun at home too, Sissy.”

She looked at each person briefly and was sure to make eye contact. “There seems to be a lot going on. . . . I think we are going to need to understand a lot of things to see why this is happening. . . .”

(Sheras & Worchel, 1979, pp. 108–110)

### »»BY THE NUMBERS

#### Greater Father Involvement

57% Persons who believe that today’s fathers bathe their children and change diapers more than fathers did 20 years ago.<<

53% Those who believe that today’s fathers play with their children more than fathers of the past.<<

53% Those who believe that today’s fathers help more with homework.<<

53% Those who believe that today’s fathers are more involved in caring for their sick children.<<

(Fetto, 2002)

Family therapists may follow any of the major theoretical models (Alexander et al., 2001), but more and more of them are adopting the sociocultural principles of family systems theory. Today 4 percent of all clinical psychologists, 13 percent of social workers, and 1 percent of psychiatrists identify themselves mainly as *family systems therapists* (Prochaska & Norcross, 2003).

As we observed earlier, family systems theory holds that each family has its own rules, structure, and communication patterns that shape the individual members’ behavior. In one family systems approach, *structural family therapy*, therapists try to change the family power structure, the roles each person plays, and the alliances between members (Vetere, 2001; Minuchin, 1997, 1987, 1974).



## B O X 3-4

## Self-Help Groups: Too Much of a Good Thing?

Self-help groups are widely accepted in our society, by consumers and clinicians alike. Indeed, a recent survey of mental health professionals revealed that almost 90 percent of all therapists in the United States often recommend such groups to their clients as a supplement to therapy (Clifford et al., 1998).

Small wonder that the number, range, and appeal of such groups have grown rapidly over the past several decades and that 25 million persons in the United States alone are estimated to attend self-help groups over the course of their lives. The self-help group movement and its impact on our society are brought to life in the following notice that was posted in a



Bob Daemrich/The Image Works

Colorado church in 1990 (Moskowitz, 2001), listing support groups that would be meeting at the church during the coming week:

<i>Sunday</i>	
12:00 noon	Cocaine Anonymous, main floor
5:30 p.m.	Survivors of Incest, main floor
6:00 p.m.	Al-Anon, 2nd floor
6:00 p.m.	Alcoholics Anonymous, basement
<i>Monday</i>	
5:30 p.m.	Debtors Anonymous, basement
6:30 p.m.	Codependents of Sex Addicts Anonymous, 2nd floor
7:00 p.m.	Adult Children of Alcoholics, 2nd floor
8:00 p.m.	Alcoholics Anonymous, basement
8:00 p.m.	Al-Anon, 2nd floor
8:00 p.m.	Alateen, basement
8:00 p.m.	Cocaine Anonymous, main floor
<i>Tuesday</i>	
8:00 p.m.	Survivors of Incest Anonymous, basement

<i>Wednesday</i>	
5:30 p.m.	Sex & Love Addicts Anonymous, basement
7:30 p.m.	Adult Children of Alcoholics, 2nd floor
8:00 p.m.	Cocaine Anonymous, main floor
<i>Thursday</i>	
7:00 p.m.	Codependents of Sex Addicts Anonymous, 2nd floor
7:00 p.m.	Women's Cocaine Anonymous, main floor
<i>Friday</i>	
5:30 p.m.	Sex & Love Addicts Anonymous, basement
5:45 p.m.	Adult Overeaters Anonymous, 2nd floor
7:30 p.m.	Codependents Anonymous, basement
7:30 p.m.	Adult Children of Alcoholics, 2nd floor
8:00 p.m.	Cocaine Anonymous, main floor
<i>Saturday</i>	
10:00 a.m.	Adult Children of Alcoholics, main floor
12:00 p.m.	Self-Abusers Anonymous, 2nd floor

In another, *conjoint family therapy*, therapists try to help members recognize and change harmful patterns of communication (Innes, 2002; Satir, 1987, 1967, 1964).

Research suggests that family therapies of various kinds are often helpful to individuals, although it has not yet clarified how helpful (Sexton & Alexander, 2002). Some studies have found that as many as 65 percent of individuals treated with family approaches improve, while other studies suggest much lower success rates. Nor has any one type of family therapy emerged as consistently more helpful than the others. In response to such ambiguities, research efforts are currently under way to better determine the effectiveness and useful features of family approaches

**COUPLE THERAPY** A therapy format in which the therapist works with two people who share a long-term relationship. Also called *marital therapy*.

**COMMUNITY MENTAL HEALTH TREATMENT** A treatment approach that emphasizes community care.

and the kinds of individuals best suited to such approaches (Alexander et al., 2001; Diamond & Diamond, 2001)

**COUPLE THERAPY** In **couple therapy**, or **marital therapy**, the therapist works with two individuals who are in a long-term relationship. Often they are husband and wife, but the couple need not be married or even living together. Like family therapy, couple therapy often focuses on the structure and communication patterns occurring in the relationship (Baucom et al., 2000, 1998). A couple approach may also be employed when a child's psychological problems are traced to problems that may exist between the parents.

Although some degree of conflict exists in any long-term relationship (see Table 3-3), many adults in our society experience serious marital discord. The divorce rate in Canada, the United States, and Europe is now close to 50 percent of the marriage rate (NCHS, 2000, 1999). Many couples who live together without marrying apparently have similar levels of difficulty (Greeley, 1991).

Table 3-3

### Couple Trouble

- ✘ Annual marriage rate in the United States: 51 per 1,000 unmarried women
- ✘ Annual divorce rate: 20 per 1,000 married women
- ✘ Highest marriage rate: Nevada
- ✘ Highest divorce rate: Nevada
- ✘ Sources of marital bickering: money (29 percent), television selections (28 percent), time together (21 percent), child discipline (20 percent)
- ✘ Almost 40 percent of persons wish they could ask their spouse for more affection
- ✘ Almost 40 percent of persons report having kept a secret from their spouse
- ✘ Length of silent treatment after a spousal fight: one week (3 percent), one day (21 percent), one hour (31 percent), five minutes (19 percent)

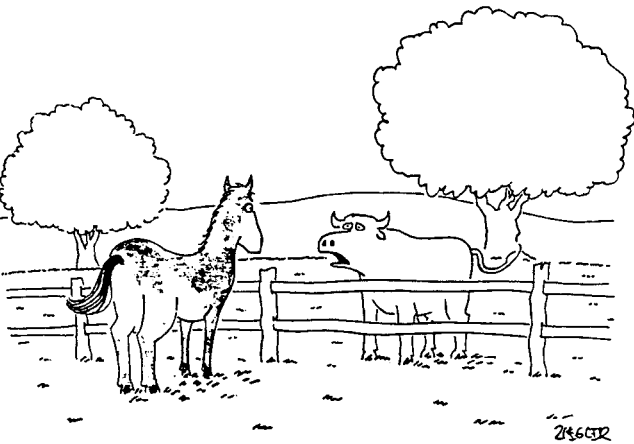
Source: Yin, 2002; Uretsky, 1999; Kanner, 1998, 1995; *Time*, 1998; NCHS, 1998; Roper Reports, 1998.

Couple therapy, like family and group therapy, may follow the principles of any of the major therapy orientations. *Behavioral couple therapy*, for example, uses many techniques from the behavioral perspective (Gollan & Jacobson, 2001).

Therapists help spouses recognize and change problem behaviors largely by teaching specific problem-solving and communication skills. A broader, more sociocultural version, called *integrative couple therapy*, further helps partners accept behaviors that they cannot change and embrace the whole relationship nevertheless (Gollan & Jacobson, 2001; Wheeler, Christensen, & Jacobson, 2001). Partners are asked to see such behaviors as an understandable result of basic differences between them.

Couples treated by couple therapy seem to show greater improvement in their relationships than couples with similar problems who fail to receive treatment, but no one form of couple therapy stands out as superior to others (Gollan & Jacobson, 2001; Gottman et al., 2001). Although two-thirds of treated couples experience improved marital functioning by the end of therapy, fewer than half of those who are treated achieve "distress-free" or "happy" relationships. Moreover, one-third of successfully treated

© The New Yorker Collection 1992, Ziegler, from cartoonbank.com.



"I've been a cow all my life, honey. Don't ask me to change now."

couples may relapse within two years after therapy. Couples who are younger, well adjusted, and less rigid in their gender roles tend to have the best results.

**COMMUNITY TREATMENT** Following sociocultural principles, **community mental health treatment** programs allow clients, particularly those with severe psychological difficulties, to receive treatment in familiar surroundings as they try to recover. In 1963 President Kennedy called for such a “bold new approach” to the treatment of mental disorders—a community approach that would enable most people with psychological problems to receive services from nearby agencies rather than distant facilities or institutions. Congress passed the Community Mental Health Act soon after, launching the community mental health movement across the United States. A number of other countries have launched similar movements.

As we observed in Chapter 1, a key principle of community treatment is prevention (Felner et al., 2000). Here clinicians actively reach out to clients rather than wait for them to seek treatment. Research suggests that such efforts are often very successful (Oxley, 2000; Wolff, 2000). Community workers recognize three types of prevention, which they call *primary*, *secondary*, and *tertiary*.

*Primary prevention* consists of efforts to improve community attitudes and policies. Its goal is to prevent psychological disorders altogether. Community workers may lobby for better community recreational programs or child-care facilities, consult with a local school board to help develop a curriculum, or offer health fairs or public workshops on stress reduction.

*Secondary prevention* consists of identifying and treating psychological disorders in the early stages, before they become serious. Community workers may work with schoolteachers, ministers, or police to help them recognize the early signs of psychological dysfunction and teach them how to help people find treatment (Newman et al., 1996).

The goal of *tertiary prevention* is to provide effective treatment as soon as it is needed so that moderate or severe disorders do not become long-term problems. Today community agencies across the United States do successfully offer tertiary care for millions of people with moderate psychological problems, but, as we also observed in Chapter 1, they often fail to provide the services needed by hundreds of thousands with severe disturbances. Why has the community mental health approach fallen short for so many people with severe disturbances? As we shall see in later chapters, one of the major reasons is lack of funding. In 1981, when only 750 of the planned 2,000 community mental health centers were in place across the United States, almost all federal funding was withdrawn and replaced with smaller financial grants to the states (Humphreys & Rappaport, 1993).

### Assessing the Sociocultural Model

The sociocultural model has added greatly to the understanding and treatment of abnormal functioning. Today most clinicians take family, cultural, social, and societal issues into account, factors that were overlooked just 30 years ago. In addition, clinicians have become more aware of the impact of clinical and social labels. Finally, as we have just observed, sociocultural treatment formats sometimes succeed where traditional approaches have failed.

At the same time, the sociocultural model, like the other models, has certain problems. To begin with, sociocultural research findings are often difficult to interpret. Research may reveal a relationship between certain sociocultural factors and a particular disorder yet fail to establish that they are its cause. Studies show a link between family conflict and schizophrenia, for example, but that finding does not



Donna Ferrato/Domestic Abuse Awareness Project, NYC, from the book *Living with the Enemy*, Aperture

**Secondary prevention in action** *Community mental health professionals sometimes work with police and other public servants, teaching them how to address the psychological needs of people who are under extreme stress and upset. This 8-year-old had to call the police when he saw his father attacking his mother with a knife. The child's rage, frustration, and emotional pain are apparent.*

**BIOPSYCHOSOCIAL THEORIES**

Explanations that explain abnormality as resulting from an interaction of genetic, biological, developmental, emotional, behavioral, cognitive, social, and societal influences.

necessarily mean that family dysfunction causes schizophrenia (Miklowitz et al., 1995). It is equally possible that family functioning is disrupted by the tension and conflict created by the schizophrenic behavior of a family member (Eakes, 1995).

Another limitation of the model is its inability to predict abnormality in specific individuals (Reynolds, 1998). For example, if societal conditions such as prejudice and discrimination are key causes of anxiety and depression, why do only some of the people subjected to such forces experience psychological disorders? Are still other factors necessary for the development of the disorders?

Given these limitations, most clinicians view sociocultural explanations as operating in conjunction with biological or psychological explanations. They agree that sociocultural factors may create a climate favorable to the development of certain disorders. They believe, however, that biological or psychological conditions or both must also be present in order for the disorders to evolve.

**CROSSROADS:****Integration of the Models**

Today's leading models vary widely (see Table 3-4). They look at behavior differently, begin with different assumptions, arrive at different conclusions, and apply different treatments. Yet none of the models have proved consistently superior. Each helps us appreciate a key aspect of human functioning, and each has important strengths as well as serious limitations.

With all their differences, the conclusions and techniques of the various models are often compatible (Friman et al., 1993). Certainly our understanding and treatment of abnormal behavior are more complete if we appreciate the biological, psychological, and sociocultural aspects of a person's problem rather than only one of them. Not surprisingly, then, a growing number of clinicians are formulating explanations of abnormal behavior that consider more than one kind of cause at a time. These explanations, sometimes called **biopsychosocial theories**, state that abnormality results from the interaction of genetic, biological, developmental, emotional, behavioral, cognitive, social, cultural, and societal influences. If so, the task facing researchers and clinicians is to identify the relative importance of each factor and learn how the factors work together to produce abnormal functioning. A case of depression, for example, might best be explained by pointing collectively to an individual's inheritance of unfavorable genes, traumatic losses during childhood, negative ways of thinking, and social isolation.

Some biopsychosocial theorists favor a *diathesis-stress* explanation of how the various factors work together to cause abnormal functioning ("diathesis" means a vulnerability or a predisposed tendency). According to this theory, people must first have a biological, psychological, or sociocultural predisposition to develop a disorder and must then be subjected to episodes of severe stress. In a case of depression, for example, we might find that unfavorable genes and related biochemical abnormalities predispose the individual to develop the disorder, while the loss of a loved one actually triggers its onset.

Other biopsychosocial theorists favor a *reciprocal effects* explanation of abnormal functioning. They believe that some key factors help produce abnormal functioning by influencing other key factors—that is, by increasing the likelihood or intensity of the other factors (Saudino et al., 1997; Kendler et al., 1995). Say, for example, a man inherits a genetic tendency to be timid and awkward. Because of his timidity and awkwardness, this individual may accept unpleasant partners in his life more readily than most other people would, thus increasing his chances of experiencing stressful relationships, breakups, or periods of isolation in his life—each a factor conducive to depression. In addition, his experiences of interpersonal stress may lower his serotonin activity, another factor conducive to depression. In short, by profoundly affecting each other, a variety of relevant factors may collectively drive an individual toward depression.

**>>Q & A****How do genetic defects differ from congenital defects?**

The terms "genetic" and "congenital" both come from the Greek for "birth." **Genetic defects** are inherited, are determined at the moment of conception, and can be passed down to future generations. **Congenital defects**—defects with which a child is born—are not inherited; they develop after conception, during the gestation period (Johnsen, 1994).<<

Table 3-4

## Comparing the Models

	BIOLOGICAL	PSYCHODYNAMIC	BEHAVIORAL	COGNITIVE	HUMANISTIC	EXISTENTIAL	SOCIO-CULTURAL
Cause of dysfunction	Biological malfunction	Underlying conflicts	Maladaptive learning	Maladaptive thinking	Self-deceit	Avoidance of responsibility	Family or social stress
Research support	Strong	Modest	Strong	Strong	Weak	Weak	Moderate
Consumer designation	Patient	Patient	Client	Client	Patient or client	Patient or client	Client
Therapist role	Doctor	Interpreter	Teacher	Persuader	Observer	Collaborator	Social facilitator
Key therapist technique	Biological intervention	Free association and interpretation	Conditioning	Reasoning	Reflection	Varied	Social intervention
Therapy goal	Biological repair	Broad psychological change	Functional behaviors	Adaptive thinking	Self-actualization	Authentic life	Effective family or social system

In a similar quest for integration, many therapists are now combining treatment techniques from several models (McDaniel et al., 2001). In fact, 27 percent of today's clinical psychologists, 34 percent of social workers, and 53 percent of psychiatrists describe their approach as "eclectic" or "integrative" (Prochaska & Norcross, 2003). Studies confirm that clinical problems often respond better to combined approaches than to any one therapy alone. For example, as we shall see, drug therapy combined with cognitive therapy is sometimes the most effective treatment for depression (de Jonghe et al., 2001).

Given the recent rise in biopsychosocial theories and combination treatments, our examination of abnormal behavior throughout this book will take two directions. As different disorders are presented, we will be interested in how today's models explain each disorder, how clinicians who endorse each model treat people with the disorder, and how well these explanations and treatments are supported by research. Just as important, however, we will also be observing how the explanations and treatments may build upon and strengthen each other, and we will examine current efforts toward integration of the models.

## SUMMARY AND REVIEW

- **Models of psychological abnormality** Scientists and clinicians use *models*, or *paradigms*, to understand and treat abnormal behavior. The principles and techniques of treatment used by clinical practitioners correspond to their preferred models. pp. 49–51
- **The biological model** Biological theorists look at the biological processes of human functioning to explain abnormal behavior, pointing to *anatomical* or *biochemical* problems in the brain and body. Such abnormalities are sometimes the result of *genetic inheritance of abnormalities*, *normal evolution*, or *viral infections*.

**>>IN THEIR WORDS**

“I am a brain, Watson. The rest of me is a mere appendix.”<<

Sherlock Holmes, in Arthur Conan Doyle’s  
“The Adventure of the Mazarin Stone”

“We are molded and remolded by those who have loved us.”<<

François Mauriac

“Fortunately, analysis is not the only way to resolve inner conflicts. Life itself still remains a very effective therapist.”<<

Karen Horney, *Our Inner Conflicts*, 1945

“Only the shallow know themselves.”<<

Oscar Wilde

“Help! I’m being held prisoner by my heredity and environment.”<<

Dennis Allen

Biological therapists use physical and chemical methods to help people overcome their psychological problems. The leading ones are *drug therapy*, *electroconvulsive therapy*, and, on rare occasions, *psychosurgery*. pp. 51–56

- **The psychodynamic model** Psychodynamic theorists believe that an individual’s behavior, whether normal or abnormal, is determined by underlying psychological forces. They consider psychological conflicts to be rooted in early parent-child relationships and traumatic experiences. The psychodynamic model was formulated by Sigmund Freud, who said that three dynamic forces—the *id*, *ego*, and *superego*—interact to produce thought, feeling, and behavior. Other psychodynamic theories are *ego theory*, *self theory*, and *object relations theory*. Psychodynamic therapists help people uncover past traumas and the inner conflicts that have resulted from them. They use a number of techniques, including *free association* and interpretations of psychological phenomena such as *resistance*, *transference*, and *dreams*. pp. 56–63
- **The behavioral model** Behaviorists concentrate on *behaviors* and propose that they develop in accordance with the *principles of learning*. These theorists hold that three types of conditioning—*classical conditioning*, *operant conditioning*, and *modeling*—account for all behavior, whether normal or dysfunctional. The goal of the behavioral therapies is to identify the client’s problematic behaviors and replace them with more appropriate ones, using techniques based on one or more of the principles of learning. The classical conditioning approach of *systematic desensitization*, for example, has been effective in treating phobias. pp. 64–67
- **The cognitive model** According to the cognitive model, we must understand human thought to understand human behavior. When people display abnormal patterns of functioning, cognitive theorists point to cognitive problems, such as *maladaptive assumptions* and *illogical thinking processes*. Cognitive therapists try to help people recognize and change their faulty ideas and thinking processes. Among the most widely used cognitive treatments is Beck’s *cognitive therapy*. pp. 67–70
- **The humanistic-existential model** The humanistic-existential model focuses on the human need to successfully confront philosophical issues such as self-awareness, values, meaning, and choice in order to be satisfied in life.
 

Humanists believe that people are driven to *self-actualize*. When this drive is interfered with, abnormal behavior may result. One group of humanistic therapists, *client-centered therapists*, try to create a very supportive therapy climate in which people can look at themselves honestly and acceptingly, thus opening the door to self-actualization. Another group, *gestalt therapists*, use more active techniques to help people recognize and accept their needs. Recently the role of *religion* as an important factor in mental health and in psychotherapy has caught the attention of researchers and clinicians.

According to existentialists, abnormal behavior results from hiding from life’s responsibilities. Existential therapists encourage people to accept *responsibility* for their lives, to recognize their *freedom to choose* a different course, and to choose to live with greater meaning. pp. 70–75
- **The sociocultural model** The sociocultural model looks outward to the social forces that affect members of a society. Some sociocultural theorists emphasize the *family system*, believing that a family’s structure or communication patterns may force members to behave in abnormal ways. Still others look at *cultural background*, *social networks* and *support*, or *societal conditions* to see what special issues they may pose. Finally, some theorists focus on *societal labels* and *roles*; they hold that society calls certain people “mentally ill” and that the label itself may influence how a person behaves and is responded to.
 

Special sociocultural principles are often on display in *culture-sensitive*, *group*, *family*, and *couple therapies*. Research indicates that these approaches are

useful for some problems and under some circumstances. In *community treatment*, therapists try to work with people in settings close to home, school, and work. Their goal is either *primary*, *secondary*, or *tertiary prevention*. pp. 75–84

### »» CRITICAL THOUGHTS ««

1. What might the enormous popularity of psychotropic drugs suggest about the needs and coping styles of individuals today and about problem solving in our technological society? pp. 54–55
2. Although Freud argued that psychoanalytic therapy needs to be long-term and in-depth, he himself sometimes practiced a short-term version of the approach. Why might Freud have chosen to break his own rules of conduct in certain cases? Can you think of other pioneers, in or out of the clinical field, whose actual work sometimes departed from their theories? pp. 60–63
3. In *Paradise Lost* Milton wrote, “The mind . . . can make a heaven of hell, a hell of heaven.” Which model(s) of abnormal functioning would agree with this statement? pp. 56–63, 67–75
4. Twenty-one percent of Americans say they are regularly “bored out of their mind” (Kanner, 1999). How might humanistic-existential theorists explain the phenomenon of severe boredom and such reactions to it? pp. 70–75
5. Why might positive religious beliefs be linked to mental health? Why have so many clinicians been suspicious of religious beliefs for so long? pp. 73–74
6. In *Anna Karenina* the writer Leo Tolstoy wrote, “All happy families resemble one another; every unhappy family is unhappy in its own fashion.” Would family systems theorists agree with Tolstoy? pp. 76–77, 79–83
7. What might be the advantages and disadvantages of self-help groups in comparison with professional treatment? pp. 79, 81

### ● CYBER STUDY

- ▲ *Observe the biological, psychodynamic, and sociocultural models in action.*
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# Clinical Assessment, Diagnosis, and Treatment

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### CROSSROADS: RENEWED RESPECT COLLIDES WITH ECONOMIC PRESSURE

Angela Savanti was 22 years old, lived at home with her mother, and was employed as a secretary in a large insurance company. She . . . had had passing periods of “the blues” before, but her present feelings of despondency were of much greater proportion. She was troubled by a severe depression and frequent crying spells, which had not lessened over the past two months. Angela found it hard to concentrate on her job, had great difficulty falling asleep at night, and had a poor appetite. . . . Her depression had begun after she and her boyfriend Jerry broke up two months previously.

(Leon, 1984, p. 109)

Her feelings of despondency led Angela Savanti to make an appointment with a therapist at a local counseling center. The first step the clinician took was to learn as much as possible about Angela and her disturbance. Who is she, what is her life like, and what precisely are her symptoms? The answers might help to reveal the causes and probable course of her present dysfunction and suggest what kinds of strategies would be most likely to help her. Treatment could then be tailored to Angela's needs and particular pattern of abnormal functioning.

In Chapters 2 and 3 we saw how researchers in abnormal psychology build a *nomothetic*, or *general*, understanding of abnormal functioning. Clinical practitioners apply this general information in their work, but their main focus when faced with a new client is to gather **idiographic**, or individual, information about their clients. To help a particular client overcome his or her problems, a practitioner must have the fullest possible understanding of that person and know the circumstances under which the problems arose. Only after thoroughly examining the person can the therapist effectively apply relevant nomothetic information. Clinicians use the procedures of *assessment* and *diagnosis* to gather individual information about a client. Then they are in a position to apply *treatment*.

## Clinical Assessment: How and Why Does the Client Behave Abnormally?

**Assessment** is simply the collecting of relevant information in an effort to reach a conclusion. It goes on in every realm of life. We make assessments when we decide what cereal to buy or which presidential candidate to vote for. College admissions officers, who have to select the “best” of the students applying to their college, depend on academic records, recommendations, achievement test scores, interviews, and application forms to help them decide. Employers, who have to predict which applicants are most likely to be effective workers, collect information from résumés, interviews, references, and perhaps on-the-job observations.

**IDIOPHIC UNDERSTANDING** An understanding of the behavior of a particular individual.

**ASSESSMENT** The process of collecting and interpreting relevant information about a client or subject.





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"We're going to run some tests: blood work, a cat-scan, and the S.A.T.'s."

*Clinical assessment* is used to determine how and why a person is behaving abnormally and how that person may be helped. It also enables clinicians to evaluate people's progress after they have been in treatment for a while and decide whether the treatment should be changed. The specific tools that are used to do an assessment depend on the clinician's theoretical orientation (Vance & Pumariega, 2001; Haynes & O'Brien, 2000) (see Box 4-1). Psychodynamic clinicians, for example, use methods that assess a client's personality and probe for any unconscious conflicts he or she may be experiencing. This kind of assessment, called a *personality assessment*, enables them to piece together a clinical picture in accordance with the principles of their model. Behavioral and cognitive clinicians are more likely to use assessment methods that reveal specific dysfunctional behaviors and cognitions. The goal of this kind of assessment, called a *behavioral assessment*, is to produce a *functional analysis* of the person's behaviors—an analysis of how the behaviors are learned and reinforced.

The hundreds of clinical assessment techniques and tools that have been developed fall into three categories: *clinical interviews*, *tests*, and *observations*. To be useful, these tools must be *standardized* and have clear *reliability* and *validity*.

### Characteristics of Assessment Tools

In order to get meaningful results, all clinicians must follow the same procedures when they use a particular technique of assessment. To **standardize** a technique is to set up common steps to be followed whenever it is administered. Similarly, clinicians must standardize the way they interpret the results of an assessment tool in order to be able to understand what a particular score means. They may standardize the scores of a test, for example, by first administering it to a group of subjects whose performance will then serve as a common standard, or norm, against which later individual scores can be measured. The group that initially takes the test is called the *standardization sample*. This sample must be typical of the larger population the test is intended for. If an aggressiveness test meant for the public at large were standardized on a group of marines, for example, the resulting "norm" might turn out to be misleadingly high.

**Reliability** refers to the *consistency* of assessment measures. A good assessment tool will always yield the same results in the same situation (Loewenthal, 2001; Wiens, Mueller & Bryan, 2001). An assessment tool has high *test-retest reliability*, one kind of reliability, if it yields the same results every time it is given to the same people. If a woman's responses on a particular test indicate that she is generally a heavy drinker, the test should produce the same result when she takes it again a week later. To measure test-retest reliability, subjects are tested on two occasions and the two scores are correlated. The higher the correlation, the greater the test's reliability (see Chapter 2).

An assessment tool shows high *interrater* (or *interjudge*) *reliability*, another kind of reliability, if different judges independently agree on how to score and interpret it. True-false and multiple-choice tests yield consistent scores no matter who evaluates them, but other tests require that the evaluator make a judgment. Consider a test that requires the person to draw a copy of a picture, which a judge then rates for accuracy. Different judges may give different ratings to the same drawing.

Finally, an assessment tool must have **validity**: it must *accurately* measure what it is supposed to measure (Goodwin, 2002; Loewenthal, 2001). Suppose a weight scale reads 12 pounds every time a 10-pound bag of sugar is placed on it. Although the scale is reliable because its readings are consistent, those readings are not valid, or accurate.

**Oops!** These judges of a high school diving competition, actually coaches from the opposing teams, arrive at very different assessments of the same diver. The low interrater reliability may reflect evaluator bias or defects in the scoring procedure.



The Palm Beach Post, photo by Mark Mirko

## BOX 4-1

## Assessing Van Gogh

Vincent van Gogh led a tortured and unhappy life. In a legendary incident the artist cut off one of his ears. Later he was admitted to a mental institution, and ultimately he committed suicide at the age of 37. Van Gogh wrote a great deal about his pain and anguish, describing mental and physical torment and hallucinations. Indeed, he observed, “There is quite definitely something or other deranged in my brain.”

For years clinicians have typically agreed with van Gogh and have speculated that the artist suffered from a mood disorder, schizophrenia, or both. Recently, however, these assessments have been challenged (Blumer, 2002; Rosenfeld, 1998).

A Harvard neurologist, for example, has suggested that van Gogh in fact suffered from *Geschwind’s syndrome*, technically known as *interictal personality disorder*, caused by brain

seizure disorder, or epilepsy. Van Gogh displayed many of its symptoms, including excessive drawing (hypergraphia), hyperreligiosity, and aggression (Hochman, 2000; Trotter, 1985).

In contrast, medical specialists in Colorado have concluded that van Gogh suffered from an extreme form of *Menière’s syndrome*, a disorder marked by an excessive buildup of fluid in the inner ear. The enormous pressure may produce nausea, dizziness, poor balance, pain, deafness, and constant buzzing or ringing sensations. Perhaps van Gogh cut off his ear in an effort to reduce the pain. And perhaps his other problems and pains arose from the severe secondary psychological problems that

can accompany Menière’s syndrome (Hochman, 2000; Scott, 1990).



Vincent van Gogh, a self-portrait

Courtesy of the Fogg Art Museum, Harvard University Art Museum, Bequest from the collection of Maurice Wertheim, Class of 1906/ David Matthews/President and Fellows of Harvard College

A given assessment tool may appear to be valid simply because it makes sense and seems reasonable. However, this sort of validity, called *face validity*, does not by itself mean that the instrument is trustworthy. A test for depression, for example, might include questions about how often a person cries. Because it makes sense that depressed people would cry, these test questions would have face validity. It turns out, however, that many people cry a great deal for reasons other than depression, and some extremely depressed people fail to cry at all. Thus an assessment tool should not be used unless it meets more exacting criteria of validity, such as high predictive or concurrent validity (Kamphaus & Frick, 2002).

*Predictive validity* is a tool’s ability to predict future characteristics or behavior. Let us say that a test has been developed to identify elementary school children who are likely to take up cigarette smoking in junior high school. The test gathers information about the children’s parents—their personal characteristics, smoking habits, and attitudes toward smoking—and on that basis identifies high-risk children. To establish the test’s predictive validity, we could administer it to a group of elementary school students, wait until they were in junior high school, and then check to see which children actually did become smokers.

*Concurrent validity* is the degree to which the measures gathered from one tool agree with measures gathered from other assessment techniques. Subjects’ scores on a new test designed to measure anxiety, for example, should correlate highly with their scores on other anxiety tests or with their behavior during clinical interviews.

Before any assessment technique can be fully useful, it must meet the requirements of standardization, reliability, and validity. No matter how insightful or clever a technique may be, clinicians cannot profitably use its results if they are uninterpretable, inconsistent, or inaccurate. Unfortunately, more than a few clinical assessment tools fall short, suggesting that at least some clinical assessments, too, miss their mark.

**STANDARDIZATION** The process in which a test is administered to a large group of persons whose performance then serves as a common standard or norm against which any individual’s score can be measured.

**RELIABILITY** A measure of the consistency of test or research results.

**VALIDITY** The accuracy of a test’s or study’s results; that is, the extent to which the test or study actually measures or shows what it claims.

**>>IN THEIR WORDS**

“If you don’t ask the right questions, you don’t get the right answers.”<<

Edward Hodnett

“Good questions outrank easy answers.”<<

Paul A. Samuelson

“A prudent question is one half of wisdom.”<<

Francis Bacon

## Clinical Interviews

Most of us feel instinctively that the best way to get to know people is to meet with them face to face. Under these circumstances, we can see them react to what we do and say, observe as well as listen as they answer, watch them observing us, and generally get a sense of who they are. A **clinical interview** is just such a face-to-face encounter (Compas & Gottlib, 2002; Robinson, 2000). If during a clinical interview a man looks as happy as can be while describing his sadness over the recent death of his mother, the clinician may suspect that the man actually has conflicting emotions about this loss. Almost all practitioners use interviews as part of the assessment process.

**CONDUCTING THE INTERVIEW** The interview is often the first contact between client and clinician. Clinicians use it to collect detailed information about the person’s problems and feelings, lifestyle and relationships, and other personal history. They may also ask about the person’s expectations of therapy and motives for seeking it. The clinician who worked with Angela Savanti began with a face-to-face interview:

Angela was dressed neatly when she appeared for her first interview. She was attractive, but her eyes were puffy and ringed with dark circles. She answered questions and related information about her life history in a slow, flat tone of voice, which had an impersonal quality to it. She sat stiffly in her chair. . . .

The client stated that the time period just before she and her boyfriend terminated their relationship had been one of extreme emotional turmoil. She was not sure whether she wanted to marry Jerry, and he began to demand that she decide either one way or the other. Mrs. Savanti [Angela’s mother] did not seem to like Jerry and was very cold and aloof whenever he came to the house. Angela felt caught in the middle and unable to make a decision about her future. After several confrontations with Jerry over whether she would marry him or not, he told her he felt that she would never decide, so he was not going to see her anymore. . . .

Angela stated that her childhood was a very unhappy period. Her father was seldom home, and when he was present, her parents fought constantly. . . .

Angela recalled feeling very guilty when Mr. Savanti left. . . . She revealed that whenever she thought of her father, she always felt that she had been responsible in some way for his leaving the family. . . .

Angela described her mother as the “long-suffering type” who said that she had sacrificed her life to make her children happy, and the only thing she ever got in return was grief and unhappiness. . . . When Angela and [her sister] began dating, Mrs. Savanti . . . would make disparaging remarks about the boys they had been with and about men in general. . . .

Angela revealed that she had often been troubled with depressed moods. During high school, if she got a lower grade in a subject than she had expected, her initial response was one of anger, followed by depression. She began to think that she was not smart enough to get good grades, and she blamed herself for studying too little. Angela also became despondent when she got into an argument with her mother or felt that she was being taken advantage of at work. . . .

The intensity and duration of the [mood change] that she experienced when she broke up with Jerry were much more severe. She was not sure why she was so depressed, but she began to feel it was an effort to walk around and go out to work. Talking with others became difficult. Angela found it hard to concentrate, and she began to forget things she was supposed to do. . . . She preferred to lie in bed rather than be with anyone, and she often cried when alone.

(Leon, 1984, pp. 110–115)

**CLINICAL INTERVIEW** A face-to-face encounter in which clinicians ask questions of clients, weigh their responses and reactions, and learn about them and their psychological problems.

**MENTAL STATUS EXAM** A set of interview questions and observations designed to reveal the degree and nature of a client’s abnormal functioning.

Beyond gathering basic background data of this kind, clinical interviewers give special attention to whatever topics they consider most important (Compas &

Gotlib, 2002). Psychodynamic interviewers try to learn about the person's needs and memories of past events and relationships. Behavioral interviewers try to pinpoint the precise nature of the abnormal responses, including information about the stimuli that trigger such responses and their consequences. Cognitive interviewers try to discover assumptions and interpretations that influence the person. Humanistic clinicians ask about the person's self-evaluation, self-concept, and values. Biological clinicians look for signs of biochemical or brain dysfunction. And sociocultural interviewers ask about the family, social, and cultural environments.

Interviews can be either unstructured or structured (Kamphaus & Frick, 2002; Moberg et al., 2001). In an *unstructured interview*, the clinician asks open-ended questions, perhaps as simple as "Would you tell me about yourself?" The lack of structure allows the interviewer to follow interesting leads and explore relevant topics that could not be anticipated before the interview.

In a *structured interview*, clinicians ask prepared questions. Sometimes they use a published *interview schedule*—a standard set of questions designed for all interviews. Many structured interviews include a **mental status exam**, a set of questions and observations that systematically evaluate the client's awareness, orientation with regard to time and place, attention span, memory, judgment and insight, thought content and processes, mood, and appearance (Robinson, 2000). A structured format ensures that clinicians will cover the same kinds of important issues in all their interviews and enables them to compare the responses of different individuals (Shear et al., 2001).

Although most clinical interviews have both unstructured and structured portions, many clinicians favor one kind over the other. Unstructured interviews typically appeal to psychodynamic and humanistic clinicians, while structured formats are widely used by behavioral clinicians, who need to do a systematic review of a person's behaviors (Pope, 1983). Structured formats are also popular among cognitive interviewers, who need to pinpoint attitudes or thinking processes that may underlie abnormal behavior.

**WHAT ARE THE LIMITATIONS OF CLINICAL INTERVIEWS?** Although interviews often produce valuable information about people, there are limits to what they can accomplish (Meyer et al., 2001; Saile et al., 2000). One problem is that they sometimes lack validity, or accuracy. Individuals may intentionally mislead in order to present themselves in a positive light or to avoid discussing embarrassing topics. Or people may be unable to give an accurate report in their interview. Individuals who suffer from depression, for example, take a pessimistic view of themselves and may describe themselves as poor workers or inadequate parents when that isn't the case at all.

Interviewers too may make mistakes in judgments that slant the information they gather. They usually rely too heavily on first impressions, for example, and give too much weight to unfavorable information about a client (Meehl, 1996, 1960). Interviewer biases, including gender, race, and age biases, may also influence the interviewers' interpretations of what a client says (Plante, 1999).

Interviews, particularly unstructured ones, may also lack reliability (Wood et al., 2002; Wiens et al., 2001). People respond differently to different interviewers, providing less information to a cold interviewer than to a warm and supportive one (Eisenthal, Koopman, & Lazare, 1983). Similarly, a clinician's race, sex, age, and appearance may influence a client's responses (Paurohit, Dowd, & Cottingham, 1982).

Because different clinicians can obtain different answers and draw different conclusions, even when they ask the same questions of the same person, some researchers believe that interviewing should be discarded as a tool of clinical assessment. As we shall see, however, the two other kinds of clinical assessment methods also have serious limitations.

### >>LOOKING AROUND Revealing Interview

During World War II, recruits were briefly interviewed and tested by clinicians to determine their fitness for military service. When the famous (and witty) pianist Oscar Levant was asked whether he thought he was capable of killing, he is alleged to have pondered the question for a moment and then replied, "I am not sure about strangers, but friends and family, definitely yes" (Bahrack, 1996).<<

**The structured interview** In a structured interview, clinicians gather information by asking a set of standard questions regardless of the client's particular symptoms.



"So, Mr. Fenton, . . . Let's begin with your mother."

**TEST** A device for gathering information about a few aspects of a person's psychological functioning from which broader information about the person can be inferred.

**PROJECTIVE TEST** A test consisting of ambiguous material that people interpret or respond to.

## Clinical Tests

**Tests** are devices for gathering information about a few aspects of a person's psychological functioning, from which broader information about the person can be inferred (Watkins & Campbell, 2000). On the surface, it may look easy to design an effective test. Every month, magazines and newspapers present new tests that supposedly tell us about our personalities, our relationships, our sex lives, our reactions to stress, our ability to succeed. Such tests might sound convincing, but most of them lack reliability, validity, and standardization. That is, they do not yield consistent, accurate information or say anything meaningful about where we stand in comparison with others.

More than 500 clinical tests are currently in use throughout the United States. The ones that clinicians use most often are of six kinds: *projective tests*, *personality inventories*, *response inventories*, *psychophysiological tests*, *neurological and neuropsychological tests*, and *intelligence tests*.

**PROJECTIVE TESTS** **Projective tests** require that subjects interpret vague stimuli, such as inkblots or ambiguous pictures, or follow open-ended instructions such as "Draw a person." Theoretically, when clues and instructions are so vague, subjects will "project" aspects of their personality into the task. Projective tests are used primarily by psychodynamic clinicians to help assess the unconscious drives and conflicts they believe to be at the root of abnormal functioning (McGowen, 2001; Sugarman & Kanner, 2000). The most widely used projective tests are the *Rorschach test*, the *Thematic Apperception Test*, *sentence-completion tests*, and *drawings*.



**FIGURE 4-1** An inkblot similar to those used in the Rorschach test

**RORSCHACH TEST** In 1911 Hermann Rorschach, a Swiss psychiatrist, experimented with the use of inkblots in his clinical work. He made thousands of blots by dropping ink on paper and then folding the paper in half to create a symmetrical but wholly accidental design, such as the one shown in Figure 4-1. Rorschach found that everyone saw images in these blots. In addition, the images a viewer saw seemed to correspond in important ways with his or her psychological condition. People diagnosed with schizophrenia, for example, tended to see images that differed from those described by people suffering from depression.

Rorschach selected 10 inkblots and published them in 1921 with instructions for their use in assessment. This set was called the *Rorschach Psychodynamic Inkblot Test*. Rorschach died just eight months later, at the age of 37, but his work was continued by others, and his inkblots took their place among the most widely used projective tests of the twentieth century.

Clinicians administer the "Rorschach," as it is commonly called, by presenting one inkblot card at a time and asking respondents what they see, what the inkblot seems to be, or what it reminds them of. In the following exchange, a tense 32-year-old woman who complains of feeling unworthy and lacking in confidence responds to one Rorschach inkblot:

**Subject:** Oh, dear! My goodness! O.K. Just this [upper] part is a bug. Something like an ant—one of the social group which is a worker, trying to pull something. I think this is some kind of food for the rest of the ants. It's a bee because it has wings, a worker bee bringing up something edible for the rest of the clan. . . . Here is the bee, the mouth and the wings. I don't think bees eat leaves but it looks like a leaf or a piece of lettuce.

**Clinician:** What makes it look like a piece of lettuce?

**Subject:** Its shape and it has a vein up the middle. It is definitely a bee.

(Klopfer & Davidson, 1962, p. 164)

In the early years, Rorschach testers paid special attention to the *themes* and *images* that the inkblots evoked, called the *thematic content* (Meyer, 2001; Weiner, 2000). Testers now also pay attention to the *style* of the responses: Do the subjects view the design as a whole or see specific details? Do they focus on the blots or on the white spaces between them? Do they use or do they ignore the shadings and colors in several of the cards? Do they see human movement in the designs, or animal movement? Here is how the clinician interpreted the bug responses of the woman quoted above:

The bee may reflect the image she has of herself as a hard worker (a fact noted by her supervisor). In addition, the “bee bringing up something edible for the rest of the clan” suggests that she feels an overwhelming sense of responsibility toward others.

This card frequently evokes both masculine and feminine sexual associations, either in direct or symbolic form. Apparently [this woman] is not able to handle such material comfortably either overtly or in a more socialized manner, and so both sexual symbols are replaced by the oral symbolism of providing food.

(Klopfers & Davidson, 1962, pp. 182–183)

### >>LOOKING BACK

#### Believe It or Not

By a strange coincidence, Hermann Rorschach’s young schoolmates gave him the nickname *Klex*, a variant of the German *Klecks*, which means “inkblot” (Schwartz, 1993).<<

**THEMATIC APPERCEPTION TEST** The *Thematic Apperception Test (TAT)* is a pictorial projective test (Conklin & Westen, 2001; Morgan & Murray, 1935). People who take the TAT are commonly shown 30 black-and-white pictures of individuals in vague situations and are asked to make up a dramatic story about each card. They must tell what is happening in the picture, what led up to it, what the characters are feeling and thinking, and what the outcome of the situation will be.

Clinicians who use the TAT believe that people always identify with one of the characters on each card, called the *hero*. The stories are thought to reflect the individuals’ own circumstances, needs, emotions, and sense of reality and fantasy. For example, a female client seems to be revealing her own feelings in this story about the TAT picture shown in Figure 4-2, one of the few TAT pictures permitted for display in textbooks:

This is a woman who has been quite troubled by memories of a mother she was resentful toward. She has feelings of sorrow for the way she treated her mother, her memories of her mother plague her. These feelings seem to be increasing as she grows older and sees her children treating her the same way that she treated her mother.

(Aiken, 1985, p. 372)

**SENTENCE-COMPLETION TEST** The *sentence-completion test*, first developed in the 1920s (Payne, 1928), asks people to complete a series of unfinished sentences, such as “I wish \_\_\_\_\_” or “My father \_\_\_\_\_.” The test is considered a good springboard for discussion and a quick and easy way to pinpoint topics to explore.

**DRAWINGS** On the assumption that a drawing tells us something about its creator, clinicians often ask clients to draw human figures and talk about them. Evaluations of these drawings are based on the details and shape of the drawing, solidity of the pencil line, location of the drawing on the paper, size of the figures, features of the figures, use of background, and comments made by the respondent during the drawing task. In the *Draw-a-Person (DAP) Test*, the most

FIGURE 4-2 A picture used in the Thematic Apperception Test





AP Photo/Suzanne Plunkett

**Drawing Test** Drawing tests are commonly used to assess the functioning of children. A popular one is the Kinetic Family Drawing test, in which children draw their household members performing some activity (“kinetic” means “active”).

popular of the drawing tests, subjects are first told to draw “a person,” and then are instructed to draw another person of the opposite sex.

**WHAT ARE THE MERITS OF PROJECTIVE TESTS?** Until the 1950s, projective tests were the most common technique for assessing personality. In recent years, however, clinicians and researchers have relied on them largely to gain “supplementary” insights (Westen et al., 1999). One reason for this shift is that practitioners who follow the newer models have less use for the tests than psychodynamic clinicians do. Even more important, the tests have rarely demonstrated much reliability or validity (Wood et al., 2002; Meyer, 2001).

In reliability studies, different clinicians have tended to score the same person’s projective test quite differently. Standardized procedures for administering and scoring the tests have been developed in order to improve scoring consistency, but research suggests that the reliability of projective tests remains weak even when such procedures are used (Wood et al., 2002; Lilienfeld et al., 2000).

Research has also challenged the validity of projective tests. When clinicians try to describe a client’s personality and feelings on the basis of responses to projective tests, their conclusions often fail to match the self-report of the client, the view of the psychotherapist, or the picture gathered from an extensive case history (Wood et al., 2002). Another validity problem is that projective tests are sometimes biased against minority ethnic groups. For example, people are supposed to identify with the characters in the Thematic Apperception Test (TAT) when they make up stories about them, yet no members of minority groups are in the TAT pictures. In response to this problem, some clinicians have developed other TAT-like tests with African American or Hispanic figures (Costantino et al., 2001).

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**The art of assessment** Clinicians often view works of art as informal projective tests in which artists reveal their conflicts and mental stability. The sometimes bizarre cat portraits of the early-twentieth-century artist Louis Wain, for example, have been interpreted as reflections of the psychosis with which he struggled for many years. Others believe such interpretations are incorrect, however, and note that the decorative patterns in some of his later paintings were actually based on textile designs.



Louis Wain

**PERSONALITY INVENTORIES** An alternative way to collect information about individuals is to ask them to assess themselves. The **personality inventory** asks respondents a wide range of questions about their behavior, beliefs, and feelings. In the typical personality inventory, individuals indicate whether or not each of a long list of statements applies to them. Clinicians then use the responses to draw conclusions about the person’s personality and psychological functioning.

By far the most widely used personality inventory is the *Minnesota Multiphasic Personality Inventory (MMPI)* (Nichols, 2001; Butcher, 2000). Two adult versions are available—the original test, published in 1945, and the *MMPI-2*, a 1989 revision. A special version of the test for adolescents, the *MMPI-A*, is also used widely.

The traditional MMPI consists of 550 self-statements, to be labeled “true,” “false,” or “cannot say.” The statements describe physical concerns; mood; morale; attitudes toward religion, sex, and social activities; and psychological symptoms, such as fears or hallucinations. The inventory was constructed by a method called *criterion keying*. The authors asked 724 “normal” people (hospital visitors) and 800 hospitalized mental patients to indicate whether or not each of hundreds of self-statements was true for them. Only statements that differentiated the hospitalized subjects from the normal subjects were incorporated into the inventory.

The items in the MMPI make up 10 clinical scales:

**Hypochondriasis (HS)** Items showing abnormal concern with bodily functions (“I have chest pains several times a week.”)

**Depression (D)** Items showing extreme pessimism and hopelessness (“I often feel hopeless about the future.”)

**Conversion hysteria (Hy)** Items suggesting that the person may use physical or mental symptoms as a way of unconsciously avoiding conflicts and responsibilities (“My heart frequently pounds so hard I can feel it.”)

**Psychopathic deviate (PD)** Items showing a repeated and gross disregard for social customs and an emotional shallowness (“My activities and interests are often criticized by others.”)

**Masculinity-femininity (Mf)** Items that are thought to distinguish male and female respondents (“I like to arrange flowers.”)

**Paranoia (Pa)** Items that show abnormal suspiciousness and delusions of grandeur or persecution (“There are evil people trying to influence my mind.”)

**Psychasthenia (Pt)** Items that show obsessions, compulsions, abnormal fears, and guilt and indecisiveness (“I save nearly everything I buy, even after I have no use for it.”)

**Schizophrenia (Sc)** Items that show bizarre or unusual thoughts or behavior, including extreme withdrawal, delusions, or hallucinations (“Things around me do not seem real.”)

**Hypomania (Ma)** Items that show emotional excitement, overactivity, and flight of ideas (“At times I feel very ‘high’ or very ‘low’ for no apparent reason.”)

**Social introversion (Si)** Items that show shyness, little interest in people, and insecurity (“I am easily embarrassed.”)

Scores for each scale can range from 0 to 120. When people score above 70, their functioning on that scale is considered deviant. When the scores are connected on a graph, a pattern called the *profile* takes shape, indicating the person’s general personality and underlying emotional needs. Figure 4-3 shows the MMPI profile of John, a depressed 27-year-old man. It indicates that he is very depressed, feels anxious and threatened, is socially withdrawn, and is prone to physical complaints. In addition to such clinical measures, questions have been built into the MMPI to detect whether respondents are lying, defensive, or careless in their answers (Butcher, 2000).

The MMPI-2, the newer version of the MMPI, contains 567 items—many identical to those in the original, some rewritten to reflect current language (“upset stomach,” for instance, replaces “acid stomach”) and others that are new. To the original scales the MMPI-2 adds several new scales that cover issues such as eating problems, a tendency to abuse drugs, and poor functioning at work. Before being adopted, the MMPI-2 was tested on a more diverse group of people than was the original test. Thus scores on the new test may be more accurate indicators of personality and abnormal functioning.

Although many clinicians were reluctant at first to change from the MMPI to the MMPI-2, most now embrace the latter as a needed improvement and update. They have been won over by a growing body of research showing that the MMPI-2

**PERSONALITY INVENTORY** A test designed to measure broad personality characteristics, consisting of statements about behaviors, beliefs, and feelings that people evaluate as either characteristic or uncharacteristic of them.

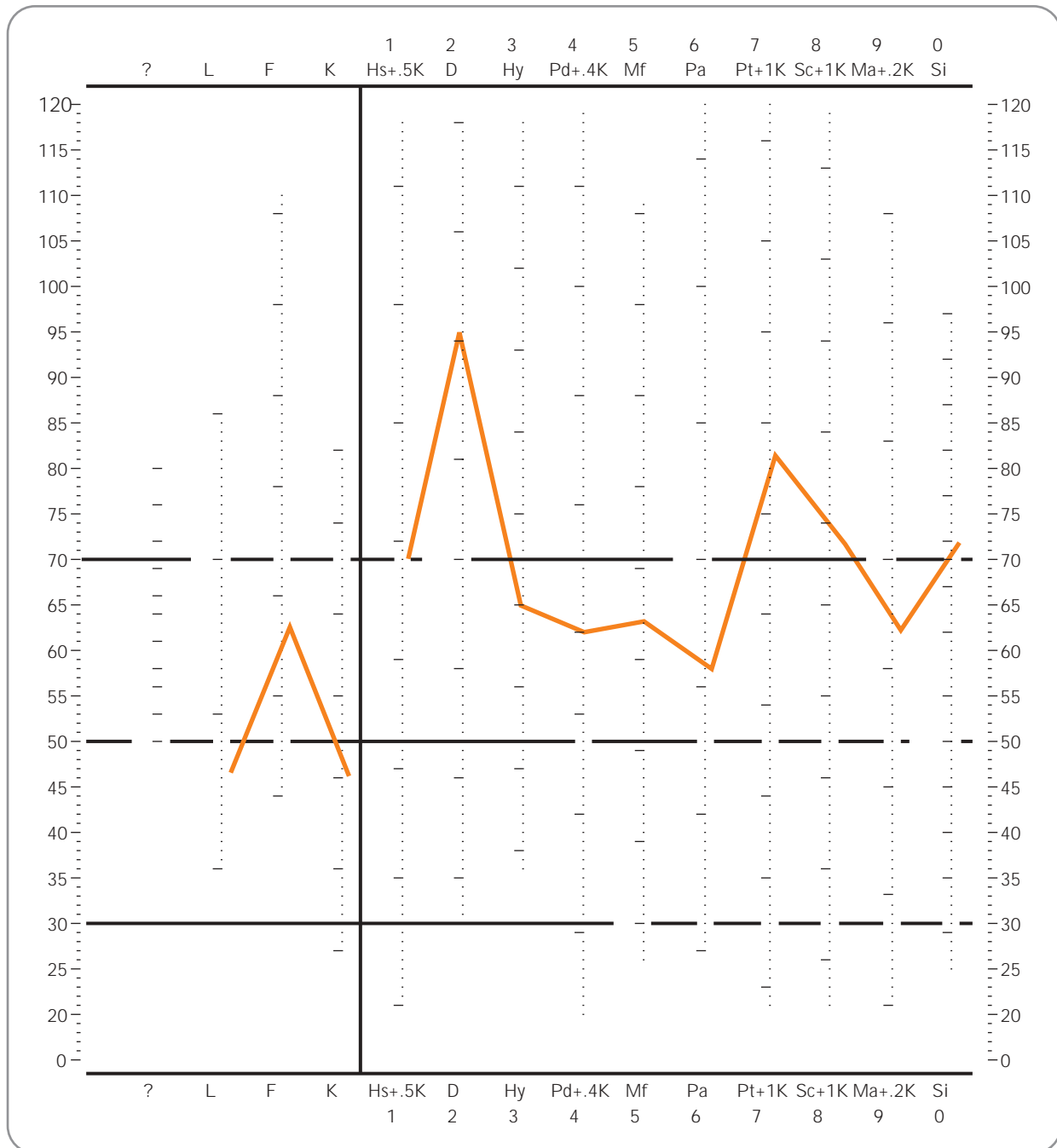
#### >>PSYCH•NOTES MMPI Preferences

According to surveys, 80 percent of professionals who administer an MMPI in their work use the MMPI-2, 37 percent the MMPI, and 40 percent the MMPI-A.

Around 68 percent of professionals who administer the MMPI today use computerized scoring, and 44 percent use computerized interpretations of the scores.

(Downey et al., 1998)





**FIGURE 4-3 An MMPI profile** The profile of John, a 27-year-old man, suggests that he is depressed. He also appears to be anxious, prone to physical complaints, indecisive, introverted, and insecure. (From Graham, 1977, p. 164.)

is indeed a useful instrument and that the two versions produce comparable results (Dorfman & Leonard, 2001; Butcher, 2000).

The MMPI and other personality inventories have several advantages over projective tests (Wood et al., 2002). Because they are paper-and-pencil tests, they do not take much time to administer, and they are objectively scored. Most of them are standardized, so one person's scores can be compared to those of many others. Moreover, they often display greater test-retest reliability than projective tests. For example, people who take the MMPI a second time after a period of less than two weeks receive approximately the same scores (Graham, 2000).

Personality inventories also appear to have greater validity, or accuracy, than projective tests (Wood et al., 2000). However, they can hardly be considered *highly* valid. When clinicians have used these tests alone, they have not typically

been able to judge a respondent's personality accurately (Johnson et al., 1996). One problem is that the personality traits that the tests seek to measure cannot be examined directly. How can we fully know a person's character, emotions, and needs from self-reports alone?

Another problem is the tests' frequent failure to allow for cultural differences in people's responses. Responses indicative of a psychological disorder in one culture may be normal responses in another (Butcher, 2000; Dana, 2000). In Puerto Rico, for example, where it is common to practice spiritualism, it would be normal to answer "true" to the MMPI item "Evil spirits possess me at times." In other populations, that response could indicate psychopathology (Rogler, Malgady, & Rodriguez, 1989).

Despite their limited validity, personality inventories continue to be popular (Kamphaus & Frick, 2002). Research indicates that they can help clinicians learn about people's personal styles and disorders as long as they are used in combination with interviews or other assessment tools.

**RESPONSE INVENTORIES** Like personality inventories, **response inventories** ask people to provide detailed information about themselves, but these tests focus on one specific area of functioning. For example, one such test may measure affect (emotion), another social skills, and still another cognitive processes. Clinicians can use them to determine the role such factors play in a person's disorder.

*Affective inventories* measure the severity of such emotions as anxiety, depression, and anger (Beidel et al., 2000, 1995). In one of the most widely used affective inventories, the Beck Depression Inventory, shown in Table 4-1, people rate their level of sadness and its effect on their functioning. *Social skills inventories*, used particularly by behavioral and sociocultural clinicians, ask respondents to indicate how they would react in a variety of social situations (Wiggins & Trobst, 2002). *Cognitive inventories* reveal a person's typical thoughts and assumptions, and can uncover counterproductive patterns of thinking that may be at the root of abnormal functioning (Glass & Merluzzi, 2000). They are, not surprisingly, often used by cognitive therapists and researchers.

**RESPONSE INVENTORIES** Tests designed to measure a person's responses in one specific area of functioning, such as affect, social skills, or cognitive processes.

Table 4-1

### Sample Items from the Beck Depression Inventory

ITEMS	INVENTORY	
Suicidal ideas	0	I don't have any thoughts of killing myself.
	1	I have thoughts of killing myself but I would not carry them out.
	2	I would like to kill myself.
	3	I would kill myself if I had the chance.
Work inhibition	0	I can work about as well as before.
	1	It takes extra effort to get started at doing something.
	2	I have to push myself very hard to do anything.
	3	I can't do any work at all.
Loss of libido	0	I have not noticed any recent change in my interest in sex.
	1	I am less interested in sex than I used to be.
	2	I am much less interested in sex now.
	3	I have lost interest in sex completely.

### >>LOOKING AROUND Spotting Depression

Family physicians recognize fewer than one-third of all cases of clinical depression that they encounter among their patients. Most of the undetected cases are mild (Coyne et al., 1995).<<

**PSYCHOPHYSIOLOGICAL TEST** A test that measures physical responses (such as heart rate and muscle tension) as possible indicators of psychological problems.

**NEUROLOGICAL TEST** A test that directly measures brain structure or activity.

**NEUROIMAGING TECHNIQUES** Neurological tests that provide images of brain structure or brain activity, including CT scans, PET scans, and MRIs.

Because response inventories collect information directly from the clients themselves, they have strong face validity. Thus both the number of these tests and the number of clinicians who use them have increased steadily in the past twenty-five years. At the same time, however, these inventories have major limitations. Unlike the personality inventories, they rarely include questions to indicate whether people are being careless or inaccurate in their accounts. Moreover, with the notable exceptions of the Beck Depression Inventory and a few others, only some of them have been subjected to careful standardization, reliability, and validity procedures (Kamphaus & Frick, 2002; Canals et al., 2001). Often they are improvised as a need arises, without being tested for accuracy and consistency.

**PSYCHOPHYSIOLOGICAL TESTS** Clinicians may also use **psychophysiological tests**, which measure physiological responses as possible indicators of psychological problems (Allen, 2002; Wilken et al., 2000). This practice began three decades ago after several studies suggested that states of anxiety are regularly accompanied by physiological changes, particularly increases in heart rate, body temperature, blood pressure, skin reactions (*galvanic skin response*), and muscle contraction. The measuring of physiological changes has since played a key role in the assessment of certain psychological disorders.

One psychophysiological test is the *polygraph*, popularly known as a *lie detector* (Kleiner, 2002). Electrodes attached to various parts of a person's body detect changes in breathing, perspiration, and heart rate while the individual answers questions. The clinician observes these functions while the subject answers *yes to control questions*—questions whose answers are known to be yes, such as “Are your parents both alive?” Then the clinician observes the same physiological functions while the person answers *test questions*, such as “Did you commit this robbery?” If breathing, perspiration, and heart rate suddenly increase, the subject is suspected of lying.

Like other kinds of clinical tests, psychophysiological tests have their drawbacks. Many require expensive equipment that must be carefully tuned and maintained. In addition, psychophysiological measurements can be inaccurate and unreliable (see Box 4-2). The laboratory equipment itself—impressive, unusual, and sometimes frightening—may arouse a subject's nervous system and thus change his or her physical responses. Physiological responses may also change when they are measured repeatedly in a single session. Galvanic skin responses, for example, often decrease during repeated testing.

**NEUROLOGICAL AND NEUROPSYCHOLOGICAL TESTS** Some problems in personality or behavior are caused primarily by damage to the brain or changes in brain activity. Head injury, brain tumors, brain malfunctions, alcoholism, infections, and other disorders can all cause such impairment. If a psychological dysfunction is to be treated effectively, it is important to know whether its primary cause is a physical abnormality in the brain.

A number of techniques may help pinpoint brain abnormalities. Some procedures, such as brain surgery, biopsy, and X ray, have been used for many years. More recently, scientists have developed a number of **neurological tests**, designed to measure brain structure and activity directly. One neurological test is the *electroencephalogram (EEG)*, which records *brain waves*, the electrical activity taking place within the brain as a result of neurons firing. In this procedure, electrodes placed on the scalp send brain-wave impulses to a machine, called an oscillograph, which records them. When the electroencephalogram reveals an abnormal brain-wave pattern, or *dysrhythmia*, clinicians suspect the existence of brain injuries, tumors, seizures, or other brain abnormalities, and they turn to more precise and sophisticated techniques to ascertain the nature and scope of the problem.

Other neurological tests actually take “pictures” of brain structure or brain activity. These tests, called **neuroimaging techniques**,

**The EEG** Electrodes pasted to a person's scalp detect electrical impulses from the brain. The electroencephalogram (EEG), used here to measure the brain waves of a 4-month-old being stimulated with toys, is only a gross indicator of the brain's activity.



Joe McNally/Sygma

## BOX 4-2

## Tests, Lies, and Videotape: The Public Misuse of Assessment

In movies, criminals being grilled by the police reveal their guilt by sweating, shaking, cursing, or twitching. When they are hooked up to a *polygraph* (a *lie detector*), the needles bounce all over the paper. This image has been with us since World War I, when some clinicians developed the theory that people who are telling lies display systemic changes in their breathing, perspiration, and heart rate (Marston, 1917).

The danger of relying on polygraph tests is that there is no clear evidence that they work as well as we would like (Raskin & Houts, 2002; Steinbrook, 1992). The public did not pay much attention to this inconvenient fact until the mid-1980s, when the American Psychological Association officially reported that polygraphs were often inaccurate and the United States Congress voted to restrict their use in criminal prosecution and employment screening (Krapohl, 2002). The problem with polygraphs is not that they are totally inaccurate but that they are *too* inaccurate to be used as the basis for important judgments and decisions, such as determining guilt or innocence in a crime. Research clarifies that 8 out of 100 truths, on average, are called lies in polygraph testing (Raskin & Houts, 2002; MacLaren, 2001). Imagine, then, how many innocent people might be convicted of crimes if polygraph findings were taken as valid evidence in criminal trials.

Given such findings, polygraphs are less trusted and less popular today than they once were. For example, few courts now admit results from such tests as evidence of criminal guilt (Daniels, 2002). Polygraph testing has by no means disappeared, however. The FBI uses it extensively in counter-intelligence work; parole boards and probation offices routinely use it to help decide whether to release convicted sex offenders; and in public-sector hiring (such as for police officers), the use of polygraph screening may actually be on the increase (Krapohl, 2002).



Richard Nowitz/Photo Researchers

Polygraph, a test that lies?

When questions about the validity of the polygraph first emerged, businesses immediately began looking for tests to replace or supplement it. They were losing billions of dollars to theft, low productivity, and other dishonest behavior. *Integrity tests* seemed to be the answer. These personality tests seek to measure whether test takers are generally honest or dishonest—and whether it is safe to hire them for a particular job. More than 40 of these written tests are now in use, supposedly revealing such characteristics as dependability, deviance, social conformity, wayward impulses, and hostility to rules (Iacono & Patrick, 1997). Here again, however, research suggests that the tests have little validity, often yielding high rates of false accusations (Camara & Schneider, 1994; Guastello & Rieke, 1991).

Other psychological tests too have caused uproars. In Old Town, Maine, a police officer who had been accused of child sexual abuse lost his job after he refused to take a *penile plethysmograph test*, a test meant to evaluate his sexual impulses. To administer this psychophysiological test, a clinician places a rubber tube filled with mercury around a subject's penis and then shows him videotapes or slides of naked adults and children. When the subject becomes sexually aroused, the

band stretches and the mercury registers the arousal. Clinicians can chart the results to determine whether a subject is more aroused by adults than by children, by males than by females, or by coerced sex than by consensual sex.

Although this test does accurately report sexual arousal, it cannot predict whether a person will act on his feelings (Barker & Howell, 1992). That is, the test cannot determine whether someone has committed a sexual offense or predict whether he is likely to do so.

Although the charges against the police officer in Maine were never confirmed, the police department required him to see a sex-abuse therapist and undergo testing to retain his job. The officer in turn charged the city of Old Town with violation of his civil rights. No government agency, he claimed, had the right to make such an intimate physical test a condition of employment. An arbitrator ordered the police department to reinstate the officer.

Lives can be changed dramatically when people are labeled, whether the label be "dishonest," "criminal," "depressive," or "sexually deviant." Questionable devices such as polygraph, integrity, and plethysmograph tests may violate more than the basic principles of science. They can also violate civil rights and hurt innocent people.



**The PET scan** Elaborate neuroimaging tests such as positron emission tomography (PET) help detect abnormal brain activity that may be causing psychological problems.

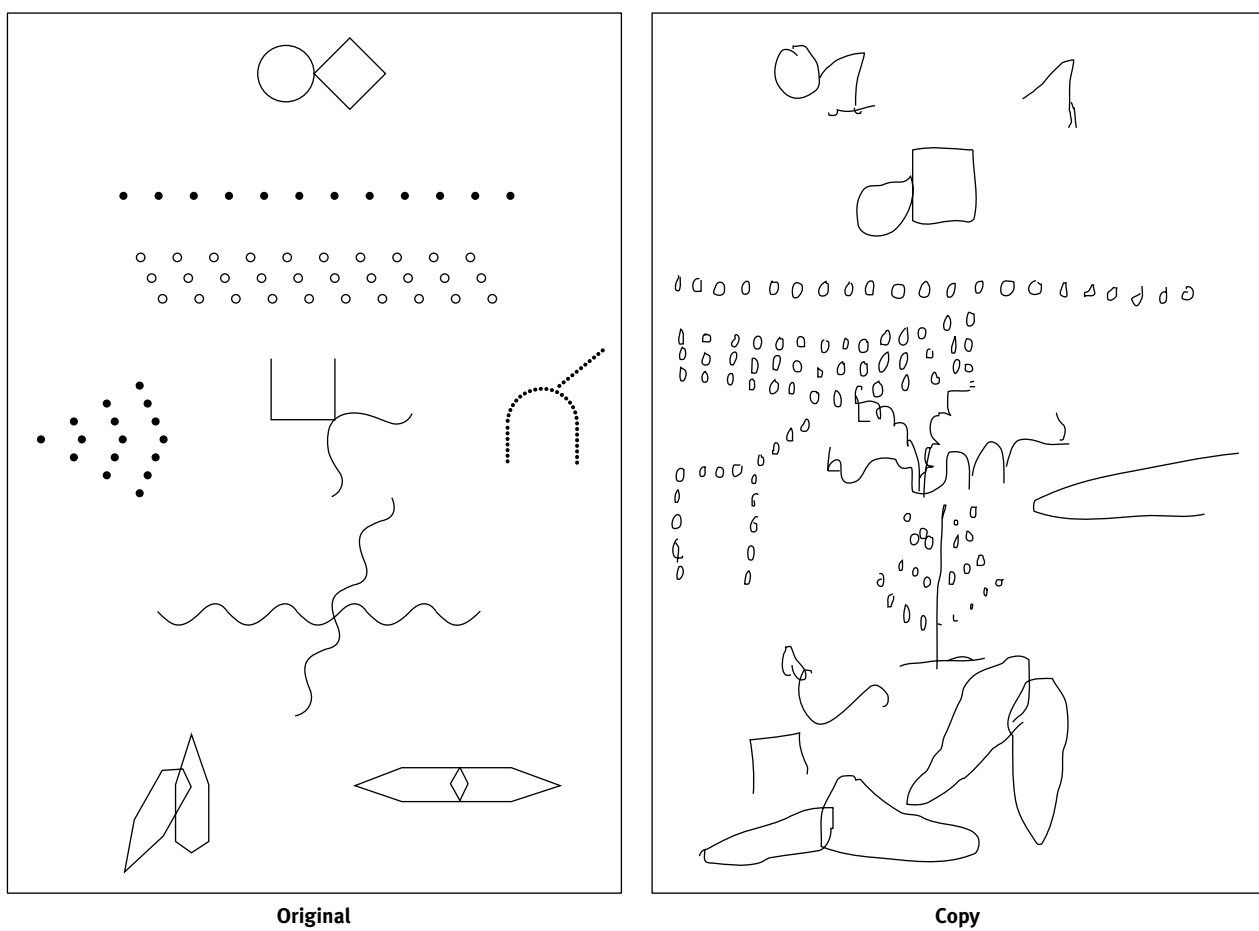
include *computerized axial tomography (CAT scan or CT scan)*, in which X rays of the brain's structure are taken at different angles; *positron emission tomography (PET scan)*, a computer-produced motion picture of chemical activity throughout the brain; and *magnetic resonance imaging (MRI)*, a procedure that uses the magnetic property of certain atoms in the brain to create a detailed picture of the brain's structure and activity.

Though widely used, these various techniques are sometimes unable to detect subtle brain abnormalities. Clinicians have therefore developed less direct but sometimes more revealing **neuropsychological tests** that measure cognitive, perceptual, and motor performances on certain tasks and interpret abnormal performances as an indicator of underlying brain problems (Rao, 2000). Brain damage is especially likely to affect visual perception, recent memory, and visual-motor coordination, and so neuropsychological tests focus particularly on these areas.

The *Bender Visual-Motor Gestalt Test* (Bender, 1938), a widely used neuropsychological test, consists of nine cards, each displaying a simple design (see Figure 4-4). Test subjects look at the designs one at a time and copy each one on a piece of paper. Later they try to redraw the designs from memory. By the age of 12, most people can remember and redraw the designs accurately. Notable errors in accuracy are thought to reflect organic brain impairment.

The Bender-Gestalt test can detect *general* organic impairment in approximately 75 percent of cases, suggesting high validity (Heaton, Baade, & Johnson, 1978). However, no single neuropsychological test can consistently distinguish one *specific* kind of brain impairment from another (Lacks, 1999). This is the major limitation of all the neuropsychological tests: at best they are rough and general screening devices for brain problems.

**FIGURE 4-4** The Bender Visual-Motor Gestalt Test Individuals copy each of nine designs on a piece of paper, then produce them again from memory. Sizable errors in a drawing (as in the one on the right, which was done by a person with brain damage) may reflect organic brain dysfunction. (Adapted from Lacks, 1984, p. 33.)



To achieve greater precision and accuracy, clinicians often use a **battery**, or series, of neuropsychological tests, each targeting a specific skill area. The Halstead-Reitan Neuropsychology Battery and the Luria-Nebraska Battery are two of the most widely used batteries (Reitan & Wolfson, 2001, 1996; Bradley et al., 2000).

**INTELLIGENCE TESTS** An early definition of intelligence described it as “the capacity to judge well, to reason well, and to comprehend well” (Binet & Simon, 1916, p. 192). Because intelligence is an *inferred* quality rather than a specific physical process, it can be measured only indirectly. In 1905 the French psychologist Alfred Binet and his associate Theodore Simon produced an **intelligence test** consisting of a series of tasks requiring people to use various verbal and nonverbal skills. The general score derived from this and subsequent intelligence tests is termed an **intelligence quotient**, or **IQ**, so called because initially it represented the ratio of a person’s “mental” age to his or her “chronological” age, multiplied by 100.

There are now more than 100 intelligence tests available, including the widely used *Wechsler Adult Intelligence Scale*, *Wechsler Intelligence Scale for Children*, and *Stanford-Binet Intelligence Scale*. As we shall discuss in Chapter 18, intelligence tests play a key role in the diagnosis of mental retardation, but they can also help clinicians identify other problems (Compas & Gotlib, 2002).

Intelligence tests are among the most carefully produced of all clinical tests. Because they have been standardized on large groups of subjects, clinicians have a good idea how each individual’s score compares with the performance of the population at large. These tests have also shown very high reliability: people who repeat the same IQ test years later receive approximately the same score (Compas & Gotlib, 2002). Finally, the major IQ tests appear to have fairly high validity: children’s IQ scores often correlate with their performance in school, for example (Sternberg et al., 2001).

Nevertheless, intelligence tests have some key shortcomings. Factors that have nothing to do with intelligence, such as low motivation and high anxiety, can greatly influence a performance (Van der Molen et al., 1995). In addition, IQ tests may contain cultural biases in their language or tasks that place people of one background at an advantage over those of another (Gopaul-McNicol & Armour-Thomas, 2002). Similarly, members of some minority groups may have little experience with this kind of test, or they may be uncomfortable with test examiners of a majority ethnic background. Either way, their performances may suffer.

## Clinical Observations

In addition to interviewing and testing people, clinicians may systematically observe their behavior. In one technique, called **naturalistic observation**, clinicians observe clients in their everyday environments. In another, **analog observation**, they observe them in an artificial setting, such as a clinical office or laboratory. Finally, in **self-monitoring**, clients are instructed to observe themselves.

**NATURALISTIC AND ANALOG OBSERVATIONS** Naturalistic clinical observations usually take place in homes, schools, institutions such as hospitals and prisons, or community settings. Most of them focus on parent-child, sibling-child, or teacher-child interactions and on fearful, aggressive, or disruptive behavior (Kaplan, 1999). Often such observations are made by *participant observers*, key persons in the client’s environment, and reported to the clinician (Auge & Auge, 1999).

When naturalistic observations are not practical, clinicians may resort to analog observations, often aided by special equipment such as a videotape recorder or one-way mirror (Haynes, 2001). Analog observations have often focused on children interacting with their parents, married couples attempting to settle a disagreement, speech-anxious people giving a speech, and fearful people approaching an object they find frightening.



Travis Amos

**The Wechsler Adult Intelligence Scale-Revised (WAIS-R)** This widely used intelligence test has eleven subtests, which cover such areas as factual information, memory, vocabulary, arithmetic, design, and eye-hand coordination.

**NEUROPSYCHOLOGICAL TEST** A test that detects brain impairment by measuring a person’s cognitive, perceptual, and motor performances.

**BATTERY** A series of tests, each of which produces a different kind of data.

**INTELLIGENCE TEST** A test designed to measure a person’s intellectual ability.

**INTELLIGENCE QUOTIENT (IQ)** A general score derived from intelligence tests that is considered to represent a person’s overall level of intelligence.

**NATURALISTIC OBSERVATION** A method for observing behavior in which clinicians or researchers observe people in their everyday environments.

**ANALOG OBSERVATION** A method for observing behavior in which people are observed in artificial settings such as clinicians’ offices or laboratories.

**SELF-MONITORING** A technique for observing behavior in which clients observe themselves.

**An ideal observation** Using a one-way mirror, a clinical observer is able to view the classroom behaviors of young children without distracting the children or influencing their behaviors in any way.



Jeff Greenberg/Photo Edit

Although much can be learned from actually witnessing behavior, clinical observations have certain disadvantages. For one thing, they are not always reliable (Banister et al., 1994). It is possible for various clinicians who observe the same person to focus on different aspects of behavior, assess the person differently, and arrive at different conclusions. Careful training of observers and the use of observer checklists can help reduce this problem (Kamphaus & Frick, 2002).

Similarly, observers may make errors that affect the validity, or accuracy, of their observations (Goodwin, 2002; Banister et al., 1994; O'Leary & Kent, 1973). The observer may suffer from *overload* and be unable to see or record all the important behaviors and events. Or the observer may experience *observer drift*, a steady decline in accuracy as a result of fatigue or of a gradual unintentional change in the standards used when an observation continues for a long period of time. Another possible problem is *observer bias*—the observer's judgments may be influenced by information and expectations he or she already has about the person.

A client's *reactivity* may also limit the validity of clinical observations; that is, his or her behavior may be affected by the very presence of the observer (Kamphaus & Frick, 2002). If schoolchildren are aware that someone special is watching them, for example, they may change their usual classroom behavior, perhaps in the hope of creating a good impression.

Finally, clinical observations may lack *cross-situational*, or *external*, *validity*. A child who behaves aggressively in school is not necessarily aggressive at home or with friends after school. Because behavior is often specific to particular situations, observations in one setting cannot always be applied to other settings (Haynes, 2001; Simpson & Halpin, 1986).

### >>LOOKING AROUND

**The Power of Observation** Everyday observations are more prone to error than clinical observations and often more damaging. Mistaken eyewitness testimony is the primary cause of the conviction of innocent people (Wells et al., 1998).<<

**Believing Is Seeing** Persons' beliefs often wrongly influence their observations and recollections. Most moviegoers recall seeing Bambi's mother die in the snow and a knife slash Janet Leigh in the shower in *Psycho*, and hearing Tarzan say, "Me Tarzan, you Jane," and Humphrey Bogart say, "Play it again, Sam," in *Casablanca*. Yet none of these events took place in their respective movies.<<

**SELF-MONITORING** As we saw earlier, personality and response inventories are tests in which persons report their own behaviors, feelings, or cognitions. In a related assessment procedure, *self-monitoring*, people observe themselves and carefully record the frequency of certain behaviors, feelings, or cognitions as they occur over time (Compas & Gotlib, 2002). How frequently, for instance, does a drug user have an urge for drugs or a headache sufferer have a headache? What kinds of circumstances bring those feelings about?

Self-monitoring is especially useful in assessing behavior that occurs so infrequently it is unlikely to be seen during other kinds of observations. It is also useful for behaviors that occur so frequently that any other method of observing them in detail would be impossible—for example, smoking, drinking, or other drug use. Third, self-monitoring may be the only way to observe and measure private thoughts or perceptions (Hollon et al., 2002).

Like all other clinical assessment procedures, however, self-monitoring has drawbacks. Here too validity is often a problem (Barker et al., 1994). People do not always receive proper instruction in this form of observation, nor do they always try to record their observations accurately. Furthermore, when people monitor themselves, they may change their behaviors unintentionally (Plante, 1999). Smokers, for example, often smoke fewer cigarettes than usual when they are monitoring themselves, drug users take drugs less frequently, and teachers give more positive and fewer negative comments to their students.

**DIAGNOSIS** A determination that a person's problems reflect a particular disorder.

## Diagnosis: Does the Client's Syndrome Match a Known Disorder?

Clinicians use the information from interviews, tests, and observations to construct an integrated picture of the factors that are causing and maintaining a client's disturbance, a construction sometimes known as a *clinical picture* (Stricker & Trierweiler, 1995). Although research suggests that systematic statistical analyses of assessment data yield the most accurate clinical judgments, clinicians typically follow their own implicit rules of logic to form clinical pictures (Wood et al., 2002; Grove et al., 2000). Such pictures are also influenced by the clinicians' theoretical orientation (Wood et al., 2002) (see Box 4-3). The psychologist who worked with Angela Savanti held a cognitive-behavioral view of abnormality and so produced a picture that emphasized modeling and reinforcement principles and Angela's expectations, assumptions, and interpretations:

Angela was rarely reinforced for any of her accomplishments at school, but she gained her mother's negative attention for what Mrs. Savanti judged to be poor performance at school or at home. Mrs. Savanti repeatedly told her daughter that she was incompetent, and any mishaps that happened to her were her own fault. . . . When Mr. Savanti deserted the family, Angela's first response was that somehow she was responsible. From her mother's past behavior, Angela had learned to expect that in some way she would be blamed. At the time that Angela broke up with her boyfriend, she did not blame Jerry for his behavior, but interpreted this event as a failing solely on her part. As a result, her level of self-esteem was lowered still more.

The type of marital relationship that Angela saw her mother and father model remained her concept of what married life is like. She generalized from her observations of her parents' discordant interactions to an expectation of the type of behavior that she and Jerry would ultimately engage in. . . .

Angela's uncertainties intensified when she was deprived of the major source of gratification she had, her relationship with Jerry. Despite the fact that she was overwhelmed with doubts about whether to marry him or not, she had gained a great deal of pleasure through being with Jerry. Whatever feelings she had been able to express, she had shared with him and no one else. Angela labeled Jerry's termination of their relationship as proof that she was not worthy of another person's interest. She viewed her present unhappiness as likely to continue, and she attributed it to some failing on her part. As a result, she became quite depressed.

(Leon, 1984, pp. 123-125)

With the assessment data and clinical picture in hand, clinicians are ready to make a **diagnosis** (from Greek for "a discrimination")—that is, a determination that a person's psychological problems constitute a particular disorder (Scotti & Morris, 2001). When clinicians decide, through diagnosis, that a client's pattern of dysfunction reflects a particular disorder, they are saying that the pattern is basically the same as one that has been displayed by many other people, has been

### >>Q & A

#### What is a nervous breakdown?

The term **nervous breakdown** is used by laypersons, not clinicians. Most people use it to refer to a *sudden* psychological disturbance that *incapacitates* a person, perhaps requiring hospitalization. Some people use the term simply to connote the onset of any psychological disorder (Padwa, 1996).<<



## B O X 4-3

## Culture-Bound Abnormality

Red Bear sits up wild-eyed, his body drenched in sweat, every muscle tensed. The horror of the dream is still with him; he is choked with fear. Fighting waves of nausea, he stares at his young wife lying asleep on the far side of the wigwam, illuminated by the dying embers.

His troubles began several days before, when he came back from a hunting expedition empty-handed. Ashamed of his failure, he fell prey to a deep, lingering depression. Others in the village, noticing a change in Red Bear, watched him nervously, afraid that he was becoming bewitched by a windigo. Red Bear was frightened too. The signs of windigo were all there: depression, lack of appetite, nausea, sleeplessness and, now, the dream. Indeed, there could be no mistake.

He had dreamed of the windigo—the monster with a heart of ice—and the dream sealed his doom. Coldness gripped his own heart. The ice monster had entered his body and possessed him. He himself had become a windigo, and he could do nothing to avert his fate.

Suddenly, the form of Red Bear's sleeping wife begins to change. He no longer sees a woman, but a deer. His eyes flame. Silently, he draws his knife from under the blanket and moves stealthily toward the motionless figure. Saliva drips from the corners of his mouth, and a terrible hunger twists his intestines. A powerful desire to eat raw flesh consumes him.

With the body of the "deer" at his feet, Red Bear raises the knife high, preparing the strike. Unexpectedly, the deer screams and twists away. But the knife flashes down, again and again. Too late, Red Bear's kinsmen rush into the wigwam. With cries of outrage and horror, they drag him outside into the cold night air and swiftly kill him. |

(LINDHOLM & LINDHOLM, 1981, p. 52)

Red Bear was suffering from *windigo*, a disorder once common among Algonquin Indian hunters. They believed in a supernatural monster that ate human beings and had the power to bewitch them and turn

them into cannibals. Red Bear was among the few afflicted hunters who actually did kill and eat members of their households.

Windigo is one of several unusual mental disorders discovered around the world, each unique to a particular culture, each apparently growing from that culture's pressures, history, institutions, and ideas (Gaw, 2001; Lindholm & Lindholm, 1981). Such disorders remind us that the classifications and diagnoses applied in one culture may not always be appropriate in another.

*Susto*, a disorder found among members of Indian tribes in Central and South America and Hispanic natives of the Andean highlands of Peru, Bolivia, and Colombia, is most likely to occur in infants and young children. The symptoms are extreme anxiety, excitability, and depression, along with loss of weight, weakness, and rapid heartbeat. The culture holds that this disorder is caused by contact with supernatural beings or with frightening strangers or by bad air from cemeteries and other supposedly dangerous places. Treatment includes rubbing certain plants and animals against the skin.

*Amok*, a disorder found in Malaya, the Philippines, Java, and some parts of Africa, is more likely to occur in men than in women. Those who are afflicted jump around violently, yell loudly, grab knives or other weapons, and attack any people and objects they encounter. This behavior is usually preceded by social withdrawal and some loss of contact with reality. The periods of violent behavior are followed by depression and by amnesia concerning the outburst. Within the culture, amok is thought to be caused by stress, severe shortage of sleep, alcohol consumption, and extreme heat.

*Koro* is a pattern of anxiety found in Southeast Asia in which a man suddenly becomes intensely fearful that his penis will withdraw

into his abdomen and that he will die as a result. Cultural lore holds that the disorder is caused by an imbalance of "yin" and "yang," two natural forces believed to be the fundamental components of life. Accepted forms of treatment include having the individual keep a firm hold on his penis until the fear passes, often with the assistance of family members or friends, and clamping the penis to a wooden box.

*Latah* is a disorder found in Malaya, usually among uneducated middle-aged or elderly women. Certain circumstances (hearing someone say "snake" or being tickled, for example) trigger a fright reaction that is marked by repeating the words and acts of other people, uttering obscenities, and doing the opposite of what others ask.



Joseph Neumayer/Design Conceptions

**Western values and abnormality** *Anorexia nervosa* and *bulimia nervosa* are eating disorders found largely in Western countries. Many clinicians believe that these are culture-bound disorders caused in part by Western society's overemphasis on thinness as the aesthetic ideal for women, a preoccupation on display throughout Western ads, magazines, movies, and the like.

observed and investigated in a variety of studies, and perhaps has responded to particular forms of treatment. They can then apply what is generally known about the disorder to the particular individual they are trying to help. They can, for example, better predict the future course of the person's problem and the treatments that are likely to be helpful (Compas & Gotlib, 2002).

## Classification Systems

The principle behind diagnosis is straightforward. When certain symptoms regularly occur together—a cluster of symptoms is called a **syndrome**—and follow a particular course, clinicians agree that those symptoms make up a particular mental disorder. When people display this particular pattern of symptoms, diagnosticians assign them to that diagnostic category. A list of such categories, or disorders, with descriptions of the symptoms and guidelines for assigning individuals to the categories, is known as a **classification system**.

In 1883 Emil Kraepelin developed the first modern classification system for abnormal behavior (see Chapter 1). His categories have formed the foundation for the psychological part of the *International Classification of Diseases (ICD)*, the classification system now used by the World Health Organization. They have also influenced the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*, a classification system developed by the American Psychiatric Association.

The DSM, like the ICD, has been changed over time. First published in 1952, the DSM underwent major revisions in 1968, 1980, 1987, and 1994. The current edition, DSM-IV, published in 1994 and revised slightly in 2000, is by far the most widely used classification system in the United States (APA, 2000, 1994). The descriptions of mental disorders presented throughout this book follow its categories. At the same time, not all of today's clinicians agree with the categories listed in DSM-IV (see Box 4-4). In fact, many actively debate the merits of this edition, just as clinicians continually argued over past versions of the DSM.

## DSM-IV

DSM-IV lists approximately 400 mental disorders (see Figure 4-5). Each entry describes the criteria for diagnosing the disorder and its key clinical features. The system also describes related features, which are often but not always present, and age, culture, or gender trends. Finally, it includes a disorder's prevalence and risk, course, complications, predisposing factors, and family patterns.

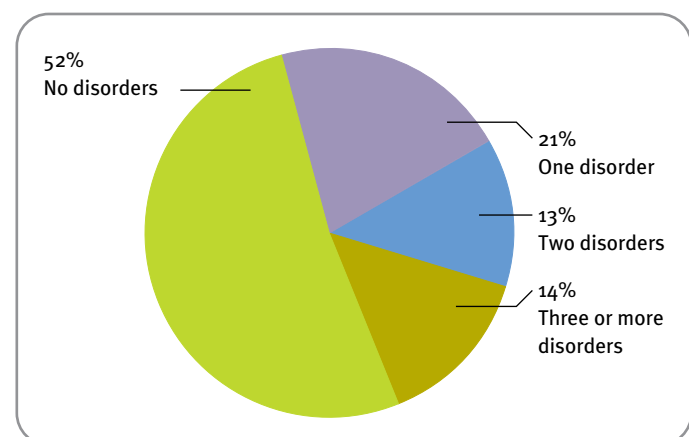
DSM-IV requires clinicians to evaluate a client's condition on five separate axes, or branches of information, when making a diagnosis. First, they must decide whether the person is displaying one or more of the disorders found on Axis I, an extensive list of clinical syndromes that typically cause significant impairment (see Table 4-2). Some of the most frequently diagnosed disorders listed on this axis are the anxiety disorders and mood disorders—problems we shall discuss in later chapters:

**Anxiety disorders** People with anxiety disorders may experience general feelings of anxiety and worry (*generalized anxiety disorder*), anxiety centered on a specific situation or object (*phobias*), periods of panic (*panic disorder*), persistent thoughts or repetitive behaviors or both (*obsessive-compulsive disorder*), or lingering anxiety reactions to unusually traumatic events (*acute stress disorder* and *posttraumatic stress disorder*).

**Mood disorders** People with mood disorders feel extremely sad or elated for long periods of time. These disorders include *major depressive disorder* and *bipolar disorders* (in which episodes of mania alternate with episodes of depression).

**SYNDROME** A cluster of symptoms that usually occur together.

**CLASSIFICATION SYSTEM** A list of disorders, along with descriptions of symptoms and guidelines for making appropriate diagnoses.



**FIGURE 4-5** How many people in the United States qualify for a DSM diagnosis during their lives? Almost half, according to one survey. Some of them even experience two or more different disorders, an occurrence known as comorbidity. (Adapted from Kessler & Zhao, 1999; Kessler et al., 1994.)

Table 4-2

## Axis I Disorders in DSM-IV

Disorders usually first diagnosed in infancy, childhood, and adolescence (see Chapter 17)	Disorders in this group tend to emerge and sometimes dissipate before adult life. They include <i>pervasive developmental disorders</i> (such as <i>autism</i> ), <i>learning disorders</i> , <i>attention-deficit hyperactivity disorder</i> , <i>conduct disorder</i> , and <i>separation anxiety disorder</i> .
Delirium, dementia, amnesic, and other cognitive disorders (see Chapter 18)	These disorders are dominated by impairment in cognitive functioning. They include <i>Alzheimer's disease</i> and <i>Huntington's disease</i> .
Mental disorders due to a general medical condition	These mental disorders are caused primarily by a general medical disorder. They include <i>mood disorder due to a general medical condition</i> .
Substance-related disorders (see Chapter 12)	These disorders are brought about by the use of substances that affect the central nervous system. They include <i>alcohol use disorders</i> , <i>opioid use disorders</i> , <i>amphetamine use disorders</i> , <i>cocaine use disorders</i> , and <i>hallucinogen use disorders</i> .
Schizophrenia and other psychotic disorders (see Chapters 14, 15)	In this group of disorders, functioning deteriorates until the patient reaches a state of <i>psychosis</i> , or loss of contact with reality.
Mood disorders (see Chapters 8, 9)	Disorders in this group are marked by severe disturbances of mood that cause people to feel extremely and inappropriately sad or elated for extended periods of time. They include <i>major depressive disorder</i> and <i>bipolar disorders</i> .
Anxiety disorders (see Chapters 5, 6)	Anxiety is the predominant disturbance in this group of disorders. They include <i>generalized anxiety disorder</i> , <i>phobias</i> , <i>panic disorder</i> , <i>obsessive-compulsive disorder</i> , <i>acute stress disorder</i> , and <i>posttraumatic stress disorder</i> .
Somatiform disorders (see Chapter 7)	These disorders, marked by physical symptoms that apparently are caused primarily by psychological rather than physiological factors, include <i>conversion disorder</i> , <i>somatization disorder</i> , and <i>hypochondriasis</i> .
Factitious disorders (see Chapter 7)	People with these disorders intentionally produce or feign physical or psychological symptoms.
Dissociative disorders (see Chapter 7)	These disorders are characterized by significant changes in consciousness, memory, identity, or perception, without a clear physical cause. They include <i>dissociative amnesia</i> , <i>dissociative fugue</i> , and <i>dissociative identity disorder</i> ( <i>multiple personality disorder</i> ).
Eating disorders (see Chapter 11)	People with these disorders display abnormal patterns of eating that significantly impair their functioning. The disorders include <i>anorexia nervosa</i> and <i>bulimia nervosa</i> .
Sexual disorders and gender identity disorder (see Chapter 13)	These disorders in sexual functioning, behavior, or preferences include <i>sexual dysfunctions</i> , <i>paraphilias</i> , and <i>gender identity disorder</i> .
Sleep disorders (see Chapter 18)	People with these disorders display chronic sleep problems. The disorders include <i>primary insomnia</i> , <i>primary hypersomnia</i> , <i>sleep terror disorder</i> , and <i>sleepwalking disorder</i> .
Impulse-control disorders (see Chapter 16)	People with these disorders are chronically unable to resist impulses, drives, or temptations to perform certain acts that are harmful to themselves or to others. The disorders include <i>pathological gambling</i> , <i>kleptomania</i> , <i>pyromania</i> , and <i>intermittent explosive disorder</i> .
Adjustment disorders (see Chapter 6)	The primary feature of these disorders is a maladaptive reaction to a clear stressor, such as divorce or business difficulties, that first occurs within three months after the onset of the stressor.
Other conditions that may be a focus of clinical attention (see Chapter 6)	This category consists of conditions or problems that are worth noting because they cause significant impairment, such as <i>relational problems</i> , <i>problems related to abuse or neglect</i> , <i>medication-induced movement disorders</i> , and <i>psychophysiological disorders</i> .

Next, diagnosticians must decide whether the person is displaying one of the disorders listed on *Axis II*, which includes long-standing problems that are frequently overlooked in the presence of the disorders on *Axis I*. There are only two groups of *Axis II* disorders: mental retardation and personality disorders. We will also examine these patterns in later chapters:

**Mental retardation** People with this disorder display significantly subaverage intellectual functioning and poor adaptive functioning by 18 years of age.

**Personality disorders** People with these disorders display a very rigid maladaptive pattern of inner experience and outward behavior that has continued for many years. People with *antisocial personality disorder*, for example, persistently disregard and violate the rights of others. People with *dependent personality disorder* are persistently dependent on others, clinging, obedient, and very afraid of separation.

Although people usually receive a diagnosis from *either* *Axis I* or *Axis II*, they may receive diagnoses from both axes. Angela Savanti would first receive a diagnosis of *major depressive disorder* from *Axis I* (a mood disorder). Let us suppose that the clinician judged that Angela also displayed a life history of dependent behavior. She might then also receive an *Axis II* diagnosis of *dependent personality disorder*.

The remaining axes of DSM-IV guide diagnosticians in reporting other factors. *Axis III* asks for information concerning relevant general medical conditions from which the person is currently suffering. *Axis IV* asks about special psychosocial or environmental problems the person is facing, such as school or housing problems. And *Axis V* requires the diagnostician to make a *global assessment of functioning (GAF)*, that is, to rate the person's psychological, social, and occupational functioning overall.

If Angela Savanti had diabetes, for example, the clinician might include that under *Axis III* information. Angela's recent breakup with her boyfriend would be

#### >>Q & A

##### What happened to neurosis?

One of Freud's most famous concepts was **neurosis**, his term for any disorder in which a person's ego defense mechanisms repeatedly failed to reduce the anxiety aroused by unconscious conflicts. In some neurotic disorders the uncontrolled anxiety was apparent, while in others it was hidden. Because the DSM now defines disorders by symptoms and not causes, the term "neurosis" has been dropped from the diagnostic system. Disorders in which anxiety is particularly apparent are now categorized as *anxiety disorders*. The other former neurotic disorders are now labeled *mood disorders*, *somatiform disorders*, and *dissociative disorders*. <<

#### BOX 4-4

##### The Battle over Premenstrual Dysphoric Disorder

Some categories of mental dysfunctioning are much more controversial than others, causing clinicians and the public alike to battle over their appropriateness. After long and heated discussions two decades ago, for example, DSM-III dropped homosexuality as a category of mental dysfunctioning, citing a lack of evidence for including it and a concern about the social implications of calling a sexual orientation abnormal.

One of the biggest controversies in the development of DSM-IV centered on the category *premenstrual dysphoric disorder (PMDD)* (Wittchen, Becker, & Krause, 2002). A DSM work group recommended in 1993 that PMDD be formally listed as a new and distinct kind of depressive disorder.

The category was to be applied when a woman was regularly impaired by at least five of eleven symptoms during the week before her menses: sad or hopeless feelings; tense or anxious feelings; marked mood changes; frequent irritability or anger and increased interpersonal conflicts; decreased interest in her usual activities; lack of concentration; lack of energy; changes in appetite; insomnia or sleepiness; a subjective feeling of being overwhelmed or out of control; and physical symptoms such as swollen breasts, headaches, muscle pain, a "bloated" sensation, or weight gain.

This recommendation set off an uproar. Many clinicians (including some dissenting members of the work

group), several national organizations, interest groups, and the media warned that this diagnostic category would "pathologize" severe cases of premenstrual syndrome, or PMS, the premenstrual discomforts that are common and normal, and might cause women's behavior in general to be attributed largely to "raging hormones" (a stereotype that society is finally rejecting). They also argued that there were insufficient data to include the new category (Chase, 1993; DeAngelis, 1993).

The DSM solution? A compromise. PMDD is not currently listed as a formal category in DSM-IV, but the pattern is listed in the DSM appendix, with the suggestion that it be studied more thoroughly in the coming years.

**>>BY THE NUMBERS**

- 1 Number of categories of psychological dysfunctioning listed in the 1840 U.S. census (“idiocy/insanity”)◀◀
- 7 Number of categories listed in the 1880 census◀◀
- 60 Number of categories listed in DSM-I in 1952◀◀
- 400 Number of categories listed in DSM-IV today◀◀

noted on Axis IV. And because she seemed fairly dysfunctional at the time of diagnosis, Angela’s GAF would probably be around 55 on Axis V, indicating a moderate level of dysfunction. The complete diagnosis for Angela Savanti would then be:

Axis I: Major depressive disorder

Axis II: Dependent personality disorder

Axis III: Diabetes

Axis IV: Problem related to the social environment (termination of engagement)

Axis V: GAF = 55 (current)

Because DSM-IV uses several kinds of diagnostic information, each defined by a different “axis,” it is known as a *multi-axial system*. The diagnoses arrived at under this classification system are thought to be more informative and more carefully considered than those derived from the early DSMs.

### Are Classifications Reliable and Valid?

A classification system, like an assessment method, is judged by its reliability and validity. Here *reliability* means that different diagnosticians are likely to agree on the diagnosis when they use the system to diagnose the same client. Early versions of the DSM were at best moderately reliable (Malik & Beutler, 2002; Kirk & Kutchins, 1992). In the early 1960s, for example, four clinicians, each relying on DSM-I, independently interviewed 153 patients (Beck et al., 1962). Only 54 percent of their diagnoses were in agreement. Because all four clinicians were experienced diagnosticians, their failure to agree suggested deficiencies in the classification system.

DSM-IV appears to have greater reliability than any of its predecessors (Reeb, 2000; Nathan & Lagenbucher, 1999). Its framers conducted extensive reviews of research to pinpoint which categories in past DSMs had been too vague and unreliable. In turn, they developed a number of new diagnostic criteria and categories, and then ran *field trials* to make sure that the new criteria and categories were in

**The power of labeling** When looking at this late-nineteenth-century photograph of a baseball team at the State Homeopathic Asylum for the Insane in Middletown, New York, most observers assume that the players are patients. As a result, they tend to “see” depression or confusion in the players’ faces and posture. In fact, the players are members of the asylum staff, some of whom even sought their jobs for the express purpose of playing for the hospital team.



Elizabeth Eckert, Middletown, NY. From L. Gamwell and N. Tomes, *Madness in America*, 1995, Cornell University Press

fact reliable (Malik & Beutler, 2002). Still, many clinicians worry that DSM-IV's reliability may not be as strong as its framers claim (Beutler & Malik, 2002).

The *validity* of a classification system is the accuracy of the information that its diagnostic categories provide. Categories are of most use to clinicians when they demonstrate *predictive validity*—that is, when they help predict future symptoms or events. A common symptom of major depressive disorder, for example, is either insomnia or excessive sleep. When clinicians give Angela Savanti a diagnosis of major depressive disorder, they expect that she may eventually develop sleep problems even if none are present now. In addition, they expect her to respond to treatments that are effective for other depressed persons. The more often such predictions are accurate, the greater a category's predictive validity.

DSM-IV's framers tried to ensure the validity of this version of the DSM by again conducting extensive reviews of research and running many field studies. As a result, its criteria and categories appear to have stronger validity than those of earlier versions of the DSM (Reeb, 2000; Nathan & Lagenbucher, 1999). Yet, again, more research is needed to determine the precise strength of DSM-IV's validity (Beutler & Malik, 2002).

### Can Diagnosis and Labeling Cause Harm?

Even with trustworthy assessment data and reliable and valid classification categories, clinicians will sometimes arrive at a wrong conclusion (Wood et al., 2002; Delahanti et al., 2001). Like all human beings, they are flawed information processors. Studies show that they are influenced disproportionately by information gathered early in the assessment process (Meehl, 1996, 1960). They sometimes pay too much attention to certain sources of information, such as a parent's report about a child, and too little to others, such as the child's point of view (McCoy, 1976). They can also be unduly influenced by their expectations about the client (Shemberg & Doherty, 1999). They may assume, for example, that any person who consults them professionally must have some disorder. And, finally, their judgments can be distorted by any number of personal biases—gender, age, race, and socioeconomic status, to name just a few (Delahanti et al., 2001).

Given the limitations of both assessment tools and assessors, it is small wonder that studies sometimes uncover shocking errors in diagnosis, especially in hospitals (Chen, Swann, & Burt, 1996). In one study a clinical team was asked to reevaluate the records of 131 patients at a mental hospital in New York, conduct interviews with many of these persons, and arrive at a diagnosis for each one (Lipton & Simon, 1985). The researchers then compared the team's diagnoses with the original diagnoses for which the patients were hospitalized. Although 89 of the patients had originally received a diagnosis of schizophrenia, only 16 received it upon reevaluation. And whereas 15 patients originally had been given a diagnosis of mood disorder, 50 received it now. It is obviously important for clinicians to be aware that such huge disagreements can occur.

Beyond the potential for misdiagnosis, the very act of classifying people can lead to unintended results (see Box 4-5). As we observed in Chapter 3, for example, many sociocultural theorists believe that diagnostic labels can become self-fulfilling prophecies. When people are diagnosed as mentally disturbed, they may be viewed and reacted to correspondingly. If others see them as deficient and expect them to take on a sick role, they may begin to consider themselves sick as well and act that way. Furthermore, our society attaches a stigma to abnormality (Link et al., 2001). People labeled mentally ill may find it difficult to get a job, especially a position of responsibility, or to be welcomed into social relationships (Perlick et al., 2001). Once a label has been applied, it may stick for a long time.

Because of these problems, some clinicians would like to do away with diagnoses. Others disagree. They believe we must simply work to increase what is known about psychological disorders and improve diagnostic techniques (Cunningham, 2000). They hold that classification and diagnosis are critical to understanding and treating people in distress.

#### >>PSYCH•LISTINGS

##### Rock Bands with Psychological Labels

Disturbed<<

Widespread Panic<<

10,000 Maniacs<<

Moody Blues<<

Suicidal Tendencies<<

Xanax 25<<

Mental as Anything<<

The Insane Clown Posse<<

Unsane<<

Jane's Addiction<<

Therapy?<<

Psychotica<<

Multiple Personalities<<

The Self-Haters Orchestra<<

#### >>LOOKING AROUND

##### The Power of Diagnosis

People who are diagnosed with a mental disorder report having twice as much difficulty obtaining and keeping medical insurance as do people with any other condition, including diabetes and hypertension (Druss & Rosenheck, 1998).<<

**>>LOOKING AROUND**

**Treatment Delay** Most individuals with mood, anxiety, or addictive disorders fail to contact a therapist until at least six years after the initial onset of their symptoms (Kessler et al., 1998).<<

**College Counseling** At least 8 percent of all college students seek psychotherapy at their college's counseling center. The percentage is higher at small, private colleges and prestigious schools (Gallagher, 1998).<<

**Treatment: How Might the Client Be Helped?**

Over the course of 10 months, Angela Savanti was treated for depression and related symptoms. She improved considerably during that time, as the following report describes.

Angela's depression eased as she began to make progress in therapy. A few months before the termination of treatment, she and Jerry resumed dating. Angela discussed with Jerry her greater comfort in expressing her feelings and her hope that Jerry would also become more expressive with her. They discussed the reasons why Angela was ambivalent about getting married, and they began to talk again about the possibility of marriage. Jerry, however, was not making demands for a decision by a certain date, and Angela felt that she was not as frightened about marriage as she previously had been. . . .

Psychotherapy provided Angela with the opportunity to learn to express her feelings to the persons she was interacting with, and this was quite helpful to her. Most important, she was able to generalize from some of the learning experiences in therapy and modify her behavior in her renewed relationship with Jerry. Angela still had much progress to make in terms of changing the characteristic ways she interacted with others, but she had already made a number of important steps in a potentially happier direction.

(Leon, 1984, pp. 118, 125)

Clearly, treatment helped Angela, and by its conclusion she was a happier, more functional person than the woman who had first sought help 10 months earlier. But how did her therapist decide on the treatment program that proved to be so helpful? And was the effectiveness of Angela's therapy typical of that offered by other therapists, to other clients, with other problems?

**Treatment Decisions**

Angela's therapist began, like all therapists, with assessment information and diagnostic decisions. Knowing the specific details and background of Angela's problem (*idiographic data*), and combining this information with established information about the nature and treatment of depression (*nomothetic data*), the clinician could arrive at a treatment plan for her.

Yet therapists may also be influenced by other factors when they make treatment decisions. Their treatment plans typically reflect their theoretical orientations and how they have learned to conduct therapy (Maher, 2000). As therapists apply a favored model in case after case, they become more and more familiar with its principles and treatment techniques and tend to use them in work with still other clients.

Current research may also play a role. Most clinicians say that they value research as a guide to practice (Beutler et al., 1995). However, not all of them actually read research articles, so they cannot be directly influenced by them. Research articles tend to be written for other researchers, in technical language that is not typically accessible to clinicians or other kinds of readers. In fact, according to surveys, today's therapists actually gather most of their information about the latest developments in the field from colleagues, professional newsletters, workshops, conferences, books, and the like (Goldfried & Wolfe, 1996; Beutler et al., 1995). Unfortunately, the accuracy and usefulness of these sources vary widely.

To help clinicians become more familiar with and apply research findings, there is currently a movement afoot in the

**Crystal clear** More precise assessment leads to better treatment decisions. Thus most clinicians have welcomed the arrival of the MRI and other neuroimaging techniques as informative assessment tools for certain psychological disorders. This MRI of a person's brain is so detailed that it looks more like a photograph than a computer-based image.

Roger Ressmeyer/Corbis



Fig 4UN17

## BOX 4-5

## Oppression and Mental Health: The Politics of Labeling

Throughout history governments have applied the label of mental illness as a way of controlling or changing people whose views threaten the social order. This was a common practice in the former Soviet Union. There, political dissent was considered a symptom of abnormal mental functioning, and many dissidents were committed to mental hospitals.

In a more subtle process, a country's cultural values often influence the clinical assessments made by its practitioners. The historians Lynn Gamwell and Nancy Tomes (1995) have noted, for example, the widespread clinical belief in the nineteenth-century United States that freedom would drive such "primitive" people as Native Americans insane. Medical experts of that time went so far as to claim that the forcible movement of tribal groups onto reservations was in their best interest because it would save them from the madness that awaited them in free society. The medical officer who supervised the "removal" of the Cherokees from their homeland to Oklahoma was later pleased to report that during the whole time he oversaw the migration of 20,000 Cherokees (over 4,000 of whom died), he had not observed a single case of insanity.

Slave owners, too, liked to believe that slaves were psychologically comfortable with their subservience and that those who tried to escape either were or would soon become insane. Secretary of State John Calhoun of South Carolina pointed to the 1840

census, conducted by his office, as evidence: it identified almost no insanity among slaves in the South but many cases among former slaves living in the North. Calhoun asserted: "The data on insanity revealed in this census is unimpeachable. From it our nation must conclude that the abolition of slavery would be to the African a curse instead of a blessing."

The work of clinicians at that time lent support to this belief. One specialist claimed that several kinds of mental disorders were unique to African Americans, including *drapetomania* (from the Latin *drapeta*, "fugitive")—an

obsessive desire for freedom that drove some slaves to try to flee. Any slave who tried to run away more than twice was considered insane.

Drapetomania is long forgotten, but cultural views continue to influence psychological assessments and categories. Many clinicians have argued that categories such as "homosexuality," "sexual frigidity," and "masochistic personality"—each an established clinical category during much of the twentieth century—show all too well the impact of cultural beliefs on clinical categorizations and diagnoses.



Francis G. Meyer/Corbis

**A ride for liberty** Eastman Johnson's 1862 painting, *A Ride for Liberty—The Fugitive Slaves*, demonstrates the courage and clear-mindedness slaves needed to escape, in stark contrast to the mental instability of which they were accused.

United States, the United Kingdom, and elsewhere called *empirically supported*, or *evidence-based, treatment* (Chambless, 2002; Chambless & Ollendick, 2001). Proponents of this approach have formed task forces that seek to identify those therapies that have received clear research support, conduct new therapy research, develop treatment guidelines, spread such information to clinicians, and promote training in the empirically supported treatments.

But how much, in fact, do we currently know about treatment and treatment effectiveness? And how can researchers best examine such questions? We turn to this set of questions next.



**>>PSYCH•LISTINGS****Client Predictors of Early Termination of Therapy**

Low income&lt;&lt;

Ethnic or racial minority status&lt;&lt;

Young age&lt;&lt;

Poor insurance coverage&lt;&lt;

Negative attitude toward therapy&lt;&lt;

Embarrassment over seeking therapy&lt;&lt;

(Edmund et al., 2002)

**The Effectiveness of Treatment**

Altogether, as many as 400 forms of therapy are currently practiced in the clinical field (Prochaska & Norcross, 2003). Naturally, the most important question to ask about each of them is whether it does what it is supposed to do. Does a particular treatment really help people overcome their psychological problems? On the surface, the question may seem simple. In fact, it is one of the most difficult questions for clinical researchers to answer.

The first problem is how to *define* “success” (Erwin, 2000; Strupp, 1996, 1989). If, as Angela’s therapist suggests, she still has much progress to make at the conclusion of therapy, should her recovery be considered successful? The second problem is how to *measure* improvement (Luborsky et al., 2002, 1999). Should researchers give equal weight to the reports of clients, friends, relatives, therapists, and teachers? Should they use rating scales, inventories, therapy insights, observations, or some other measure?

Perhaps the biggest problem in determining the effectiveness of treatment is the *variety* and *complexity* of the treatments currently in use. People differ in their problems, personal styles, and motivations for therapy. Therapists differ in skill, experience, orientation, and personality. And therapies differ in theory, format, and setting. Because an individual’s progress is influenced by all these factors and more, the findings of a particular study will not always apply to other clients and therapists.

Proper research procedures address some of these problems. By using control groups, random assignment, matched subjects, and the like, clinicians can draw certain conclusions about various therapies. Even in studies that are well designed, however, the variety and complexity of treatment limit the conclusions that can be reached (Kazdin, 1994).

Despite these difficulties, the job of evaluating therapies must be done, and clinical researchers have plowed ahead with it. Investigators have, in fact, conducted thousands of *therapy outcome studies*, studies that measure the effects of various treatments. The studies typically ask one of three questions:

1. Is therapy *in general* effective?
2. Are *particular* therapies generally effective?
3. Are *particular* therapies effective for *particular* problems?

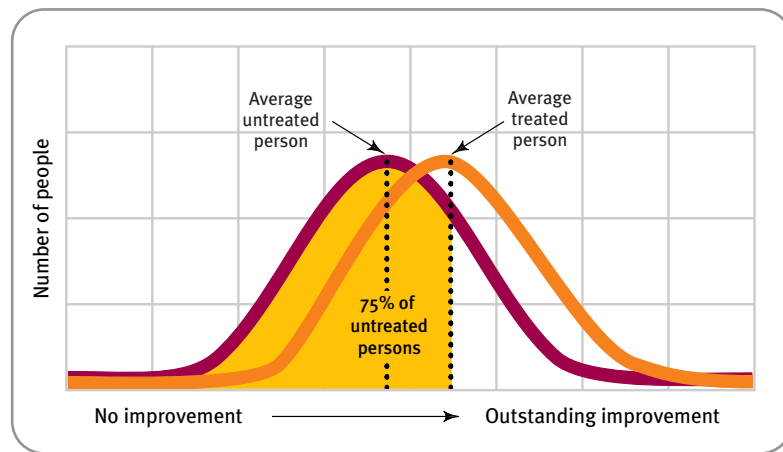
**IS THERAPY GENERALLY EFFECTIVE?** Studies suggest that therapy is often more helpful than no treatment or than placebos. A pioneering review examined 375 controlled studies, covering a total of almost 25,000 people seen in a wide assortment of therapies (Smith, Glass, & Miller, 1980; Smith & Glass, 1977). The reviewers combined the findings of these studies by using a special statistical technique called *meta-analysis*. They rated the level of improvement in each person treated and in each untreated control subject and measured the average difference between the two groups. According to this statistical analysis, the average person who received treatment was better off than 75 percent of the untreated control subjects (see Figure 4-6). Other meta-analyses have found similar relationships between treatment and improvement (Prochaska & Norcross, 2003).

The widely read magazine *Consumer Reports* also conducted a survey several years back, asking its readers about their experiences and satisfaction in therapy (Seligman, 1995). The 4,000 readers who responded indicated that therapy had often been helpful for them, or at least satisfying. Around 54 percent of the respondents who had felt “very poor” when they first began therapy reported that therapy “made things a lot better.”

Some clinicians have concerned themselves with an important related question: Can therapy be harmful? In his book *My Analysis with Freud*, the psychoanalyst Abraham Kardiner (1977) wrote, “Freud was always infuriated whenever I would say to him that you could not do harm with psychoanalysis. He said: ‘When you say that, you also say it cannot do any good. Because if you cannot do

**>>Q & A****What is the difference between treatment efficacy and treatment effectiveness?**

Many writers use the terms “treatment efficacy” and “treatment effectiveness” interchangeably. Technically, however, **efficacy** research determines whether a treatment can work under ideal conditions (for example, with therapists who are given special training for the study), while **effectiveness** research examines whether a treatment works well in the real world (for example, as offered by practicing therapists) (Compas & Gotlib, 2002).<<



**FIGURE 4-6** Does therapy help? Combining subjects and results from hundreds of studies, investigators have determined that the average person who receives psychotherapy experiences greater improvement than do 75 percent of all untreated people with similar problems. (Adapted from Prochaska & Norcross, 2003; Lambert, Weber, & Sykes, 1993; Smith, Glass, & Miller, 1980.)

any harm, how can you do good?’ ” In agreement with Freud, a number of studies have found that more than 5 percent of patients actually seem to get worse because of therapy (Compas & Gotlib, 2002; Lambert & Bergin, 1994). Their symptoms may become more intense, or the individuals may develop new ones, such as a sense of failure, guilt, reduced self-concept, or hopelessness, because of their inability to profit from therapy (Lambert, Shapiro, & Bergin, 1986; Hadley & Strupp, 1976).

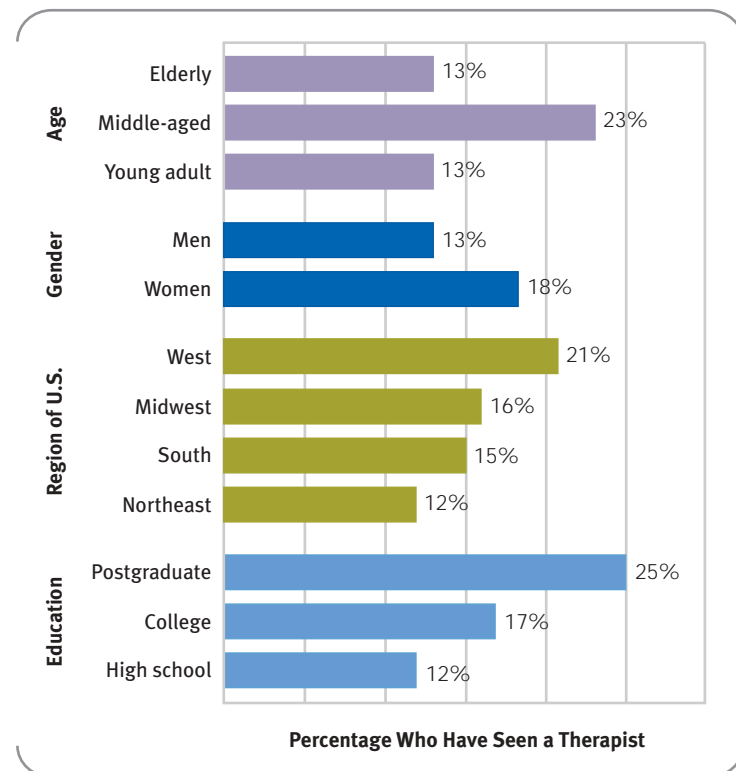
**ARE PARTICULAR THERAPIES GENERALLY EFFECTIVE?** The studies we have looked at so far have lumped all therapies together to consider their general effectiveness. Many researchers, however, consider it wrong to treat all therapies alike. One critic suggests that these studies are operating under a *uniformity myth*—a false belief that all therapies are equivalent despite differences in the therapists’ training, experience, theoretical orientations, and personalities (Kiesler, 1995, 1966).

Thus, an alternative approach examines the effectiveness of *particular* therapies. Most research of this kind shows each of the major forms of therapy to be superior to no treatment or to placebo treatment (Prochaska & Norcross, 1999, 1994). A number of other studies have compared particular therapies with one another and found that no one form of therapy generally stands out over all others (Luborsky et al., 2002, 1975).

If different kinds of therapy have similar successes, might they have something in common? A **rapprochement movement** has tried to identify a set of common strategies that may run through the work of all effective therapists, regardless of the clinicians’ particular orientation (Luborsky et al., 2002; Messer & Wampold, 2002). A survey of highly successful therapists suggests, for example, that most give feedback to patients, help patients focus on their own thoughts and behavior, pay attention to the way they and their patients are interacting, and try to promote self-mastery in their patients. In short, effective therapists of any type may practice more similarly than they preach (Korchin & Sands, 1983).

**ARE PARTICULAR THERAPIES EFFECTIVE FOR PARTICULAR PROBLEMS?** People with different disorders may respond differently to the various forms of therapy. Gordon Paul, an influential clinical theorist, said some years back that the most appropriate question regarding the effectiveness of therapy may be “*What specific treatment, by whom, is most effective for this individual with that specific problem, and under which set of circumstances?*” (Paul, 1967, p. 111). Researchers have investigated how effective particular therapies are at treating particular disorders, and they have often found sizable differences among the various therapies (Chambless, 2002). Behavioral therapies, for example, appear to be the most effective of all in treating phobias (McLean & Woody, 2001), whereas drug therapy is the single most effective treatment for schizophrenia (Breier, 2001).

**RAPPROCHEMENT MOVEMENT** An effort to identify a set of common strategies that run through the work of all effective therapists.



**FIGURE 4-7 Who seeks therapy?** According to surveys conducted in the United States, people who are middle-aged, female, from Western states, and highly educated are the most likely to have been in therapy at some point in their lives. (Adapted from Fetto, 2002.)

As we observed previously, studies also show that some clinical problems may respond better to *combined* approaches (Kupfer & Frank, 2001). Drug therapy is sometimes combined with certain forms of psychotherapy, for example, to treat depression. In fact, it is now common for clients to be seen by two therapists—one of them a **psychopharmacologist** (or **pharmacotherapist**)—a psychiatrist who primarily prescribes medications—and the other a psychologist, social worker, or other therapist who conducts psychotherapy.

Obviously, knowledge of how particular therapies fare with particular disorders can help therapists and clients alike make better decisions about treatment (Beutler, 2002, 2000, 1991) (see Figure 4-7). It can also lead researchers to a better understanding of why therapy works and ultimately of abnormal functioning. Thus this is a question to which we shall keep returning as we examine the disorders the therapies have been devised to combat.

### CROSSROADS:

#### Renewed Respect Collides with Economic Pressure

In Chapter 3 we observed that today's leading models of abnormal behavior often differ widely in their assumptions, conclusions, and treatments. It should not surprise us, then, that clinicians also differ considerably in their approaches to assessment and diagnosis or that those who prefer certain assessment techniques sometimes scoff at those who use other approaches. Yet when all is said and done, no assessment technique stands out as superior to the rest. Each of the hundreds of available tools has major limitations, and each produces at best an incomplete picture of how a person is functioning and why.

In short, even though some assessment procedures have received more research support than others (and clinicians should pay close attention to such findings when they are deciding which ones to use), the present state of assessment and diagnosis argues against relying exclusively on any one approach. As a result, more and more clinicians now use batteries of assessment tools in their

**PSYCHOPHARMACOLOGIST** A psychiatrist who primarily prescribes medications. Also known as a *pharmacotherapist*.

work (Meyer et al., 2001). Such batteries are already providing invaluable guidance in the assessment of Alzheimer's disease and certain other disorders that are particularly difficult to diagnose, as we shall see later.

Attitudes toward clinical assessment have shifted back and forth over the past several decades. Before the 1950s, assessment was a highly regarded part of clinical practice. As the number of clinical models grew during the 1960s and 1970s, however, followers of each model favored certain tools over others, and the practice of assessment became fragmented. Meanwhile, research began to reveal that a number of tools were inaccurate or inconsistent. In this atmosphere, many clinicians lost confidence in systematic assessment and diagnosis, and some came to approach these tasks casually.

Today respect for assessment and diagnosis is on the rise once again. One reason for the renewal of interest is the development of more precise diagnostic criteria, as presented in DSM-IV. Another is the drive by researchers for more rigorous tests to help them select appropriate subjects for clinical studies. Still another factor is the clinical field's growing awareness that certain disorders can be properly identified only after careful assessment procedures.

Along with heightened respect for assessment and diagnosis has come increased research (Chorpita & Lilienfeld, 1998; Exner, 1997). Every major kind of assessment tool—from projective tests to personality inventories—is now undergoing careful scrutiny. This work is helping many clinicians perform their work with more accuracy and consistency—welcome news for people with psychological problems.

Ironically, just as today's clinicians and researchers are rediscovering systematic assessment, powerful economic forces have emerged to work against the use of assessment tools. In particular, managed care insurance plans, which emphasize cost containment and shorter treatments, often refuse to provide coverage for extensive clinical testing or observations (Wood et al., 2002). Indeed, in a recent survey of psychologists, half of the respondents reported spending less time giving clinical tests than they had done previously, using fewer tests, or discontinuing such tests altogether—all because of managed care policies (Piotrowski et al., 1998). Which of these forces will ultimately have a greater influence on clinical assessment and diagnosis—promising research or economic pressure? We shall find out in the coming years.



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## SUMMARY AND REVIEW

**The practitioner's task** Clinical practitioners are interested primarily in gathering *idiographic* information about their clients. They seek an understanding of the specific nature and origins of a client's problems through *clinical assessment* and *diagnosis*. p. 89

**Clinical assessment** To be useful, assessment tools must be *standardized*, *reliable*, and *valid*. Most clinical assessment methods fall into three general categories: *clinical interviews*, *tests*, and *observations*. A clinical interview permits the practitioner to interact with a client and generally get a sense of who he or she is. It may be either *unstructured* or *structured*. Types of clinical tests include *projective*, *personality*, *response*, *psychophysiological*, *neurological*,

### >>IN THEIR WORDS

"Love is a form of mental illness not yet recognized in any of the standard diagnostic manuals."<<

Stuart Sutherland, psychologist, 1989

"Modern medicine ... does reasonably well at measuring disease, but not that well at measuring health."<<

James Neel, geneticist, 1994

"Show me a sane man and I will cure him for you."<<

Carl Jung

### >>PSYCH•LISTINGS

#### Famous Movie Clinicians

Dr. Crowe (*The Sixth Sense*, 1999) <<

Dr. McGuire (*Good Will Hunting*, 1997) <<

Dr. Lecter (*The Silence of the Lambs*, 1991; *Hannibal*, 2001; and *Red Dragon*, 2002) <<

Dr. Marvin (*What About Bob?*, 1991) <<

Dr. Sobel (*Analyze This*, 1999, and *Analyze That*, 2002) <<

Dr. Livingston (*Agnes of God*, 1985) <<

Dr. Berger (*Ordinary People*, 1980) <<

Dr. Dysart (*Equus*, 1977) <<

Nurse Ratched (*One Flew over the Cuckoo's Nest*, 1975) <<

Dr. Swinford (*David and Lisa*, 1962) <<

Dr. Petersen (*Spellbound*, 1945) <<

Dr. Murchison (*Spellbound*, 1945) <<

*neuropsychological*, and *intelligence tests*. Types of observation include *naturalistic observation* and *analog observation*. Practitioners also employ *self-monitoring*: subjects observe themselves and record designated behaviors, feelings, or cognitions as they occur. pp. 89–105

**Diagnosis** After collecting assessment information, clinicians form a *clinical picture* and decide upon a *diagnosis*. The diagnosis is chosen from a *classification system*. The system used most widely in the United States is the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*. pp. 105–107

**DSM-IV** The most recent version of the DSM, known as *DSM-IV*, lists approximately 400 disorders. Clinicians must evaluate a client's condition on five *axes*, or categories of information. Because DSM-IV is relatively new, its reliability and validity continue to receive broad clinical review. pp. 107–111

**Dangers of diagnosis and labeling** Even with trustworthy assessment data and reliable and valid classification categories, clinicians will not always arrive at the correct conclusion. They are human and so fall prey to various biases, misconceptions, and expectations. Another problem related to diagnosis is the prejudice that labels arouse, which may be damaging to the person who is diagnosed. pp. 110–111

**Treatment** The *treatment decisions* of therapists may be influenced by assessment information, the diagnosis, the clinician's theoretical orientation and familiarity with research, and the field's state of knowledge. Determining the *effectiveness of treatment* is difficult because therapists differ in their ways of defining and measuring success. The variety and complexity of today's treatments also present a problem. *Therapy outcome studies* have led to three general conclusions: (a) people in therapy are usually better off than people with similar problems who receive no treatment; (b) the various therapies do not appear to differ dramatically in their general effectiveness; (c) certain therapies or combinations of therapies do appear to be more effective than others for certain disorders. Some therapists currently advocate *empirically supported treatment*, the active identification, promotion, and teaching of those interventions that have received clear research support. pp. 112–116

### >>> CRITICAL THOUGHTS <<<

- How would you grade the tests you take in school? That is, how reliable and valid are they? How about the tests you see in magazines? pp. 90–91, 94–103
- Would people react to van Gogh's work differently if they thought of him as having had an ear disorder rather than a psychological disorder? Why do people find it fascinating to assess famous people, particularly those in the arts, long after their death? p. 91
- How might IQ scores be misused by school officials, parents, or other individuals? Why do you think our society is so preoccupied with the concept of intelligence and with IQ scores? p. 103
- Many people argue for a "people first" approach to clinical labeling. For example, they recommend using the phrase "a person with schizophrenia" rather than "a schizophrenic" (Foderaro, 1995). Why might this approach to labeling be preferable? pp. 105–111
- A newspaper columnist, has observed, "Newspapers usually take great care not to mention the race of those accused of violent crimes. But how many times have you seen the sentence, 'He had a history of mental illness?'" What does this double standard suggest about the status and rights of people with psychological disorders? p. 111
- How can persons make wise decisions about therapists and treatment approaches when they are seeking treatment? pp. 112–116
- One out of five persons surveyed still does not believe that people with psychological disorders can be treated and can improve (National Mental Health Association, 1999). Why do such beliefs persist despite research evidence to the contrary? pp. 112–116

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MN 4–8 [pages 24–25]

**>>LOOKING BACK**

**Photo Opportunities**

1827 Photography is invented.<<

1892 First color photo is developed.<<

1895 X rays are discovered.<<

1981 MRI is first used as a diagnostic tool.<<

MN 4–2 [pages 30–39]

**>>LOOKING BACK**

**Psychologically Incorrect**

Some past terms for abnormal behavior are considered unacceptable today. **Lunacy** was used before the twentieth century because phases of the moon (lunar phases) were thought to produce such behavior. Similarly, the term **deranged**—first used in the case of a very orderly man who suddenly became “disarranged”—is now obsolete.<<

**>>LAB•NOTES**

**Psychophysiological Tattletales**

Some persons, so-called *repressive copers*, deny or ignore negative feelings in order to cope with unpleasant circumstances. While watching scary movies in one study, such individuals reported experiencing less fear than did nonrepressors. However, their bodily measures of fear (recorded by body sensors) were two to three times higher than those of the nonrepressing moviegoers (Sparks et al., 1999).<<

**>>LOOKING AROUND**

**The Madness of King George**

Severe psychological problems can sometimes be traced to purely medical disorders. The legendary mental and physical dysfunctioning of England’s King George III (1760–1820) has been documented and often exaggerated in movies, books, and numerous tales. The cause of his problems? *Porphyria*, a rare enzyme disease passed down from Mary, Queen of Scots, to George III, his son George IV, and Queen Victoria.<<

## Topic Overview | :

**GENERALIZED ANXIETY DISORDER**

The Sociocultural Perspective  
 The Psychodynamic Perspective  
 The Humanistic Perspective  
 The Cognitive Perspective  
 The Biological Perspective

**PHOBIAS**

Specific Phobias  
 Social Phobias  
 What Causes Phobias?  
 How Are Phobias Treated?

**PANIC DISORDER**

The Biological Perspective  
 The Cognitive Perspective

**OBSESSIVE-COMPULSIVE DISORDER**

What Are the Features of Obsessions and Compulsions?  
 The Psychodynamic Perspective  
 The Behavioral Perspective  
 The Cognitive Perspective  
 The Biological Perspective

**CROSSROADS: DIATHESIS-STRESS IN ACTION**

**FEAR** The central nervous system's physiological and emotional response to a serious threat to one's well-being.

Bob Donaldson was a 22-year-old carpenter referred to the psychiatric outpatient department of a community hospital. . . . During the initial interview Bob was visibly distressed. He appeared tense, worried, and frightened. He sat on the edge of his chair, tapping his foot and fidgeting with a pencil on the psychiatrist's desk. He sighed frequently, took deep breaths between sentences, and periodically exhaled audibly and changed his position as he attempted to relate his story:

**Bob:** It's been an awful month. I can't seem to do anything. I don't know whether I'm coming or going. I'm afraid I'm going crazy or something.

**Doctor:** What makes you think that?

**Bob:** I can't concentrate. My boss tells me to do something and I start to do it, but before I've taken five steps I don't know what I started out to do. I get dizzy and I can feel my heart beating and everything looks like it's shimmering or far away from me or something—it's unbelievable.

**Doctor:** What thoughts come to mind when you're feeling like this?

**Bob:** I just think, "Oh, Christ, my heart is really beating, my head is swimming, my ears are ringing—I'm either going to die or go crazy."

**Doctor:** What happens then?

**Bob:** Well, it doesn't last more than a few seconds, I mean that intense feeling. I come back down to earth, but then I'm worrying what's the matter with me all the time, or checking my pulse to see how fast it's going, or feeling my palms to see if they're sweating.

**Doctor:** Can others see what you're going through?

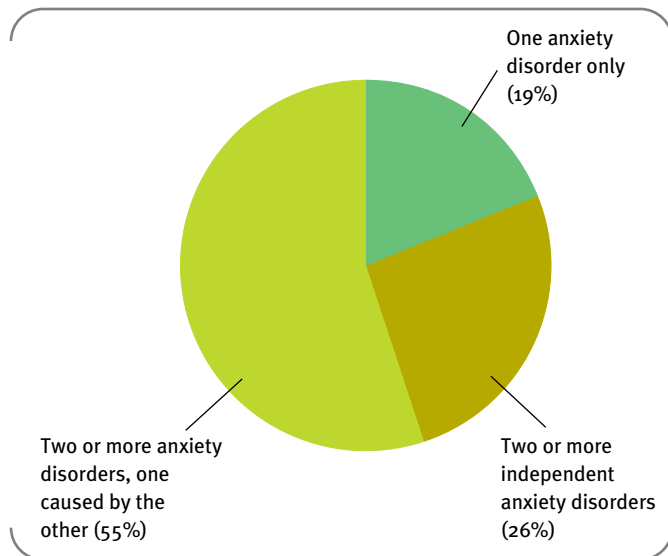
**Bob:** You know, I doubt it. I hide it. I haven't been seeing my friends. You know, they say "Let's stop for a beer" or something after work and I give them some excuse—you know, like I have to do something around the house or with my car. I'm not with them when I'm with them anyway—I'm just sitting there worrying. My friend Pat said I was frowning all the time. So, anyway, I just go home and turn on the TV or pick up the sports page, but I can't really get into that either.

Bob went on to say that he had stopped playing softball because of fatigability and trouble concentrating. On several occasions during the past two weeks he was unable to go to work because he was "too nervous."

(Spitzer et al., 1983, pp. 11–12)

One does not need to be as troubled as Bob Donaldson to experience fear and anxiety. Think about a time when your breathing quickened, your muscles tensed, and your heart pounded with a sudden sense of dread. Was it when your car almost skidded off the road in the rain? When your professor announced a pop quiz? What about when the person you were in love with went out with someone else, or your boss suggested that your job performance ought to improve? Anytime you face what seems to be a serious threat to your well-being, you may react with the state of immediate alarm known as **fear**. Sometimes you cannot pinpoint a specific cause for your alarm, but still you feel tense and edgy, as if you expected something unpleasant to happen. The vague sense of being in danger is usually termed





**FIGURE 5-1 Does anxiety beget anxiety?** People with one anxiety disorder usually experience another as well, either simultaneously or at another point in their lives. One study of persons with anxiety disorders found that 81 percent actually suffered from multiple disorders. (Adapted from Hunt & Andrews, 1995.)

**anxiety**, and it has the same features—the same increase in breathing, muscular tension, perspiration, and so forth—as fear (Barlow, 2002).

Although everyday experiences of fear and anxiety are not pleasant, they often have an adaptive function: they prepare us for action—for “fight or flight”—when danger threatens. They may lead us to drive more cautiously in a storm, keep up with our reading assignments, treat our dates more sensitively, and work harder at our jobs (Millar & Millar, 1996). Unfortunately, some people suffer such disabling fear and anxiety that they cannot lead normal lives. Their discomfort is too severe or too frequent; it lasts too long; or it is triggered too easily. These people are said to have an *anxiety disorder* or a related kind of disorder.

Anxiety disorders are the most common mental disorders in the United States. In any given year as many as 19 percent of the adult population suffer from one or another of the six anxiety disorders identified by DSM-IV. These disorders cost society at least \$42 billion each year in health-care expenses, lost wages,

and lost productivity (Barlow, 2002; Greenberg et al., 1999).

People with *generalized anxiety disorder* experience general and persistent feelings of anxiety. People with *phobias* experience a persistent and irrational fear of a specific object, activity, or situation. Individuals with *panic disorder* have recurrent attacks of terror. Those with *obsessive-compulsive disorder* feel overrun by recurrent thoughts that cause anxiety or by the need to perform repetitive actions to reduce anxiety. And those with *acute stress disorder* and *posttraumatic stress disorder* are tormented by fear and related symptoms well after a traumatic event (military combat, rape, torture) has ended. Most individuals with one anxiety disorder suffer from a second one as well (Roemer et al., 2002) (see Figure 5-1). Bob Donaldson, for example, experiences the excessive worry found in generalized anxiety disorder and the repeated attacks of terror that mark panic disorder.

In this chapter we shall look at generalized anxiety disorder, phobias, panic disorder, and obsessive-compulsive disorder. The other anxiety disorders—acute and posttraumatic stress disorders—will be examined in the next chapter when we consider the special effects that intense or ongoing stress have on both our psychological and physical functioning.

## Generalized Anxiety Disorder

People with **generalized anxiety disorder** experience excessive anxiety under most circumstances and worry about practically anything. In fact, their problem is sometimes described as *free-floating anxiety*. Like the young carpenter Bob Donaldson, they typically feel restless, keyed up, or on edge, tire easily, have difficulty concentrating, suffer from muscle tension, and have sleep problems (see Table 5-1). The symptoms last at least six months. Many individuals with this disorder experience depression as well (Brown & Barlow, 2002). Nevertheless, most people with generalized anxiety disorder are able, with some difficulty, to carry on social relationships and job activities (Keller, 2002; Maier et al., 2000).

Relatives and friends of people with this disorder sometimes accuse them of “wanting” to worry, “looking” for things to worry about, and being “happy” only when worrying. Most such accusations are unfair: people with the disorder hardly feel happy. They feel that they are in a constant struggle, always threatened and defending themselves, and always trying to escape their pain.

Generalized anxiety disorder is common in Western society. Surveys suggest that as many as 4 percent of the United States pop-

**Table 5-1 DSM-IV Checklist**

### GENERALIZED ANXIETY DISORDER

1. Excessive or ongoing anxiety and worry, for at least six months, about numerous events or activities.
2. Difficulty controlling the worry.
3. At least three of the following symptoms: restlessness • easy fatigue • irritability • muscle tension • sleep disturbance.
4. Significant distress or impairment.

Based on APA, 2000, 1994.

Table 5-2

## Anxiety Disorders Profile

	ONE-YEAR PREVALENCE (%)	FEMALE:MALE RATIO	TYPICAL AGE AT ONSET	PREVALENCE AMONG CLOSE RELATIVES	PERCENTAGE RECEIVING TREATMENT
Generalized anxiety disorder	4.0%	2:1	0–20 years	Elevated	27%
Specific phobias	9.0	2:1	Variable	Elevated	12%
Social phobias	8.0	3:2	10–20 years	Elevated	21%
Panic disorder	2.3	5:2	15–35 years	Elevated	54.4%
Obsessive-compulsive disorder	2.0	1:1	4–25 years	Elevated	41.3%

Source: Ingersoll & Burns, 2001; APA, 2000, 1994; Kessler et al., 1999, 1994; Regier et al., 1993; Blazer et al., 1991; Davidson et al., 1991; Eaton et al., 1991.

ulation and 3 percent of Britain's population have the symptoms of this disorder in any given year (Roemer et al., 2002; Kessler et al., 2001, 1999; Jenkins et al., 1997). It may emerge at any age, but usually it first appears in childhood or adolescence. Women diagnosed with the disorder outnumber men 2 to 1 (see Table 5-2).

A variety of factors have been cited to explain the development of generalized anxiety disorder. Here we shall observe the views and treatments offered by the sociocultural, psychodynamic, humanistic, cognitive, and biological models. The behavioral perspective will be examined when we turn to phobias later in the chapter, because that model's approach to generalized anxiety disorder and phobias is basically the same.

### The Sociocultural Perspective

According to sociocultural theorists, generalized anxiety disorder is most likely to develop in people who are faced with societal conditions that are truly dangerous. Studies have found that people in highly threatening environments are indeed more likely to develop the general feelings of tension, anxiety, and fatigue, the exaggerated startle reactions, and the sleep disturbances found in this disorder (Kendler, Karkowski, & Prescott, 1998) (see Box 5-1).

Take, for example, the psychological impact of living near the Three Mile Island nuclear power plant after the nuclear reactor accident of March 1979 (Baum, 1990; Bromet et al., 1984, 1982). In the months following the accident, local mothers of preschool children were found to display five times as many anxiety or depression disorders as mothers living elsewhere. Although the number of disorders decreased during the next year, the Three Mile Island mothers still displayed high levels of anxiety or depression a year later.

One of the most powerful forms of societal stress is poverty. People without financial means are likely to live in run-down communities with high crime rates, have fewer educational and job opportunities, and run a greater risk for health problems. As sociocultural theorists would predict, such people also have a higher rate of generalized anxiety disorder. In the United States, the rate is twice as high among people with low incomes as among those with higher incomes (Blazer et al., 1991). As salaries and wages decrease in this country, the rate of generalized anxiety disorder steadily increases.

Since race is closely tied to income and job opportunity in the United States (Belle, 1990), it is also tied to the prevalence of generalized anxiety disorder. In

**ANXIETY** The central nervous system's physiological and emotional response to a vague sense of threat or danger.

**GENERALIZED ANXIETY DISORDER** A disorder marked by persistent and excessive feelings of anxiety and worry about numerous events and activities.



**The role of society** Upon learning that her son was a victim of a drive-by shooting, a woman collapses in the arms of relatives at the scene. People who live in dangerous environments experience greater anxiety and have a higher rate of generalized anxiety disorder than those residing in other settings.

any given year, approximately 6 percent of all African Americans suffer from this disorder, compared to 3.5 percent of white Americans. African American women, perhaps the country's most socially stressed group, have the highest rate of all—6.6 percent.

Although poverty and other societal pressures may create a climate in which generalized anxiety disorder is more likely to develop, sociocultural variables are not the only factors at work. After all, most people in poor, war-torn, politically oppressed, or dangerous environments do not develop this anxiety disorder. Even if sociocultural factors play a broad role, theorists still must explain why some people develop the disorder and others do not. The psychodynamic, humanistic-existential, cognitive, and biological schools of thought have all tried to explain why and have offered corresponding treatments.

### The Psychodynamic Perspective

Sigmund Freud (1933, 1917) believed that all children experience some degree of anxiety as part of growing up. They feel *realistic anxiety* when they face actual danger. They experience *neurotic anxiety* when they are repeatedly prevented, by parents or by circumstances, from expressing their id impulses. And they experience *moral anxiety* when they are punished or threatened for expressing their id impulses. According to Freud, we all use ego defense mechanisms to help control these forms of anxiety (see pages 57–58); in some people, however, the anxiety is so strong and the defense mechanisms are so inadequate that generalized anxiety disorder develops.

#### PSYCHODYNAMIC EXPLANATIONS: WHEN CHILDHOOD ANXIETY GOES UNRESOLVED

Freud suggested that generalized anxiety disorder arises when a person's defense mechanisms break down under stress and are overrun by neurotic or moral anxiety. It may be that the person's level of anxiety is just too high. Say that a boy is spanked every time he cries for milk as an infant, messes his pants as a 2-year-old, and explores his genitals as a toddler. He may eventually come to believe that his various id impulses are very dangerous, and he may experience overwhelming anxiety whenever he has such impulses. Or perhaps the ego defense mechanisms are too weak to cope with the resulting anxiety. Overprotected children, shielded by their parents from all frustrations and threats, have little opportunity to develop effective defense mechanisms. When they face the pressures of adult life, their defense mechanisms may be too weak to cope with the resulting anxieties. Although today's psychodynamic theorists often disagree with many of Freud's specific notions, they believe, as Freud did, that generalized anxiety disorder can be traced to inadequacies in the early relationships between children and their parents.

Researchers have tested these psychodynamic explanations in various ways. First, they have tried to show that people in general tend to use defense mechanisms in frightening situations. In some studies, experimenters have exposed subjects to threats of various kinds and have then measured how well they remember the fear-arousing events. As psychodynamic theorists would predict, the subjects tend to forget—that is, *repress*—many aspects of the events (Rosenzweig, 1943, 1933).

Second, psychodynamic researchers have tried to show that people with generalized anxiety disorder are particularly likely to use defense mechanisms. In one study, investigators examined the early therapy transcripts of patients with this diagnosis. The transcripts indicated that the patients often reacted defensively. When asked by therapists to discuss upsetting experiences, they would quickly forget (repress) what they had just been talking about, change the direction of the discussion, or deny having negative feelings (Luborsky, 1973).

Third, researchers have studied people who as children suffered extreme punishment for id impulses. As psychodynamic theorists would predict, these people have higher levels of anxiety later in life (Chiu, 1971). In cultures where children

#### »»LOOKING AROUND Insecurity, Adult Style

Children may cling to blankets or cuddly toys to feel more secure. Adults, too, may hug a beloved object in order to relax. One in five adult women and one in twenty men admit to sleeping with a stuffed animal on a regular basis (Kanner, 1995).««

## BOX 5-1

## Apocalypse Not: The Y2K Scare

As January 1, 2000, approached, more and more people became concerned—even anxious—about what this date would bring. Much of the concern centered on the so-called *Y2K problem*. Computers around the world, particularly older ones, had not been programmed to recognize the start of the new century. This failure of foresight raised questions about their capacity to continue to provide governmental, industrial, health, and personal services. As warnings vied with reassurances, the public's concern increased.

At first the concerns seemed realistic. There was, after all, a possibility that many services could be disrupted as the year 2000 began. As the countdown to the new millennium continued, however, the growing anxiety

displayed by many people seemed disproportionate to and disconnected from any real societal dangers. In one survey, for example, 25 percent of Americans said they were worried because they didn't know what was going to happen in the new century, and 28 percent even agreed with the statement "We're approaching the end of the world" (Roper Starch Worldwide, 1999). Many people talked generally of doom and a number began to hoard food, cash, medicine, and gasoline.

Given such reactions, clinical theorists also suspected psychological reasons for the premillennial anxiety. Some, for example, described the Y2K computer problem as a magnet for the emotions of people who were already highly anxious (Goldstein et al., 2002; Strous et al., 2000). One theorist observed, "People may project some of their anxiety and fears and blame Y2K as a scapegoat" (Goldberg, 1999), and another noted that a person who "fears accidents and disasters is likely to fear the millennial change" (Kupfer, 1999).

Theorists also pointed out that the anxiety surrounding the Y2K computer problem was similar to that which swept the

world in A.D. 999 as people prepared for that millennial change (Landes, 1999; Rhodes, 1999). Doomsaying is as old as humankind. Over the years, numerous religions have taught that the world would end by a particular date, bringing punishment to some people and rewards to others. Secular organizations have also predicted an apocalypse, though for other reasons—a squandering of natural resources, shortages of food, unchecked population growth, or a natural catastrophe (Moshinsky, 1995). When a new millennium approaches, such beliefs and the people who embrace them increase precipitously.

Consistent with such psychological explanations, a later survey revealed that Y2K anxiety had indeed been greatest among people who were generally anxious and among highly religious people (Goldstein et al., 2002). In fact, Y2K anxiety was not even related strongly to individuals' levels of computer use or computer anxiety.

Such findings suggest that the anxiety of the late 1990s was much more than a straightforward reaction to computer dangers, real as some of them were. Like other forms of anxiety, it represented a complex phenomenon in which sociocultural and psychological forces combined in just the right, or wrong, way.



are regularly punished and threatened, for example, adults seem to have more fears and anxieties (Whiting et al., 1966). In addition, several studies have supported the psychodynamic position that extreme protectiveness by parents may also lead to high levels of anxiety in their children (Jenkins, 1968; Eisenberg, 1958).

Although these studies are consistent with psychodynamic explanations, some scientists question whether they show what they claim to show. When people have difficulty talking about upsetting events early in therapy, for example, they are not necessarily repressing those events. They may be purposely focusing on the positive aspects of their lives, or they may be too embarrassed to share personal negative events until they develop trust in the therapist.

Another problem is that some research studies and clinical reports have actually contradicted the psychodynamic explanations. In one, 16 people with generalized anxiety disorder were interviewed about their upbringing (Raskin et al., 1982). They reported relatively little of the excessive discipline or disturbed childhood environments that psychodynamic therapists might expect for people with this disorder.

**PSYCHODYNAMIC THERAPIES** Psychodynamic therapists use the same general techniques to treat all psychological problems: free association and the therapist’s interpretations of transference, resistance, and dreams. *Freudian psychodynamic therapists* use these methods to help clients with generalized anxiety disorder become less afraid of their id impulses and more able to control them successfully. Other psychodynamic therapists, particularly *object relations therapists*, use them to help anxious patients identify and settle the childhood relationship problems that continue to produce anxiety in adulthood (Zerbe, 1990).

Controlled research has not consistently shown psychodynamic approaches to be helpful in cases of generalized anxiety disorder (Goisman et al., 1999). In most studies, such interventions have proved at best modestly helpful. An exception to this overall trend is short-term psychodynamic therapy (see Chapter 3), which has in some cases significantly reduced the levels of anxiety, worry, and social difficulty of patients with this disorder (Crits-Christoph, 2002).

### The Humanistic Perspective

Humanistic theorists propose that generalized anxiety disorder, like other psychological disorders, arises when people stop looking at themselves honestly and acceptingly. Repeated denials of their true thoughts, emotions, and behavior make these people extremely anxious and unable to fulfill their potential as human beings.

The humanistic view of why people develop this disorder is best illustrated by Carl Rogers’s explanation. As we saw in Chapter 3, Rogers believed that children who fail to receive *unconditional positive regard* from others may become overly critical of themselves and develop harsh self-standards, what Rogers called *conditions of worth*. They try to meet these standards by repeatedly distorting and denying their true thoughts and experiences. Despite such efforts, however, threatening self-judgments keep breaking through and causing them intense anxiety. This onslaught of anxiety sets the stage for generalized anxiety disorder or some other form of psychological dysfunctioning.

Practitioners of Rogers’s treatment approach, **client-centered therapy**, try to show unconditional positive regard for their clients and to empathize with them. The therapists hope that an atmosphere of genuine acceptance and caring will help clients feel secure enough to recognize their true needs, thoughts, and emotions. When clients eventually “experience” themselves—that is, trust their instincts and are honest and comfortable with themselves—their anxiety or other symptoms will subside. In the following excerpt, Rogers describes the progress made by a client with anxiety and related symptoms:

She was unusually sensitive to the process she was experiencing in herself. To use some of her expressions, she was feeling pieces of a jigsaw puzzle, she was singing a song without words, she was creating a poem, she was learning a new way of experiencing herself which was like learning to read Braille. Therapy was an experiencing of herself, in all its aspects, in a safe relationship. At first it was her guilt and her concern over being responsible for the maladjustments of others. Then it was her hatred and bitterness toward life for having cheated and frustrated her in so many different areas, particularly the sexual, and then it was the experiencing of her own hurt, of the sorrow she felt for herself for having been so wounded. But along with these went the experiencing of self as having a capacity for wholeness, a self which was not possessively loving toward others but was “without hate,” a self that cared about others. This last followed what was, for her, one of the deepest experiences in therapy . . . the realization that the therapist cared, that it really mattered to him how therapy turned out for her, that he really valued her. She experienced the soundness of her basic directions. She gradually became aware of the fact that, though she had searched in every corner of herself, there was nothing fundamentally bad, but rather, at heart she



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“Don’t make me come over there.”

**No judgment allowed** According to client-centered therapists, *individuals can overcome their psychological problems only if they feel accepted and understood by their therapists.*

**CLIENT-CENTERED THERAPY** The humanistic therapy developed by Carl Rogers in which clinicians try to help clients by being accepting, empathizing accurately, and conveying genuineness.

**BASIC IRRATIONAL ASSUMPTIONS** The inaccurate and inappropriate beliefs held by people with various psychological problems, according to Albert Ellis.

was positive and sound. She realized that the values she deeply held were such as would set her at variance with her culture, but she accepted this calmly. . . .  
(Rogers, 1954, pp. 261–264)

In spite of such optimistic case reports, controlled studies have failed to offer strong support for this approach. Although research does suggest that client-centered therapy is usually more helpful to anxious clients than no treatment, the approach is only sometimes superior to placebo therapy and tends to be less effective than cognitive therapy, the approach that we shall be turning to next (Prochaska & Norcross, 2003; Grawe et al., 1998). In addition, researchers have found, at best, only limited support for Rogers’s explanation of generalized anxiety disorder and other forms of abnormal behavior. Nor have other humanistic theories and treatment received much research support.

### The Cognitive Perspective

Followers of the cognitive model suggest that psychological problems are often caused by dysfunctional ways of thinking. Given that excessive worry—a cognitive symptom—is a key characteristic of generalized anxiety disorder, it is not surprising that cognitive theorists have had much to say about the causes of and treatments for this particular disorder.

**COGNITIVE EXPLANATIONS: MALADAPTIVE ASSUMPTIONS** Several influential cognitive theories suggest that generalized anxiety disorder is caused by *maladaptive assumptions*. Albert Ellis, for example, believes that many people are guided by irrational beliefs that lead them to act and react in inappropriate ways (Ellis, 2002, 2001, 1977, 1962). Ellis calls these **basic irrational assumptions**, and he claims that people with generalized anxiety disorder often hold the following ones:

“It is a dire necessity for an adult human being to be loved or approved of by virtually every significant other person in his community.”

“It is awful and catastrophic when things are not the way one would very much like them to be.”

“If something is or may be dangerous or fearsome, one should be terribly concerned about it and should keep dwelling on the possibility of its occurring.”

“One should be thoroughly competent, adequate, and achieving in all possible respects if one is to consider oneself worthwhile.”

(Ellis, 1962)

When people who make these basic assumptions are faced with a stressful event, such as an exam or a blind date, they are likely to interpret it as highly dangerous and threatening, to overreact, and to experience fear (see Box 5–2). As they apply the assumptions to more and more life events, they may begin to develop a generalized anxiety disorder (Warren, 1997).

Similarly, the cognitive theorist Aaron Beck holds that people with generalized anxiety disorder constantly hold unrealistic silent assumptions (for example, “A situation or a person is unsafe until proven to be safe” or “It is always best to assume the worst”) that imply they are in imminent danger (Beck, 1997, 1991, 1976; Beck & Emery, 1985):

Researchers have found that people with generalized anxiety disorder do indeed hold maladaptive notions about dangerousness, as Ellis and Beck claim (Boegels & Zigterman, 2000; Clark, 1999). One study found that 32 participants with this disorder held overblown beliefs that they would come to harm (Beck et al., 1974). Each person reported upsetting assumptions and images regarding such issues as physical injury, illness, or death; psychological dysfunctioning; failure

### >>LOOKING AROUND Lay Treatment

Besides seeking professional treatment, people are known to try informal techniques in an effort to feel better. “Worry beads,” strings of beads that people rub between their fingers to help relieve anxiety, became popular in the 1960s and are still used today. The practice began as a custom among peasants in Greece, who fingered sets of beads called *komboloi* to keep their hands occupied (Kahn & Fawcett, 1993).<<

**Fearful delights** Many people enjoy the feeling of fear as long as it occurs under controlled circumstances, as when they are safely watching the tension grow in the enormously popular Blair Witch Project.



The Everett Collection

## B O X 5-2

## Fears, Shmears: The Odds Are Usually on Our Side

People with anxiety disorders have many unreasonable fears, but millions of other people, too, worry about disaster every day. Most of the catastrophes they fear are not probable. Perhaps the ability to live by laws of probability rather than possibility is what separates the fearless from the fearful. What are the odds, then, that commonly feared events will happen? The range of probability is wide, but the odds are usually heavily in our favor.

A city resident will be a victim of a violent crime . . . 1 in 60

A suburbanite will be a victim of a violent crime . . . 1 in 1,000

A small-town resident will be a victim of a violent crime . . . 1 in 2,000

A child will suffer a high-chair injury this year . . . 1 in 6,000

The IRS will audit you this year . . . 1 in 100

You will be bumped off any given airline flight . . . 1 in 4,000

You will be murdered this year . . . 1 in 12,000

You will be killed on your *next* bus ride . . . 1 in 500 million

You will be hit by a baseball at a major-league game . . . 1 in 300,000

You will drown in the tub this year . . . 1 in 685,000

Your house will have a fire this year . . . 1 in 200

You will die in a fire this year . . . 1 in 40,200

Your carton will contain a broken egg . . . 1 in 10

You will develop a tooth cavity . . . 1 in 6

A young child will develop a tooth cavity . . . 1 in 10

You will contract AIDS from a blood transfusion . . . 1 in 100,000

Any given miner will be injured while working this year . . . 1 in 23

Any given factory worker will be injured at work this year . . . 1 in 37

Any given farmer will be injured while working this year . . . 1 in 19

You will die in a fall . . . 1 in 200,000

You will be attacked by a shark . . . 1 in 4 million

You will receive a diagnosis of cancer this year . . . 1 in 8,000

A woman will develop breast cancer during her lifetime . . . 1 in 9

You will develop a brain tumor this year . . . 1 in 25,000

A piano player will eventually develop lower back pain . . . 1 in 3

You will be killed on your *next* automobile outing . . . 1 in 4 million

You will die in an automobile accident . . . 1 in 5,000

Condom use will eventually fail to prevent pregnancy . . . 1 in 10

An IUD will eventually fail to prevent pregnancy . . . 1 in 10

Coitus interruptus will eventually fail to prevent pregnancy . . . 1 in 5

(ADAPTED FROM KRANTZ, 1992)



**Build with care** The chance of a construction worker being injured at work during the year is 1 in 27.

and inability to cope; and rejection. Related studies have also found that people with generalized anxiety symptoms pay unusually close attention to threatening cues (Atkins & Craske, 2001).

What kinds of people are likely to have exaggerated expectations of danger? Some cognitive theorists point to those whose lives have been filled with *unpredictable negative events*. These individuals become generally fearful of the unknown and always wait for the boom to drop (Roemer et al., 2002; Ladouceur, 1998). To avoid being blindsided, they keep trying to predict new and unforeseeable negative events. They look everywhere for signs of danger, and they wind up seeing danger everywhere, thus setting up a life of anxiety. In support of this idea, stud-

ies have demonstrated that both animal and human subjects respond more fearfully to unpredictable negative events than to predictable ones and that people with generalized anxiety disorder worry much more about the future than others do (Barlow, 2002; Dugas et al., 2002; Mineka, 1985). However, researchers have yet to determine whether people with this disorder have, in fact, experienced an unusual number of unpredictable negative events in life.

**COGNITIVE THERAPIES** Two kinds of cognitive approaches are commonly used in cases of generalized anxiety disorder. In one, based on the theories of Ellis and Beck, therapists help clients change the maladaptive assumptions that are supposedly at the root of their disorders. In the other, therapists teach clients how to cope during stressful situations.

**CHANGING MALADAPTIVE ASSUMPTIONS** In Ellis's technique of **rational-emotive therapy**, practitioners point out the irrational assumptions held by clients, suggest more appropriate assumptions, and assign homework that gives the individuals practice at challenging old assumptions and applying new ones (Ellis, 2002, 2001). Research has been limited, but studies do suggest that this approach brings at least modest relief to persons suffering from anxiety (Cowan & Brunero, 1997). The approach is illustrated in the following discussion between Ellis and an anxious client who fears failure and disapproval at work, especially over a testing procedure that she has developed for her company:



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“Wait a minute—I know there’s something we’ve forgotten to worry about.”

**Client:** I’m so distraught these days that I can hardly concentrate on anything for more than a minute or two at a time. My mind just keeps wandering to that damn testing procedure I devised, and that they’ve put so much money into; and whether it’s going to work well or be just a waste of all that time and money. . . .

**Ellis:** Point one is that you must admit that you are telling yourself something to start your worrying going, and you must begin to look, and I mean really look, for the specific nonsense with which you keep reindoctrinating yourself. . . . The false statement is: “If, because my testing procedure doesn’t work and I am functioning inefficiently on my job, my co-workers do not want me or approve of me, then I shall be a worthless person.” . . .

**Client:** But if I want to do what my firm also wants me to do, and I am useless to them, aren’t I also useless to me?

**Ellis:** No—not unless you think you are. You are frustrated, of course, if you want to set up a good testing procedure and you can’t. But need you be desperately unhappy because you are frustrated? And need you deem yourself completely unworthwhile because you can’t do one of the main things you want to do in life?

(Ellis, 1962, pp. 160–165)

Beck’s similar but more systematic approach, called, simply, *cognitive therapy*, is an adaptation of his influential and very effective treatment for depression (which is discussed in Chapter 9). Researchers have found that it and similar cognitive approaches often reduce generalized anxiety to more tolerable levels (Brown et al., 2001; Olverholser & Nasser, 2000).

**TEACHING CLIENTS TO COPE** The clinical innovator Donald Meichenbaum (1997, 1993, 1992, 1977) has developed a cognitive technique for coping with stress called **self-instruction training**, or **stress inoculation training**. It teaches clients to rid themselves of the unpleasant thoughts that keep raising their anxiety during difficult situations (so-called *negative self-statements*) and replace them with *coping self-statements* instead.

**RATIONAL-EMOTIVE THERAPY** A cognitive therapy developed by Albert Ellis which helps clients to identify and change the irrational assumptions and thinking that help cause their psychological disorder.

**SELF-INSTRUCTION TRAINING** A cognitive treatment developed by Donald Meichenbaum which teaches clients to use coping self-statements at times of stress. Also known as *stress inoculation training*.



**>>LAB•NOTES**

**Facing Fear** Studies find that subjects with generally high levels of anxiety are more likely than calmer subjects to notice and remember pictures of threatening faces. Attention to happy or neutral faces is the same in both groups (Bradley et al., 1998).<<

**Cloning Fear** Researchers in Germany momentarily flashed pictures of snakes and spiders for subjects who were afraid of the creatures. The subjects began to experience physical fear reactions (autonomic arousal) just 300 microseconds after each picture's brief appearance (Globisch et al., 1999).<<

In Meichenbaum's approach, people are taught coping self-statements that they can apply during four stages of a stressful situation—say, talking to their boss about a raise. First, they learn to say things to themselves that prepare them for the situation. Second, they learn self-statements that enable them to cope with the stressful situation as it is occurring—for instance, when they are actually in the boss's office. Third, they learn self-statements that will help them through the difficult moments when the situation seems to be going badly, as when the boss glares at them as they ask for more money. Finally, they learn to make self-congratulatory self-statements after they have coped effectively. Here are a few examples of the four kinds of self-statements:

**Preparing for a Stressor**

What is it you have to do?

Just think about what you can do about it. That's better than getting anxious.

**Confronting and Handling a Stressor**

Just psych yourself up—you can meet this challenge.

Relax: you're in control. Take a slow, deep breath.

**Coping with the Feeling of Being Overwhelmed**

When fear comes, just pause.

Keep the focus on the present. What is it you have to do?

You should expect your fear to rise.

**Reinforcing Self-Statements**

It worked! You did it.

Your damn ideas—that's the problem. When you control them, you control your fear.

Self-instruction training has proved to be of modest help in cases of generalized anxiety disorder and moderately helpful to people who suffer from test-taking and performance anxiety, stress associated with life change, and mild forms of anxiety (Rokke & Rehm, 2001; Meichenbaum, 1993, 1992, 1972). It has also been used with some success to help athletes compete better and to encourage people to behave less impulsively, control anger, and control pain (Meichenbaum, 1997, 1993; Novaco, 1977).

In view of the limited effectiveness of self-instruction training in treating anxiety disorders, Meichenbaum (1972) himself has suggested that it should be combined with other treatments. In fact, anxious people treated with a combination of self-instruction training and Ellis's rational-emotive therapy improve more than people treated by either approach alone (Glogower, Fremouw, & McCroskey, 1978).

## The Biological Perspective

Biological theorists believe that generalized anxiety disorder is caused chiefly by biological factors. For years this claim was supported primarily by **family pedigree studies**, in which researchers determine how many and which relatives of a person with a disorder have the same disorder. If biological tendencies toward generalized anxiety disorder are inherited, people who are biologically related should have similar probabilities of developing this disorder. Studies have in fact found that blood relatives of persons with generalized anxiety disorder are more likely than nonrelatives to have the disorder, too (Hettema et al., 2001; Kendler et al., 1992). Approximately 15 percent of the relatives of people with the disorder display it themselves—much more than the 4 percent found in the general population. And the closer the relative (an identical twin, for example, as opposed to a fraternal twin or other sibling), the greater the likelihood that he or she will also have the disorder (APA, 2000).

**FAMILY PEDIGREE STUDY** A research design in which investigators determine how many and which relatives of a person with a disorder have the same disorder.

**BENZODIAZEPINES** The most common group of antianxiety drugs, which includes Valium and Xanax.

**GABA** The neurotransmitter gamma-aminobutyric acid, whose low activity has been linked to generalized anxiety disorder.

Of course, investigators cannot have full confidence in biological interpretations of such studies. The findings could also be suggesting that generalized anxiety disorder is caused by environmental experiences. Because relatives are likely to share aspects of the same environment, their shared disorders may reflect similarities in environment and upbringing rather than similarities in biological makeup. The closer the relatives, the more similar their environmental experiences are likely to be. Because identical twins are more physically alike than fraternal twins, they may even experience more similarities in their upbringing.

**BIOLOGICAL EXPLANATIONS: GABA INACTIVITY** In recent decades important discoveries by brain researchers have offered clearer evidence that generalized anxiety disorder is related to biological factors, in particular to biochemical dysfunction in the brain. One of the first such discoveries occurred in the 1950s, when researchers determined that **benzodiazepines**, the family of drugs that includes *diazepam* (Valium) and *alprazolam* (Xanax), provide relief from anxiety. At first, no one understood why benzodiazepines reduce anxiety. Eventually, however, radioactive techniques were developed which enabled researchers to pinpoint the exact sites in the brain that are affected by benzodiazepines (Mohler & Okada, 1977; Squires & Braestrup, 1977). Apparently certain neurons have receptors that receive the benzodiazepines, just as a lock receives a key.

Investigators soon discovered that these benzodiazepine receptors ordinarily receive **gamma-aminobutyric acid (GABA)**, a common and important neurotransmitter in the brain (Grilly, 2002; Costa & Guidotti., 1996). As we observed in Chapter 3, neurotransmitters are chemicals that carry messages from one neuron to another. GABA carries inhibitory messages: when GABA is received at a receptor, it causes the neuron to stop firing.

On the basis of such findings, biological researchers eventually pieced together several scenarios of how fear reactions may occur. One of the most influential ones begins with the notion that in normal fear reactions, key neurons throughout the brain fire more rapidly, triggering the firing of still more neurons and creating a general state of excitability throughout the brain and body. Perspiration, breathing, and muscle tension increase. This state is experienced as fear or anxiety. After neuron firing continues for a while, it triggers a feedback system—that is, brain and body activities that reduce the level of excitability. Some neurons throughout the brain release the neurotransmitter GABA, which then binds to GABA receptors on certain neurons and instructs those neurons to stop firing. The state of excitability ceases, and the experience of fear or anxiety subsides (Sanders & Shekhar, 1995; Costa, 1985, 1983).

Some researchers believe that a malfunction in this feedback system can cause fear or anxiety to go unchecked (Lloyd, Fletcher, & Minchin, 1992). In fact, when investigators reduced GABA's ability to bind to GABA receptors, they found that animal subjects reacted with a rise in anxiety (Costa, 1985; Mohler, Richards, & Wu, 1981). This finding suggests that people with generalized anxiety disorder may have ongoing problems in their anxiety feedback system. Perhaps their brain supplies of GABA are too low. Perhaps they have too few GABA receptors, or their GABA receptors do not readily capture the neurotransmitter.

This explanation of generalized anxiety disorder is promising, but it has problems. One is that recent biological discoveries have complicated the picture (Barlow, 2002). It has been found, for example, that GABA is only one of several body chemicals that can bind to the important GABA receptors. Could these other chemicals also be critical factors in the brain's control of anxiety? Similarly, there is research suggesting that neurotransmitters that bind to yet other neuron receptors may also play key roles in anxiety and anxiety disorders—acting alone or in conjunction with GABA. A second problem is that much of the research on the biology of anxiety has been done on laboratory animals. When researchers produce fear responses in animals, they assume that the animals are experiencing something similar to human anxiety, but it is impossible to be certain (Newman & Farley,

### >>BY THE NUMBERS

#### Treating Pet Anxiety

**5 MILLION** Dogs with severe separation anxiety<<

**33%** Owners who leave radio or television on when pet is alone<<

**50%** Those who leave toys out<<

**41%** Those who leave lights on<<

(Klein, 1998)

**Do monkeys experience anxiety?** *Clinical researchers must be careful in interpreting the reactions of animal subjects. This infant monkey was considered “fearful” after being separated from its mother. But perhaps it was feeling depression or another emotion, or experiencing a level of arousal that does not correspond to either human emotion.*



University of Wisconsin Primate Laboratory, Madison



**Sprinkle lightly** In the early twentieth century, drug companies did not have to prove the safety or value of their products. Brain Salt, a patent medicine for anxiety and related difficulties, promised to cure nervous disability, headaches, indigestion, heart palpitations, and sleep problems.

1995; Kalin, 1993). The animals may be experiencing a high level of arousal that is quite different from human anxiety.

Finally, biological theorists are faced with the problem of establishing a causal relationship. Although studies do tie physiological functioning to generalized anxiety disorder, they do not establish that the physiological events *cause* the disorder. The biological responses of anxious persons may be the result, rather than the cause, of their anxiety disorders. Perhaps long-term anxiety eventually leads to poorer GABA reception, for example.

**BIOLOGICAL TREATMENTS** The leading biological approach to treating generalized anxiety disorder is to prescribe *antianxiety drugs* (see Table 5-3). Indeed, it would be hard to find someone in our society who is not familiar with the word “tranquilizer” or “Valium.” Other biological interventions are *relaxation training*, in which people learn to relax the muscles throughout their bodies, and *biofeedback*, in which clients learn to voluntarily control underlying biological processes that may be contributing to their problems.

**ANTI-ANXIETY DRUGS** Before the 1950s, a family of drugs labeled *barbiturates* were the major biological treatment for anxiety disorders (Grilly, 2002). Because these drugs were used in low doses to calm people and in higher doses to help them fall asleep, they were generally known as **sedative-hypnotic drugs**. However, barbiturates created serious problems. They made people very drowsy, too high a dose could lead to death, and those who took them over a long period could become physically dependent on them. In the late 1940s, a drug called *meprobamate* was developed and later released as a new kind of sedative-hypnotic medication under the brand name *Miltown* (Cole & Yonkers, 1995). This drug was less dangerous and less addictive than barbiturates, but it still caused great drowsiness. Finally, in the late 1950s another group of antianxiety drugs called *benzodiazepines* was marketed. These drugs did not seem to produce as much tiredness as the others and were quickly embraced by both doctors and patients. Initially, the benzodiazepines were considered to be totally safe for use as sedative-hypnotics, and they soon became the most widely prescribed medications in the United States (Strange, 1992).

Only years later did investigators come to understand the reasons for the drugs’ effectiveness. As we have observed, researchers eventually learned that there are specific neuron sites in the brain that receive benzodiazepines (Mohler & Okada, 1977; Squires & Braestrup, 1977), and that these same receptor sites ordinarily receive the neurotransmitter GABA. Apparently, when benzodiazepines bind to these neuron receptor sites, particularly those receptors known as *GABA-A receptors*, they increase the ability of GABA to bind to them as well, and so improve GABA’s ability to stop neuron firing, slow bodily arousal, and reduce anxiety (Grilly, 2002).

Benzodiazepines are prescribed for generalized anxiety disorder more than for most other kinds of anxiety disorders (Keltner & Folks, 2001; Uhlenhuth et al., 1999, 1995). Controlled studies show that they do sometimes provide temporary and modest relief (Rickels et al., 2000). In recent years, however, clinicians have begun to realize the potential dangers of these drugs. First, when the medications are stopped, many persons’ anxieties return as strong as ever. Second, we now know that people who take benzodiazepines in large doses for an extended time can become physically dependent on them. Third, the drugs can produce undesirable effects such as drowsiness, lack of coordination, memory loss, depression, and aggressive behavior. Finally, although benzodiazepines are not directly harmful to the body, clinicians have learned that they do *potentiate*, or multiply, the effects of other substances, such as alcohol. Breathing can slow dangerously, sometimes fatally, if people on these antianxiety drugs drink even small amounts of alcohol (Gorman, 2002; Grilly, 2002).

Table 5-3

### Drugs That Reduce Anxiety

CLASS/GENERIC NAME	TRADE NAME
Benzodiazepines	
Alprazolam	Xanax
Chlordiazepoxide	Librium
Clonazepam	Klonopin
Clorazepate	Tranxene
Diazepam	Valium
Halazepam	Paxipam
Lorazepam	Ativan
Oxazepam	Serax
Prazepam	Centrax
Azaspirones	
Buspirone	BuSpar
Beta blockers	
Propranolol	Inderal
Atenolol	Tenormin

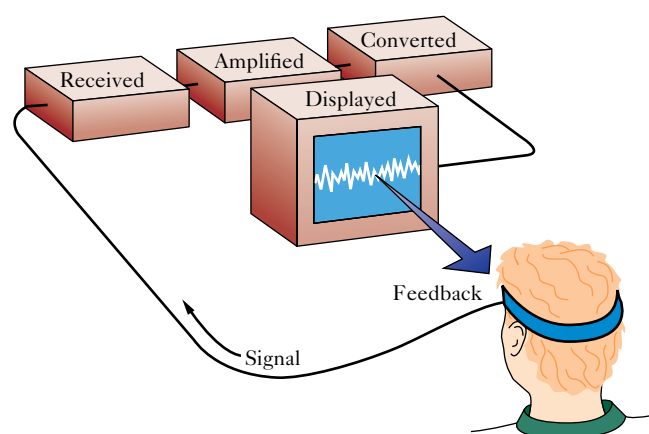
Since the 1980s several other kinds of antianxiety drugs have been developed which are now also available for people with generalized anxiety disorder (Brawman-Mintzer, 2001). One of these drugs, *bupirone* (trade name BuSpar), has gained particular popularity as a treatment for the disorder. Binding to a different set of receptors in the brain, this drug is often just as effective as benzodiazepines and is less likely to lead to physical dependence (Grilly, 2002).

**RELAXATION TRAINING** A nonchemical biological technique commonly used to treat generalized anxiety disorder is **relaxation training**. The notion behind this approach is that physical relaxation will lead to a state of psychological relaxation. In one version, therapists teach clients to identify individual muscle groups, tense them, release the tension, and ultimately relax the whole body. With continued practice, they can bring on a state of deep muscle relaxation at will, reducing their anxiety during stressful situations.

Research indicates that relaxation training is more effective than no treatment or placebo treatment in cases of generalized anxiety disorder (Gorman, 2002). The improvement it produces, however, tends to be modest (Butler et al., 1991), and other techniques that are known to induce relaxation, such as *meditation*, often seem to be equally effective (Kabat-Zinn et al., 1992). Relaxation training is of greatest help to people with generalized anxiety disorder when it is combined with cognitive therapy or with biofeedback (Brown et al., 2001; Overholser & Nasser, 2000).

**BIOFEEDBACK** In **biofeedback**, therapists use electrical signals from the body to train people to control physiological processes such as heart rate or muscle tension. Clients are connected to a monitor that gives them continuous information about their bodily activities. By attending to the therapist's instructions and the signals from the monitor, they may gradually learn to control even seemingly involuntary physiological processes.

The most widely applied method of biofeedback for the treatment of anxiety uses a device called an **electromyograph (EMG)**, which provides feedback about the level of muscular tension in the body. Electrodes are attached to the client's muscles—usually the forehead muscles—where they detect the minute electrical activity that accompanies muscle tension (see Figure 5-2). The device then converts electric potentials coming from the muscles into an image, such as lines on a screen, or into a tone whose pitch changes along with changes in muscle tension. Thus clients “see” or “hear” when their muscles are becoming more or less tense. Through repeated trial and error, the individuals become skilled at voluntarily



**FIGURE 5-2 Biofeedback at work** This biofeedback system is recording tension in the forehead muscle of an anxious person. The system receives, amplifies, converts, and displays information about the tension, allowing the client to “observe” it and to try to reduce his tension responses.

**SEDATIVE-HYPNOTIC DRUGS** Drugs that calm people at lower doses and help them to fall asleep at higher doses.

**RELAXATION TRAINING** A treatment procedure that teaches clients to relax at will so they can calm themselves in stressful situations.

**BIOFEEDBACK** A treatment technique in which a client is given information about physiological reactions as they occur and learns to control the reactions voluntarily.

**ELECTROMYOGRAPH (EMG)** A device that provides feedback about the level of muscular tension in the body.



**Modern relaxation** At the Brain Mind Gym, business executives receive pulsations of light and sound from goggles and headphones, which are meant to lull their brains into deep relaxation.

**>>Q & A****What is a generic drug?**

Drug authorities choose a **generic name** for a drug when it is first created. Upon approval, the drug's manufacturer then has an exclusive right to sell it under a **brand (trade) name** for a period of years. When that right expires, competitive companies may sell the drug either under its generic name or under brand names that they create.<<

(Padwa, 1996)

reducing muscle tension and, theoretically, at reducing tension and anxiety in everyday stressful situations. Research indicates that EMG biofeedback training helps both normal and anxious subjects reduce their anxiety somewhat (Rice, Blanchard, & Purcell, 1993). According to direct comparisons, this approach and relaxation training have similar effects on anxiety levels (Brown et al., 2001, 1992).

In the 1960s and 1970s, many hailed biofeedback as an approach that would revolutionize clinical treatment. So far, however, the approach has had its greatest impact when it plays an *adjunct* role in the treatment of certain medical problems, including headaches, back pain, gastrointestinal disorders, seizure disorders, and such neuromuscular disorders as cerebral palsy (Andrasik, 2000; Newton et al., 1995).

## Phobias

Most of us are none too eager to confront a spider or to be caught in a thunderstorm, but few of us have such dread as Marianne or Trisha:

**Marianne** Seeing a spider makes me rigid with fear, hot, trembling and dizzy. I have occasionally vomited and once fainted in order to escape from the situation. These symptoms last three or four days after seeing a spider. Realistic pictures can cause the same effect, especially if I inadvertently place my hand on one.

(Melville, 1978, p. 44)

**Trisha** At the end of March each year, I start getting agitated because summer is coming and that means thunderstorms. I have been afraid since my early twenties, but the last three years have been the worst. I have such a heartbeat that for hours after a storm my whole left side is painful. . . . I say I will stay in the room, but when it comes I am a jelly, reduced to nothing. I have a little cupboard and I go there, I press my eyes so hard I can't see for about an hour, and if I sit in the cupboard over an hour my husband has to straighten me up.

(Melville, 1978, p. 104)

A **phobia** (from the Greek for “fear”) is a persistent and unreasonable fear of a particular object, activity, or situation (see Box 5–3). People with a phobia become fearful if they even think about the object or situation they dread, but they usually remain comfortable as long as they avoid the object or thoughts about it. Most are well aware that their fears are excessive and unreasonable. Some have no idea how their fears started.

We all have our areas of special fear, and it is normal for some things to upset us more than other things, perhaps even different things at different stages of our lives (Antony & Barlow, 2002). A survey of residents of a community in Burlington, Vermont, found that fears of crowds, death, injury, illness, and separation were more common among people in their sixties than in other age groups (Agras, Sylvester, & Oliveau, 1969). Among 20-year-olds, fears of snakes, heights, storms, enclosures, and social situations were much more common.

How do these common fears differ from phobias? DSM-IV indicates that a phobia is more intense and persistent and the desire to avoid the object or situation is greater (APA, 2000, 1994). People with phobias feel such distress that their fears may interfere dramatically with their personal, social, or occupational lives.

Phobias are common in our society. Surveys suggest that 10 to 11 percent of the adults in the United States suffer from one in any given year, and more than 14 percent develop a phobia at some point in their lives (Magee et al., 1996; Regier et al., 1993). The disorder is more than twice as common in women as in men.

**PHOBIA** A persistent and unreasonable fear of a particular object, activity, or situation.

**SPECIFIC PHOBIA** A severe and persistent fear of a specific object or situation (other than agoraphobia and social phobia).

**SOCIAL PHOBIA** A severe and persistent fear of social or performance situations in which embarrassment may occur.

## B O X 5-3

## Phobias, Familiar and Not So Familiar

Air— <i>aerophobia</i>	Horses— <i>hippophobia</i>	Spiders— <i>arachnophobia</i>
Animals— <i>zoophobia</i>	Human beings— <i>anthropophobia</i>	Stings— <i>cnidophobia</i>
Beards— <i>pogonophobia</i>	Ice, frost— <i>cryophobia</i>	Strangers— <i>xenophobia</i>
Being afraid— <i>phobophobia</i>	Insects— <i>entomophobia</i>	Sun— <i>heliophobia</i>
Blood— <i>hematophobia</i>	Machinery— <i>mechanophobia</i>	Surgery— <i>ergasiophobia</i>
Books— <i>bibliophobia</i>	Marriage— <i>gamophobia</i>	Teeth— <i>odontophobia</i>
Children— <i>pediophobia</i>	Meat— <i>carnophobia</i>	Travel— <i>hodophobia</i>
Churches— <i>ecclesiophobia</i>	Mice— <i>musophobia</i>	Trees— <i>dendrophobia</i>
Corpse— <i>necrophobia</i>	Mirrors— <i>eisoptrophobia</i>	Wasps— <i>spheksophobia</i>
Crossing a bridge— <i>gephyrophobia</i>	Missiles— <i>ballistophobia</i>	Water— <i>hydrophobia</i>
Crowds— <i>ochlophobia</i>	Money— <i>chrometophobia</i>	Wind— <i>anemophobia</i>
Darkness— <i>achluophobia, nyctophobia</i>	Night— <i>nyctophobia</i>	Worms— <i>helminthophobia</i>
Daylight— <i>phengophobia</i>	Noise or loud talking— <i>phnophobia</i>	Wounds, injury— <i>traumatophobia</i>
Demons or devils— <i>demonophobia</i>	Odors— <i>osmophobia</i>	Writing— <i>graphophobia</i>
Dogs— <i>cynophobia</i>	Odors (body)— <i>osphresiophobia</i>	
Dolls— <i>pediophobia</i>	Pleasure— <i>hedonophobia</i>	
Drugs— <i>pharmacophobia</i>	Poison— <i>toxiphobia</i>	
Enclosed space— <i>claustrophobia</i>	Poverty— <i>peniaphobia</i>	
Eyes— <i>ommatophobia</i>	Pregnancy— <i>maieusiophobia</i>	
Feces— <i>coprophobia</i>	Railways— <i>siderodromophobia</i>	
Fire— <i>pyrophobia</i>	Rain— <i>ombrophobia</i>	
Flood— <i>antlophobia</i>	Rivers— <i>potamophobia</i>	
Flowers— <i>anthophobia</i>	Robbers— <i>harpaxophobia</i>	
Flying— <i>aerophobia</i>	Satan— <i>Satanophobia</i>	
Fog— <i>homichlophia</i>	Sexual intercourse— <i>coitophobia, cypridophobia</i>	
Fur— <i>doraphobia</i>	Shadows— <i>sciophobia</i>	
Germs— <i>spermophobia</i>	Sharp objects— <i>belonophobia</i>	
Ghosts— <i>phasmophobia</i>	Skin— <i>dermatophobia</i>	
God— <i>theophobia</i>	Sleep— <i>hypnophobia</i>	
Graves— <i>taphophobia</i>	Snakes— <i>ophidiophobia</i>	
Heat— <i>thermophobia</i>	Snow— <i>chionophobia</i>	
Heights— <i>acrophobia</i>	Speed— <i>tachophobia</i>	
Homosexuality— <i>homophobia</i>		

(MELVILLE, 1978, PP. 196–202)



Michael Weiland

**Ophidiophobia** A fear of snakes is one of the most common specific phobias.

Most phobias technically fall under the category of **specific phobias**, DSM-IV's label for a marked and persistent fear of a specific object or situation. In addition, there are two broader kinds of phobias: **social phobia**, a fear of social or performance situations in which embarrassment may occur, and *agoraphobia*, a fear of venturing into public places, especially when one is alone. Because agoraphobia is usually, perhaps always, experienced in conjunction with *panic attacks*, unpredictable attacks of terror, we shall examine that phobia later within our discussion of panic disorders.

**CLASSICAL CONDITIONING** A process of learning in which two events that repeatedly occur close together in time become tied together in a person's mind and so produce the same response.

### Specific Phobias

As we have observed, a specific phobia is a persistent fear of a specific object or situation (see Table 5-4). When sufferers are exposed to the object or situation, they typically experience immediate fear. Common specific phobias are intense fears of specific animals or insects, heights, enclosed spaces, thunderstorms, and blood. Earlier, Marianne and Trisha described their specific phobias of spiders and thunderstorms. Here, Andrew talks about his phobic fear of flying:

We got on board, and then there was the take-off. There it was again, that horrible feeling as we gathered speed. It was creeping over me again, that old feeling of panic. I kept seeing everyone as puppets, all strapped to their seats with no control over their destinies, me included. Every time the plane did a variation of speed or route, my heart would leap and I would hurriedly ask what was happening. When the plane started to lose height, I was terrified that we were about to crash.

(Melville, 1978, p. 59)

**Table 5-4** DSM-IV Checklist

#### SPECIFIC PHOBIA

1. Marked and persistent fear of a specific object or situation that is excessive or unreasonable, lasting at least six months.
2. Immediate anxiety usually produced by exposure to the object.
3. Recognition that the fear is excessive or unreasonable.
4. Avoidance of the feared situation.
5. Significant distress or impairment.

Based on APA, 2000, 1994.

Each year as many as 9 percent of the people in the United States have the symptoms of a specific phobia (APA, 2000; Kessler & Zhao, 1999). Eleven percent develop such phobias at some time during their lives, and many people have more than one at a time. Among people with this disorder, women outnumber men by at least 2 to 1. For reasons that are not clear, the prevalence of specific phobias also differs among racial and ethnic minority groups. Hispanic Americans, for example, report twice as many of them as white Americans (Antony & Barlow, 2002).

The impact of a specific phobia on a person's life depends on what arouses the fear. Some things are easier to avoid than others. People whose phobias center on dogs, insects, or water will keep encountering the objects they dread. Their efforts to avoid them must be elaborate and may greatly restrict their activities. People with snake phobias have a much easier time. As we saw in Table 5-2, the vast majority of people with a specific phobia—

almost 90 percent of them—do not seek treatment. They try instead to avoid the objects they fear (Antony & Barlow, 2002).

### Social Phobias

Many people worry about interacting with others or talking or performing in front of others. A number of entertainers, including Barbra Streisand and Carly Simon, have described major bouts of nervousness before going onstage. Social fears of this kind are inconvenient, but usually the people who have them manage to function adequately, some at a very high level.

People with a social phobia, by contrast, have severe, persistent, and irrational fears of social or performance situations in which embarrassment may occur (see Table 5-5). A social phobia may be *narrow*, such as a fear of talking or performing in public, eating in public, using a public bathroom, or writing in front of others, or it may be a *broader* fear of social situations, such as a general fear of functioning inadequately in front of others (Turk, Heimberg, & Hope, 2001). In both forms, people repeatedly judge themselves as performing less adequately than they actually do (Cox et al., 2000).

A social phobia can interfere greatly with one's life. A person who is unable to interact with others or speak in public may fail to perform important responsibilities. One who cannot eat in public may reject dinner invitations and other social opportuni-

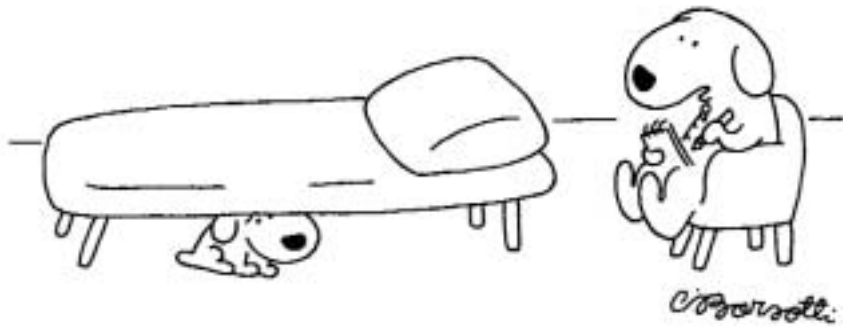
**Table 5-5** DSM-IV Checklist

#### SOCIAL PHOBIA

1. Marked and persistent fear of social or performance situations involving exposure to unfamiliar people or possible scrutiny by others, lasting at least six months. Concern about humiliating or embarrassing oneself.
2. Anxiety usually produced by exposure to the social situation.
3. Recognition that the fear is excessive or unreasonable.
4. Avoidance of feared situations.
5. Significant distress or impairment.

Based on APA, 2000, 1994.

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“And what do you think will happen if you do get on the couch?”

ties. Since most people with this phobia keep their fears secret, their social reluctance is often misinterpreted as snobbery, lack of interest, or hostility.

As many as 8 percent of the population—around three women for every two men—experience a social phobia in any given year (Kessler & Zhao, 1999). More than 13 percent experience this problem at some point in their lives. The disorder often begins in late childhood or adolescence and may persist for many years, although its intensity may fluctuate (APA, 2000).

### What Causes Phobias?

Each of the models offers explanations for phobias. Today evidence tends to support the behavioral explanations. Behaviorists believe that people with phobias first learn to fear certain objects, situations, or events through conditioning (Field & Davey, 2001). Once the fears are acquired, the individuals avoid the dreaded object or situation, permitting the fears to become all the more entrenched.

**HOW ARE FEARS LEARNED?** Behaviorists propose **classical conditioning** as a common way of acquiring fear reactions to objects or situations that are not really dangerous. Here, two events that occur close together in time become closely associated in a person’s mind, and, as we saw in Chapter 3, the person then reacts similarly to both of them. If one event triggers a fear response, the other may also.

In the 1920s a clinician described the case of a young woman who apparently acquired a phobia of running water through classical conditioning (Bagby, 1922). As a child of 7 she went on a picnic with her mother and aunt and ran off by herself into the woods after lunch. While she was climbing over some large rocks, her feet were caught between two of them. The harder she tried to free herself, the more trapped she became. No one heard her screams, and she grew more and more terrified. In the language of behaviorists, the entrapment was eliciting a fear response.

Entrapment → Fear response

As she struggled to free her feet, the girl heard a waterfall nearby. The sound of the running water became linked in her mind to her terrifying battle with the rocks, and she developed a fear of running water as well.

Running water → Fear response

Eventually the aunt found the screaming child, freed her from the rocks, and comforted her; but psychological damage had been done. From that day forward, the girl was terrified of running water. For years family members had to hold her down to bathe her. When she traveled on a train, friends had to cover the windows so that she would not have to look at any streams. The young woman had apparently acquired a phobia through classical conditioning.

In conditioning terms, the entrapment was an *unconditioned stimulus* (US) that understandably elicited an *unconditioned response* (UR) of fear. The running water represented a *conditioned stimulus* (CS), a formerly neutral stimulus that became

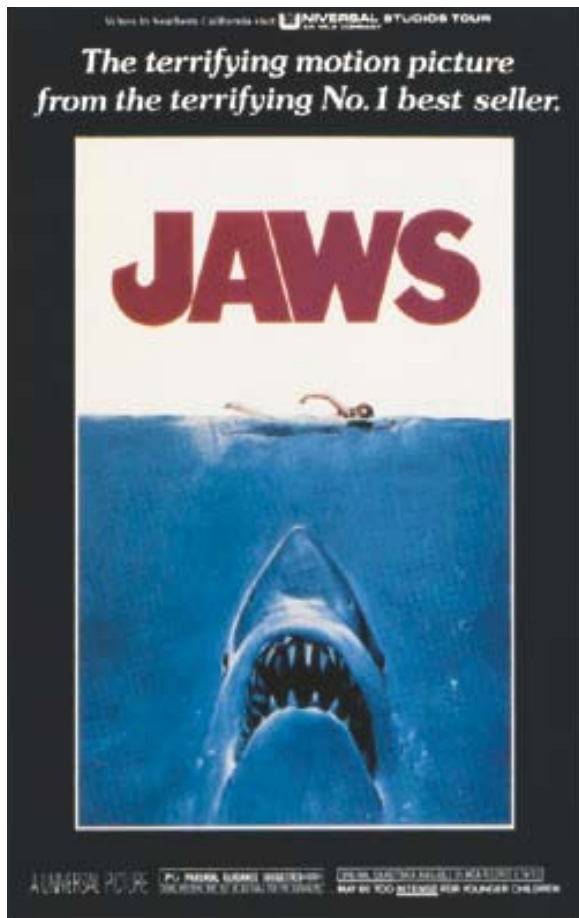
#### »»PSYCH•NOTES

**Fear by Gender** Fear of an animal is the most common specific phobia among women. Fear of heights is the most common one among men (Curtis et al., 1998).«

**The Sight of Blood** Unlike people with other specific phobias, sufferers of the *blood-injection-injury* phobia sometimes faint when confronted by one of their dreaded objects or situations (Curtis et al., 1999).«

**Turning the Tables** When frightened, some species of spiders pluck hairs from their stomach and propel them like darts toward the creature that alarms them, causing the creature to itch.«





**Viewer beware** When people observe others (models) cover from or do battle with a threatening object or situation, they themselves may develop a fear of the object. Steven Spielberg's film *Jaws* led to heightened fears of sharks around the world.

**MODELING** A process of learning in which a person observes and then imitates others. Also, a therapy approach based on the same principle.

**STIMULUS GENERALIZATION** A phenomenon in which responses to one stimulus are also produced by similar stimuli.

**PREPAREDNESS** A predisposition to develop certain fears.

associated with entrapment in the child's mind and came also to elicit a fear reaction. The newly acquired fear was a *conditioned response* (CR).

US: Entrapment → UR: Fear

CS: Running water → CR: Fear

Another way of acquiring a fear reaction is through **modeling**; that is, through observation and imitation (Bandura & Rosenthal, 1966). A person may observe that others are afraid of certain objects or events and develop fears of the same things. Consider a young boy whose mother is afraid of illnesses, doctors, and hospitals. If she frequently expresses those fears, before long the boy himself may fear illnesses, doctors, and hospitals.

Why should one upsetting experience develop into a long-term phobia? Shouldn't the trapped girl later have seen that running water would bring her no harm? Shouldn't the boy later see that illnesses are temporary and doctors and hospitals helpful? Behaviorists believe that after acquiring a fear response, people try to *avoid* what they fear. Whenever they find themselves near a fearsome object, they quickly move away. They may also plan ahead to ensure that such encounters will not occur. Remember that the girl had friends cover the windows on trains so that she could avoid looking at streams. People with phobias do not get close to the dreaded objects often enough to learn that they are really quite harmless.

Behaviorists also propose that specific learned fears will blossom into a generalized anxiety disorder when a person acquires a large number of them. This development is presumed to come about through **stimulus generalization**: responses to one stimulus are also elicited by similar stimuli. The fear of running water acquired by the girl in the rocks could have generalized to such similar stimuli as milk being poured into a glass or even the sound of bubbly music. Perhaps a person experiences a series of upsetting events, each event produces one or more feared stimuli, and the person's reactions to each of these stimuli generalize to yet other stimuli. That person may then build up a large number of fears and eventually develop generalized anxiety disorder.

**HOW HAVE BEHAVIORAL EXPLANATIONS FARED IN RESEARCH?** Some laboratory studies have found that animals and humans can indeed be taught to fear objects through classical conditioning (Miller, 1948; Mowrer, 1947, 1939). In one famous report, the psychologists John B. Watson and Rosalie Rayner (1920) described how they taught a baby boy called Little Albert to fear white rats. For weeks Albert was allowed to play with a white rat and appeared to enjoy doing so. One time when Albert reached for the rat, however, the experimenter struck a steel bar with a hammer, making a very loud noise that upset and frightened Albert. The next several times that Albert reached for the rat, the experimenter again made the loud noise. Albert acquired a fear and avoidance response to the rat. As Watson (1930) described it, "The instant the rat was shown, the baby began to cry . . . and began to crawl away so rapidly that he was caught with difficulty before he reached the edge of the mattress" (p. 161).

Research has also supported the behavioral position that fears can be acquired through modeling. The psychologists Albert Bandura and Theodore Rosenthal (1966), for example, had human subjects observe a person apparently being shocked by electricity whenever a buzzer sounded. The victim was actually the experimenter's accomplice—in research terminology, a *confederate*—who pretended to experience pain by twitching and yelling whenever the buzzer went on. After the unsuspecting subjects had observed several such episodes, they themselves experienced a fear reaction whenever they heard the buzzer.

Although these studies support behaviorists' explanations of phobias, other research has called those explanations into question (Antony & Barlow, 2002).

Several laboratory studies with children and adults have failed to condition fear reactions. In addition, although most case studies trace phobias to possible incidents of classical conditioning or modeling, quite a few fail to do so. So, although it appears that a phobia *can* be acquired by classical conditioning or modeling, researchers have not established that the disorder is *ordinarily* acquired in this way.

**A BEHAVIORAL-EVOLUTIONARY EXPLANATION** Some phobias are much more common than others (see Figure 5-3). Phobic reactions to animals, heights, and darkness are more common than phobic reactions to meat, grass, and houses. Theorists often account for these differences by proposing that human beings, as a species, have a predisposition to develop certain fears (Ohman & Soares, 1993; Seligman, 1971). This idea is referred to as **preparedness**, because human beings, theoretically, are “prepared” to acquire some phobias and not others. The following case description by I. M. Marks (1977) makes the point:

A four-year-old girl was playing in the park. Thinking that she saw a snake, she ran to her parents' car and jumped inside, slamming the door behind her. Unfortunately, the girl's hand was caught by the closing car door, the results of which were severe pain and several visits to the doctor. Before this, she may have been afraid of snakes, but not phobic. After this experience, a phobia developed, not of cars or car doors, but of snakes. The snake phobia persisted into adulthood, at which time she sought treatment from me.

(p. 192)

In a series of impressive tests of preparedness, the psychologist Arne Ohman and his colleagues have conditioned different kinds of fears in two groups of human subjects (Ohman & Soares, 1993; Ohman, Erixon, & Lofberg, 1975). In one study they showed all subjects slides of faces, houses, snakes, and spiders. One group received electric shocks whenever they observed the slides of faces and houses, while the other group received shocks when they looked at snakes and spiders. Were subjects more prepared to fear snakes and spiders? Using skin reactions, or *galvanic skin responses (GSRs)*, as a measure of fear, the experimenters found that both groups learned to fear the intended objects after repeated shock pairings. But then they noted an interesting distinction: after a short shock-free period, the persons who had learned to fear faces and houses stopped registering high GSRs in the presence of those objects, but the persons who had learned to fear snakes and spiders continued to show high GSRs in response to them for a long while. One interpretation is that animals and insects are stronger inducers of human phobias than faces or houses.

Researchers do not know whether human predispositions to fear are the result of evolutionary or environmental factors (Clum & Febraro, 2001; Graham & Gaffan, 1997). Proponents of the evolutionary explanation argue that a predisposition to fear has been transmitted genetically through the evolutionary process. Among our ancestors, the ones who more readily acquired a fear of animals, darkness, heights, and the like were more likely to survive long enough to reproduce. Proponents of an environmental explanation argue instead that experiences teach us early in life that certain objects are legitimate sources of fear, and this training predisposes many people to acquire corresponding phobias.

### >>BY THE NUMBERS

#### Average Age for Onset of Phobias

7 YEARS Animal phobias<<

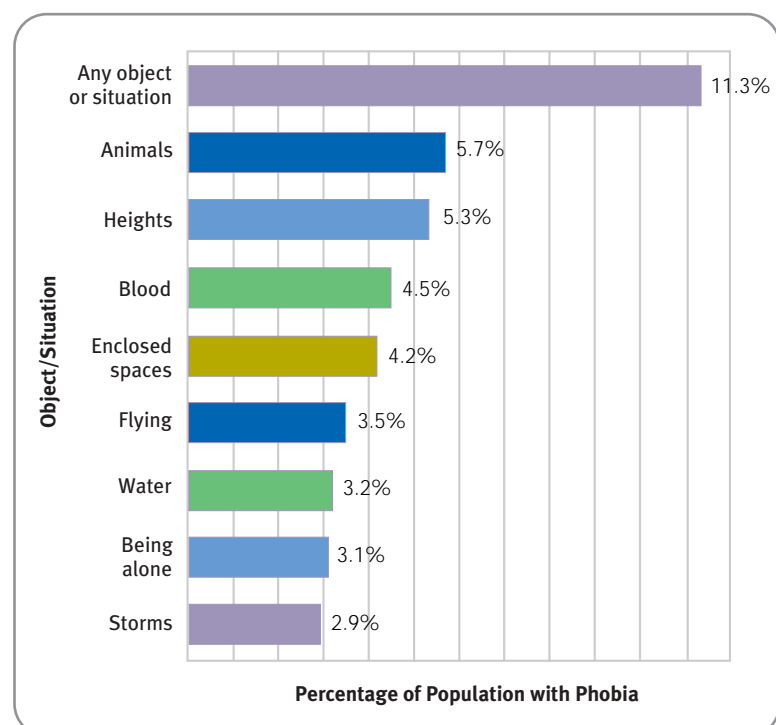
9 YEARS Blood phobias<<

12 YEARS Dental phobias<<

20 YEARS Claustrophobia<<

(Clum & Febraro, 2001)

**FIGURE 5-3** How common are the specific phobias? Over the course of their lives, 11.3 percent of people in the United States develop a specific phobia. The most common ones are fears of certain animals and of heights. Most sufferers experience more than one specific phobia. (Adapted from Curtis et al., 1998.)



**EXPOSURE TREATMENTS** Behavioral treatments in which persons are exposed to the objects or situations they dread.

**SYSTEMATIC DESENSITIZATION** A behavioral treatment that uses relaxation training and a fear hierarchy to help clients with phobias react calmly to the objects or situations they dread.

**FEAR HIERARCHY** A list of objects or situations that frighten a person, starting with those that are slightly feared and ending with those that are feared greatly.

**FLOODING** A treatment for phobias in which clients are exposed repeatedly and intensively to a feared object and made to see that it is actually harmless.

## How Are Phobias Treated?

Every theoretical model has its own approach to treating phobias, but behavioral techniques are more widely used than the rest, particularly for specific phobias. Research has shown them to be highly effective and to fare better than other approaches in most head-to-head comparisons (Ollendick & King, 1998). Thus we shall focus primarily on the behavioral interventions.

**TREATMENTS FOR SPECIFIC PHOBIAS** Specific phobias were among the first anxiety disorders to be treated successfully in clinical practice. The major behavioral approaches to treating them are *desensitization*, *flooding*, and *modeling*. Together, these approaches are called **exposure treatments**, because in all of them individuals are exposed to the objects or situations they dread.

People treated by **systematic desensitization**, a technique developed by Joseph Wolpe (1997, 1987, 1969), learn to relax while gradually confronting the objects or situations they fear. Since relaxation and fear are incompatible, the new relaxation response is thought to substitute for the fear response. Desensitization therapists first offer *relaxation training* to clients, teaching them to release all tension from their bodies. With continued practice, the clients are able to bring on a state of deep muscle relaxation at will. In addition, the therapists help clients create a **fear hierarchy**, a list of objects or situations in which the phobia is aroused. The items on the list are ranked from ones that produce only a trace of fear to those that the person finds extremely frightening.

Then clients learn how to pair relaxation with the objects or situations they fear. While the client is in a state of relaxation, the therapist has the client face the event at the bottom of his or her hierarchy. This may be an actual confrontation,

a process called *in vivo desensitization*. A person who fears heights, for example, may stand on a chair or climb a stepladder. Or the confrontation may be imagined, a process called *covert desensitization*. In this case, the person imagines the frightening event while the therapist describes it. The client moves through the entire list, pairing his or her relaxation responses with each feared item. Because the first item is only mildly frightening, it is usually only a short while before the person is able to relax totally in its presence. Over the course of several sessions, clients move up the ladder of their fears until they reach and overcome the one that frightens them most of all.

Another behavioral treatment for specific phobias is **flooding**. Flooding therapists believe that people will stop fearing things when they are exposed to them repeatedly and made to see that they are actually quite harmless. Clients are forced to face their feared objects or situations

without relaxation training and without a gradual buildup. The flooding procedure, like desensitization, can be either *in vivo* or *covert*.

When flooding therapists guide clients in imagining feared objects or situations, they often exaggerate the description so that the clients experience intense emotional arousal. In the case of a woman with a snake phobia, the therapist had her imagine the following scene, among others:

Close your eyes again. Picture the snake out in front of you, now make yourself pick it up. Reach down, pick it up, put it in your lap, feel it wiggling around in your lap, leave your hand on it, put your hand out and feel it wiggling around. Kind of explore its body with your fingers and hand. You don't like to do it, make yourself do it. Make yourself do it. Really grab onto the snake. Squeeze it a little bit, feel it. Feel it kind of start to wind around your hand. Let it. Leave your hand there, feel it touching your hand and winding around it, curling around your wrist.

(Hogan, 1968, p. 423)

Credit = (no credit listed)



**Conquering coasterphobia** Missing out on thousands of dollars each year because many persons are afraid of riding on roller coasters, some amusement parks offer behavioral programs to help customers overcome their fears. After “treatment,” some clients are able to ride the rails with the best of them. For others, it’s back to the relative calm of the Ferris wheel.

In *modeling*, or *vicarious conditioning*, it is the therapist who confronts the feared object or situation while the fearful person observes (Bandura, 1977, 1971; Bandura, Adams, & Beyer, 1977). The behavioral therapist acts as a model, to demonstrate that the person's fear is groundless. After several sessions many clients are able to approach the objects or situations with composure. In one version of modeling, *participant modeling*, the client is actively encouraged to join in with the therapist.

Clinical researchers have repeatedly found that exposure treatments help with specific phobias (Larkin & Zvolensky, 2001; McGlynn et al., 1999). The key to success in all these therapies appears to be actual contact with the feared object or situation (Hellstrom & Ost, 1996). In vivo desensitization is more effective than covert desensitization, in vivo flooding is more effective than covert flooding, and participant modeling more helpful than strictly observational modeling (Menzies & Clarke, 1993). Many behavioral therapists now combine features of each of the exposure approaches.

**TREATMENTS FOR SOCIAL PHOBIAS** Clinicians have only recently begun to have much success in treating social phobias (Heimberg, 2001). This progress is due in part to the growing recognition that social phobias have two distinct features that may feed upon each other: (1) people with the phobias may have overwhelming social fears, and (2) they may lack skill at initiating conversations, communicating their needs, or meeting the needs of others. Armed with this insight, clinicians now treat social phobias by trying to reduce social fears or by providing training in social skills, or both.

**HOW CAN SOCIAL FEARS BE REDUCED?** Unlike specific phobias, which do not typically respond to psychotropic drugs, social fears are often reduced through medication (Schneier, 2001). Somewhat surprisingly, it is antidepressant medications that seem to be most helpful for this disorder, often more helpful than benzodiazepines or other kinds of anti-anxiety drugs (Rivas-Vazquez, 2001). At the same time, several types of psychotherapy have proved at least as effective as medication at reducing social fears. Moreover, people helped by these psychological treatments are apparently less likely to relapse than people treated with drugs alone (Turk et al., 2001; Heimberg et al., 1998). This finding suggests to some clinicians that the psychological approaches should always be included in the treatment of social fears.

One psychological approach is exposure therapy (Hofman & Barlow, 2002), the behavioral intervention so effective with specific phobias. Exposure therapists guide, encourage, and persuade clients with social fears to expose themselves to the dreaded social situations and to remain until their fears subside. Usually the exposure is gradual, and it is often coupled with homework assignments in which the clients begin facing social situations on their own (Edelman & Chambless, 1995). Group therapy provides an ideal setting for exposure treatments by allowing people to confront the social situations they fear in an atmosphere of support and concern (Turk et al., 2001). In one group, for example, a man who was afraid that his hands would tremble in the presence of other people had to write on a blackboard in front of the group and serve tea to the other members (Emmelkamp, 1982).

Cognitive therapies have also been widely used to treat social fears, often in combination with behavioral techniques (Heimberg, 2001). In the following discussion, Albert Ellis uses rational-emotive therapy to help a man who fears he will be rejected if he speaks up at gatherings. The discussion took place after the man had done a homework assignment in which he was to observe his self-defeating thoughts and beliefs and force himself to say anything he had on his mind in social situations, no matter how stupid it might seem to him:



**Participant modeling** In the exposure technique of participant modeling, a therapist treats a client with a snake phobia by first handling a snake himself, then encouraging the client to touch and handle it.

#### >>LOOKING AROUND

##### Sour Notes

Musical performers often experience enormous anxiety as a play date approaches (Steptoe, 2001). In fact, according to a survey of 1,600 professional musicians, two of every ten orchestra musicians in Great Britain use psychotropic drugs to soothe their nerves (Hall, 1997). Overall, 22 percent of the musicians report long stretches of anxiety, and 28 percent experience depression. Around 40 percent have trouble sleeping through the night. Many hyperventilate.<<

**>>LAB•NOTES****The Imaginary Spotlight**

Despite the intense concerns of people with social anxiety, the psychologist Thomas Gilovich and his colleagues have found that other people rarely notice our behaviors or appearance as much as we think they do. When, for example, these researchers asked a group of Cornell students to wear a Barry Manilow T-shirt, their embarrassed subjects predicted that observers would notice the shirt the minute they walked into a room. Only a quarter of the observers actually did. Similarly, skiers overestimated the percentage of chair-lift riders who would be watching and judging their skiing ability as they skied by the lift.<<

After two weeks of this assignment, the patient came into his next session of therapy and reported: “I did what you told me to do. . . . [Every] time, just as you said, I found myself retreating from people, I said to myself: ‘Now, even though you can’t see it, there must be some sentences. What are they?’ And I finally found them. And there were many of them! And they all seemed to say the same thing.”

“What thing?”

“That I, uh, was going to be rejected. . . . [If] I related to them I was going to be rejected. And wouldn’t that be perfectly awful if I was to be rejected. And there was no reason for me, uh, to take that, uh, sort of thing, and be rejected in that awful manner.” . . .

“And did you do the second part of the homework assignment?”

“The forcing myself to speak up and express myself?”

“Yes, that part.”

“That was worse. That was really hard. Much harder than I thought it would be. But I did it.”

“And?”

“Oh, not bad at all. I spoke up several times; more than I’ve ever done before. Some people were very surprised. Phyllis was very surprised, too. But I spoke up.” . . .

“And how did you feel after expressing yourself like that?”

“Remarkable! I don’t remember when I last felt this way. I felt, uh, just remarkable—good, that is. It was really something to feel! But it was so hard. I almost didn’t make it. And a couple of other times during the week I had to force myself again. But I did. And I was glad!”

(Ellis, 1962, pp. 202–203)

Studies indicate that rational-emotive therapy and similar cognitive approaches do indeed help reduce social fears (Heimberg, 2001; Turk et al., 2001). And these reductions may persist for years. At the same time, research also suggests that cognitive therapy, like drug therapy and exposure therapy, does not typically overcome social phobias fully (Hofman & Barlow, 2002). It reduces social fear, but it does not consistently help people perform effectively in the social realm. This is where social skills training has come to the forefront.

**HOW CAN SOCIAL SKILLS BE IMPROVED?** In **social skills training**, therapists combine several behavioral techniques in order to help people improve their social skills. They usually model appropriate social behaviors for clients and encourage the individuals to try them out. The clients then role-play with the therapists, rehearsing their new behaviors until they become more effective. Throughout the process, therapists provide frank *feedback* and *reinforce* (praise) the clients for effective performances.

Social reinforcement from others with similar social difficulties is often more powerful than reinforcement from a therapist alone. In *social skills training groups* and *assertiveness training groups*, members try out and rehearse new social behavior with or in front of other group members. The group can also provide guidance on what is socially appropriate.

Social skills training helps many people perform better in social situations (Beidel et al., 2000). Some people, however, continue to experience uncomfortable levels of fear despite such treatments (Juster et al., 1996).

No single approach—drug therapy, exposure treatment, cognitive therapy, or social skills training—consistently causes social phobias to disappear, and none is clearly superior to the others (Wlazole et al., 1990). Yet each is helpful, and when the approaches are combined, the results have been especially encouraging (Turk et al., 2001; Spence et al., 2000).

**•SOCIAL SKILLS TRAINING** A therapy approach that helps people learn or improve social skills and assertiveness through role playing and rehearsing of desirable behaviors.

**•PANIC ATTACKS** Periodic, short bouts of panic that occur suddenly, reach a peak within minutes, and gradually pass.

**•PANIC DISORDER** An anxiety disorder marked by recurrent and unpredictable panic attacks.

**•AGORAPHOBIA** An anxiety disorder in which a person is afraid to be in places or situations from which escape might be difficult (or embarrassing) or help unavailable if paniclike symptoms were to occur.

## Panic Disorder

Sometimes an anxiety reaction takes the form of a smothering, nightmarish panic in which people lose control of their behavior and, in fact, are practically unaware of what they are doing. Anyone can react with panic when a real threat looms up suddenly. Some people, however, experience **panic attacks**—periodic, discrete bouts of panic that occur suddenly, reach a peak within 10 minutes, and gradually pass. The attacks feature at least four of the following symptoms of panic: palpitations of the heart, tingling in the hands or feet, shortness of breath, sweating, hot and cold flashes, trembling, chest pains, choking sensations, faintness, dizziness, and a feeling of unreality (see Table 5-6). Small wonder that during a panic attack many people fear they will die, go crazy, or lose control.

I was inside a very busy shopping precinct and all of a sudden it happened: in a matter of seconds I was like a mad woman. It was like a nightmare, only I was awake; everything went black and sweat poured out of me—my body, my hands and even my hair got wet through. All the blood seemed to drain out of me; I went as white as a ghost. I felt as if I were going to collapse; it was as if I had no control over my limbs; my back and legs were very weak and I felt as though it were impossible to move. It was as if I had been taken over by some stronger force. I saw all the people looking at me—just faces, no bodies, all merged into one. My heart started pounding in my head and in my ears; I thought my heart was going to stop. I could see black and yellow lights. I could hear the voices of the people but from a long way off. I could not think of anything except the way I was feeling and that now I had to get out and run quickly or I would die. I must escape and get into the fresh air.

(Hawkrigg, 1975)

People with any of the anxiety disorders (or, for that matter, people without an anxiety disorder) may experience a panic attack when they are faced with something they dread. Some people, however, have panic attacks repeatedly and unexpectedly without apparent reason. They may be suffering from **panic disorder**. In addition to the panic attacks, people who are diagnosed with panic disorder experience dysfunctional changes in their thinking or behavior as a result of the attacks for a period of a month or more (see Table 5-7). For example, they may worry persistently about having another attack, have concerns about what such an attack means (“Am I losing my mind?”), or plan their behavior around the possibility of a future attack.

Panic disorder is often accompanied by **agoraphobia**, one of the three categories of phobia mentioned earlier. People with agoraphobia (from the Greek for “fear of the marketplace”) are afraid to leave the house and travel to public places or other locations where escape might be difficult or help unavailable should panic symptoms develop. The intensity of agoraphobia may fluctuate. In severe cases, people become virtual prisoners in their own homes. Their social life dwindles, and they cannot hold a job.

Until recently, clinicians failed to recognize the close link between agoraphobia and panic attacks. They now realize that panic attacks, or at least some paniclike symptoms, typically set the stage for agoraphobia (White & Barlow, 2002; Langs et al., 2000): after

Table 5-6 DSM-IV Checklist

### PANIC ATTACK

A discrete period of intense fear in which at least four of the following symptoms develop suddenly and reach a peak within 10 minutes:

- ✘ Palpitations, pounding heart, or accelerated heart rate
- ✘ Sweating
- ✘ Trembling or shaking
- ✘ Sensations of shortness of breath or smothering
- ✘ A feeling of choking
- ✘ Chest pain or discomfort
- ✘ Nausea or abdominal distress
- ✘ Feeling dizzy, unsteady, lightheaded, or faint
- ✘ Derealization or depersonalization
- ✘ Fear of losing control or going crazy
- ✘ Fear of dying
- ✘ Numbness or tingling sensations
- ✘ Chills or hot flashes

Based on APA, 2000, 1994.

Table 5-7 DSM-IV Checklist

### PANIC DISORDER

1. Recurrent unexpected panic attacks.
2. A month or more of one of the following after at least one of the attacks.
  - (a) Persistent concern about having additional attacks.
  - (b) Worry about the implications or consequences of the attack.
  - (c) Significant change in behavior related to the attacks.

Based on APA, 2000, 1994.

George Tooker, *The Subway*, 1950. Whitney Museum of Art, New York

**The experience of agoraphobia** George Tooker's painting *Subway* expresses the sense of threat and entrapment that many people with agoraphobia experience when they enter public places.

experiencing one or more unpredictable attacks, certain individuals become fearful of having new attacks in public places where help or escape might be difficult. Anne Watson's plight illustrates a typical onset of agoraphobia:

Ms. Watson reported that until the onset of her current problems two years ago, she had led a normal and happy life. At that time an uncle to whom she had been extremely close in her childhood died following a sudden unexpected heart attack. . . . Six months after his death she was returning home from work one evening when suddenly she felt that she couldn't catch her breath. Her heart began to pound, and she broke out into a cold sweat. Things began to seem unreal, her legs felt leaden, and she became sure she would die or faint before she reached home. She asked a passerby to help her get a taxi and went to a nearby hospital emergency room. The doctors there found her physical examination, blood count and chemistries, and electrocardiogram all completely normal. . . .

Four weeks later Ms. Watson had a second similar attack while preparing dinner at home. She made an appointment to see her family doctor, but again, all examinations were normal. She decided to put the episodes out of her mind and continue with her normal activities. Within the next several weeks, however, she had four attacks and noticed that she began to worry about when the next one would occur. . . .

She then found herself constantly thinking about her anxieties as attacks continued; she began to dread leaving the house alone for fear she would be stranded, helpless and alone, by an attack. She began to avoid going to movies, parties, and dinners with friends for fear she would have an attack and be embarrassed by her need to leave. When household chores necessitated driving she waited until it was possible to take her children or a friend along for the ride. She also began walking the twenty blocks to her office to avoid the possibility of being trapped in a subway car between stops when an attack occurred.

(Spitzer et al., 1983, pp. 7-8)

### »»IN THEIR WORDS

#### Panic in the Real World

"They just kept pushin' forward and they would just walk right on top of you, just trample over ya like you were a piece of the ground. They wouldn't even help ya; people were just screamin' 'help me' and nobody cared." <<

Patron at *The Who* concert, Cincinnati, 1979, where 11 people were trampled to death (Johnson, 1987)

Not everyone with panic disorder develops agoraphobia, but many such persons do. Thus DSM-IV distinguishes *panic disorder without agoraphobia* from *panic disorder with agoraphobia*. Around 2.3 percent of all people in the United States suffer from one or the other of these patterns in a given year; 3.5 percent develop one of the patterns at some point in their lives (Carlbring et al., 2002; Kessler et

al., 1994). Both kinds of panic disorder are likely to develop in late adolescence and early adulthood, and are at least twice as common among women as among men (APA, 2000).

### The Biological Perspective

In the 1960s, clinicians made the surprising discovery that panic disorder responded less to benzodiazepine drugs, the drugs useful in treating generalized anxiety disorder, than to certain *antidepressant drugs*, drugs that are usually used to reduce the symptoms of depression (Klein, 1964; Klein & Fink, 1962). This observation led to the first biological explanations and treatments for panic disorder.

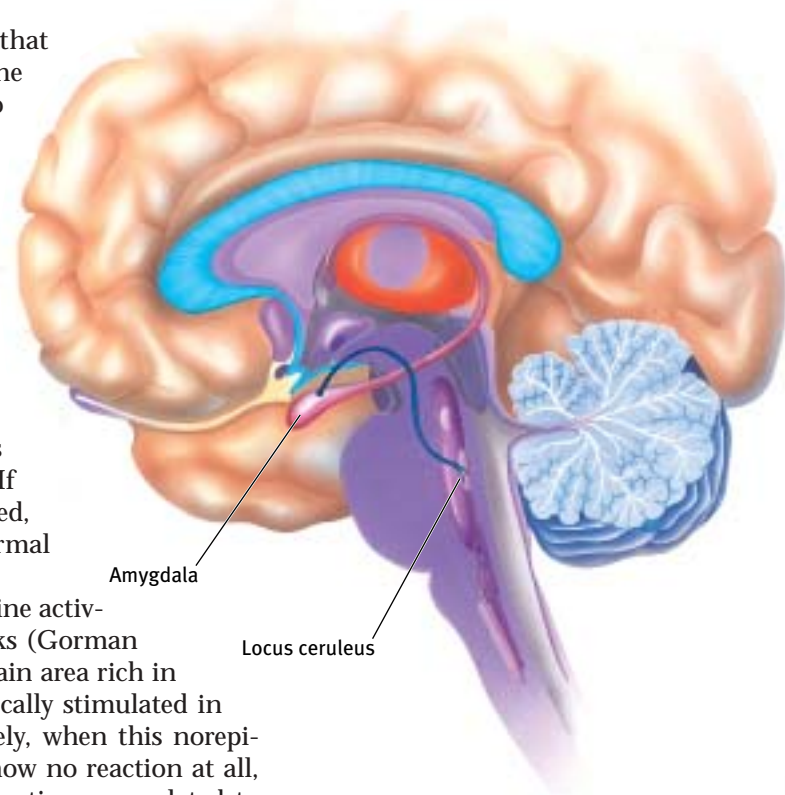
**WHAT BIOLOGICAL FACTORS CONTRIBUTE TO PANIC DISORDER?** To understand the biology of panic disorder, researchers worked backward from their understanding of the antidepressant drugs that seemed to control it. They knew that many of the antidepressant drugs change the activity of **norepinephrine**, one of the neurotransmitters that carry messages from neuron to neuron in the brain. If the drugs also eliminated panic attacks, researchers wondered, might panic disorder be caused in the first place by abnormal norepinephrine activity?

Several studies have produced evidence that norepinephrine activity is indeed irregular in people who suffer from panic attacks (Gorman et al., 2000, 1995). For example, the **locus ceruleus** is a brain area rich in neurons that use norepinephrine. When this area is electrically stimulated in monkeys, the monkeys have a paniclike reaction. Conversely, when this norepinephrine-rich brain area is surgically damaged, monkeys show no reaction at all, even in the face of unmistakable danger. Perhaps panic reactions are related to changes in norepinephrine activity in the locus ceruleus (Redmond, 1981, 1979, 1977) (see Figure 5-4). In another line of research, scientists have induced panic attacks in human beings by injecting them with chemicals known to affect the activity of norepinephrine (Bourin et al., 1995; Charney et al., 1990, 1987).

These findings strongly tie norepinephrine to panic attacks. Just what goes wrong, however, is still not fully understood. It is not clear, for example, whether the problem is excessive activity, deficient activity, or some other form of dysfunctioning involving norepinephrine. To complicate matters, there is growing evidence that other neurotransmitters also may have roles to play in panic disorder (Barlow, 2002; Gorman et al., 2000, 1995).

Furthermore, investigators do not know why some people have such biological abnormalities. One possibility is that a predisposition to develop panic disorder is inherited (Stein, Jang, & Livesley, 1999; Kendler et al., 1995; Torgersen, 1990, 1983). If a genetic factor is indeed at work, close relatives should have higher rates of panic disorder than more distant relatives. One study did find that among identical twins (twins who share all of their genes), if one twin had panic disorder, the other twin had the same disorder in 24 percent of cases. Among fraternal twins (who share only some of their genes), if one twin had panic disorder, the other twin had the same disorder in only 11 percent of cases (Kendler et al., 1993). Other twin studies, however, have not always yielded such clear trends (Stein & Uhde, 1995). Thus the issue of genetic predisposition is still open to debate.

**DRUG THERAPIES** In 1962 Donald Klein and Max Fink discovered that certain antidepressant drugs could prevent panic attacks or reduce their frequency. As we have seen, this finding was a surprise at first. Since then, however, studies across the world have repeatedly confirmed this observation (Keltner & Folks, 2001; Barlow et al., 2000). In fact, the drugs seem to be helpful whether or not the panic disorder is accompanied by depressive symptoms.



**FIGURE 5-4 The biology of panic** The locus ceruleus sends its major messages to the amygdala, a brain region known to trigger emotional reactions. Many neurons in the locus ceruleus use norepinephrine, a neurotransmitter implicated in panic disorder and in depression.

**NOREPINEPHRINE** A neurotransmitter whose abnormal activity is linked to panic disorder and depression.

**LOCUS CERULEUS** A small area of the brain that seems to be active in the regulation of emotions. Many of its neurons use norepinephrine.



### »LAB•NOTES

#### Age Limits

Typically, a person must reach a certain level of physical or cognitive maturity before experiencing a full-blown panic attack (McNally, 2001). One study found that over 5 percent of sixth- and seventh-grade girls had experienced a panic attack (Hayward, 1992). In the subgroup of girls rated most physically immature, none reported panic attacks, but 8 percent of those who had completed puberty did report having them.<<

Many of these antidepressant drugs seem to act to restore appropriate activity of the neurotransmitter norepinephrine, particularly at neurons in the locus ceruleus (Gorman et al., 1995; Redmond, 1985). They bring at least some improvement to 80 percent of patients who have panic disorder (Ballenger, 1998; Hirschfeld, 1992). Approximately 40 to 60 percent recover markedly or fully, and the improvements can last indefinitely, as long as the drugs are not stopped (Tiller et al., 1999). Otherwise, relapse rates are high (McNally, 2001). In recent years *alprazolam* (Xanax) and other powerful benzodiazepine drugs have also proved very effective, yielding similar success rates (Keltner & Folks, 2001).

Clinicians have also found the antidepressant drugs or powerful benzodiazepines to be helpful in most cases of panic disorder with agoraphobia (Clum & Febraro, 2001; Barlow et al., 2000). The drugs apparently help break the cycle of attack, anticipation, and fear. As the drugs eliminate or reduce their panic attacks, people become confident enough to journey out into public places once again. At the same time, such drugs alone are not always enough to overcome panic disorder with agoraphobia. For these people, a combination of medication and behavioral exposure treatment may be more effective than either treatment alone (Antony & Swinson, 2000).

## The Cognitive Perspective

Cognitive theorists and practitioners have come to recognize that biological factors are only part of the cause of panic attacks. In their view, full panic reactions are experienced only by people who misinterpret certain physiological events that are occurring within their bodies. Cognitive treatments are aimed at correcting such misinterpretations.

### THE COGNITIVE EXPLANATION: MISINTERPRETING BODILY SENSATIONS

Cognitive theorists believe that panic-prone people may be very sensitive to certain bodily sensations; when such sensations occur unexpectedly, they may misinterpret them as signs of a medical catastrophe (McNally, 2001, 1999). Rather than understanding the probable cause of such sensations as “something I ate” or “a fight with the boss,” the panic-prone grow increasingly worried about losing control, fear the worst, lose all perspective, and rapidly plunge into panic. They keep expecting that the “dangerous” sensations may return at any time and so set themselves up for future panic attacks.

Why might some people be prone to such misinterpretations? Clinicians have identified several possible factors (Stewart et al., 2001; McGlynn & Bates, 1999).

Perhaps the individuals have poor coping skills or lack social support. Perhaps their childhoods were filled with unpredictable events, lack of control, chronic illnesses in the family, or parental overreactions to their children’s bodily symptoms. It may also be that the misinterpretations are related to dysfunction in the locus ceruleus, the brain area that we just examined. The British psychologist Jeffrey Gray has proposed that this area of the brain is part of a brain circuit known as the *behavioral inhibition system (BIS)*, which alerts people to possible danger (Gray & McNaughton, 1996; Gray, 1995, 1985, 1982). When signs of danger are present—including signs such as changes in our body’s functioning—this brain circuit ordinarily increases its production of neurotransmitters, which carry messages of the impending danger to yet other brain areas. Clearly, abnormal functioning in the locus ceruleus, such as that found in panic-prone people, could lead to dysfunctions in the BIS, resulting in overattentiveness to one’s bodily changes, overassessments of actual danger, or both.

Whatever the precise causes, research suggests that panic-prone individuals have a high degree of what cognitive theorists have come to call **anxiety sensitivity**: they focus on their bod-

© The New Yorker Collection 1996, Peter Steiner, from cartoonbank.com.



“I’m sorry, I didn’t hear what you said.  
I was listening to my body.”

ily sensations much of the time, are unable to assess them logically, and interpret them as potentially harmful (Muris et al., 2001; Stein & Rapee, 1999). One study found that people who scored high on an anxiety sensitivity survey were five times more likely than other subjects to develop panic disorder (Maller & Reiss, 1992). Other studies have found that individuals with panic disorder are indeed more aware of and frightened by bodily sensations than other people (McNally, 2001, 1999).

According to cognitive theorists, people with high anxiety sensitivity are likely to experience and misinterpret certain kinds of sensations more than others. Many seem to “overbreathe,” or hyperventilate, in stressful situations. Apparently the abnormal breathing makes them think they are in danger or even dying of suffocation, so they panic (Dratcu, 2000). Other physical sensations that can be misinterpreted include excitement, breathing discomfort, fullness in the abdomen, and acute anger (McNally, Hornic, & Donnell, 1995; Verburg et al., 1995). One person, on learning that her artwork had been accepted for exhibit at a gallery, became so excited that she experienced “palpitations of the heart.” Misinterpreting them as a sign of a heart attack, she panicked.

In **biological challenge tests**, researchers produce hyperventilation or other biological sensations by administering drugs or by instructing subjects to breathe, exercise, or simply think in certain ways. As one might expect, people with panic disorder experience greater anxiety during these tests than people without the disorder, particularly when they believe that their bodily sensations are dangerous or out of control (Antony & Barlow, 2002).

**COGNITIVE THERAPY** Cognitive therapists try to correct people’s misinterpretations of their body sensations (Craske & Barlow, 2001; Beck & Weishaar, 1995). The first step is to educate clients about the general nature of panic attacks, the actual causes of bodily sensations, and the tendency of clients to misinterpret their sensations. The next step is to teach clients to apply more accurate interpretations during stressful situations, thus short-circuiting the panic sequence at an early point. Therapists may also teach clients to cope better with anxiety—for example, by applying relaxation and breathing techniques—and to distract themselves from their sensations, perhaps by striking up a conversation with someone.

Cognitive therapists may also use biological challenge procedures (called *interoceptive exposure* when applied in therapy) to induce panic sensations, so that clients can apply their new skills under watchful supervision. Individuals whose attacks are typically triggered by a rapid heart rate, for example, may be told to jump up and down for several minutes or to run up a flight of stairs. They can then practice interpreting the resulting sensations appropriately and not dwelling on them.

According to research, cognitive treatments often help people with panic disorder (Craske & Barlow, 2001; Stuart et al., 2000; Clark & Wells, 1997). In international studies, 85 percent of subjects given these treatments were free of panic for as long as two years or more, compared to only 13 percent of control subjects. As with drug therapy, cognitive treatments are only sometimes sufficient for persons whose panic disorders are accompanied by agoraphobia. For many such persons, therapists add exposure techniques to the cognitive treatment program—an addition that has produced high success rates.

Cognitive therapy has proved to be at least as helpful as antidepressant drugs or alprazolam in the treatment of panic disorder, sometimes more so (Barlow et al., 2000; Zuber & Katon, 1998). In view of the effectiveness of both cognitive and drug treatments, many clinicians have tried combining them. It is not yet clear, however, whether or not this strategy is more effective than cognitive therapy alone (Loerch et al., 1999).



**Joy turns to panic** Anyone is capable of experiencing panic in the face of a fast-moving and severe threat. Celebrations of soccer victories have led to several famous outbursts of panic in which thousands of fans have been injured or killed by stampeding crowds. Mindful of such tragedies, police now intervene at the earliest sign of loss of control or panic by crowd members, as we see here in the aftermath of the 2002 World Cup game in Saitama, Japan

**ANXIETY SENSITIVITY** A tendency to focus on one’s bodily sensations, assess them illogically, and interpret them as harmful.

**BIOLOGICAL CHALLENGE TEST** A procedure used to produce panic in subjects or clients by having them exercise vigorously or perform some other potentially panic-inducing task in the presence of a researcher or therapist.

## Obsessive-Compulsive Disorder

**Obsessions** are persistent thoughts, ideas, impulses, or images that seem to invade a person's consciousness. **Compulsions** are repetitive and rigid behaviors or mental acts that people feel they must perform in order to prevent or reduce anxiety. As Figure 5-5 indicates, minor obsessions and compulsions are familiar to almost everyone (Sketeeke & Barlow, 2002). We may find ourselves filled with thoughts about an upcoming performance, date, examination, or vacation; worry that we forgot to turn off the stove or lock the door; or be haunted for days by the same song, melody, or poem. We may feel better when we avoid stepping on cracks, turn away from black cats, follow a strict routine every morning, or arrange our closets in a particular manner.

Minor obsessions and compulsions can play a helpful role in life. Distracting tunes or little rituals often calm us during times of stress. A person who repeatedly hums a tune or taps his or her fingers during a test may be releasing tension and thus improving performance. Many people find it comforting to repeat religious or cultural rituals, such as touching a mezuzah, sprinkling holy water, or fingering rosary beads.

According to DSM-IV, a diagnosis of **obsessive-compulsive disorder** may be called for when obsessions or compulsions feel excessive or unreasonable, cause great distress, consume considerable time, or interfere with daily functions (see Table 5-8). Obsessive-compulsive disorder is classified as an anxiety disorder because the victims' obsessions cause intense anxiety, while their compulsions are aimed at preventing or reducing anxiety.

In addition, their anxiety rises if they try to resist their obsessions or compulsions. Georgia, a woman with this disorder, observed: "I can't get to sleep unless I am sure everything in the house is in its proper place so that when I get up in the morning, the house is organized. I work like mad to set everything straight before I go to bed, but, when I get up in the morning, I can think of a thousand things that I ought to do. . . . I can't stand to know something needs doing and I haven't done it" (McNeil, 1967, pp. 26–28). Georgia's family was no less affected by her rigid pattern, as these comments by her husband indicate:

**Table 5-8** DSM-IV Checklist

### OBSESSIVE-COMPULSIVE DISORDER

1. Recurrent obsessions or compulsions.
2. Past or present recognition that the obsessions or compulsions are excessive or unreasonable.
3. Significant distress or impairment, or disruption by symptoms for more than one hour a day.

Based on APA, 2000, 1994.

**OBSESSION** A persistent thought, idea, impulse, or image that is experienced repeatedly, feels intrusive, and causes anxiety.

**COMPULSION** A repetitive and rigid behavior or mental act that a person feels driven to perform in order to prevent or reduce anxiety.

**OBSESSIVE-COMPULSIVE DISORDER** A disorder in which a person has recurrent and unwanted thoughts, a need to perform repetitive and rigid actions, or both.

"You remember that old joke about getting up in the middle of the night to go to the john and coming back to the bedroom to find your wife has made the bed? It's no joke. Sometimes I think she never sleeps. I got up one night at 4 A.M. and there she was doing the laundry downstairs. Look at your ash tray! I haven't seen one that dirty in years! I'll tell you what it makes me feel like. If I forget to leave my dirty shoes outside the back door she gives me a look like I had just crapped in the middle of an operating room. I stay out of the house a lot and I'm about half-stoned when I do have to be home. She even made us get rid of the dog because she said he was always filthy. When we used to have people over for supper she would jitterbug around everybody till they couldn't digest their food. I hated to call them up and ask them over because I could always hear them hem and haw and make up excuses not to come over. Even the kids are walking down the street nervous about getting dirt on them. I'm going out of my mind but you can't talk to her. She just blows up and spends twice as much time cleaning things. We have guys in to wash the walls so often I think the house is going to fall down from being scrubbed all the time. About a week ago I had it up to here and told her I couldn't take it any more. I think the only reason she came to see you was because I told her I was going to take off. . . ."

(McNeil, 1967, pp. 26–27)

As many as 2 percent of the people in the United States and other countries throughout the world suffer from obsessive-compulsive disorder in any given year

(Steketee & Barlow, 2002; Frost & Steketee, 2001). It is equally common in men and women and usually begins by young adulthood. Within a given country, the prevalence of this disorder does not seem to vary among races or cultural/ethnic groups. As with Georgia, the disorder typically persists for many years, but the symptoms and their severity fluctuate over time.

### What Are the Features of Obsessions and Compulsions?

Obsessions are not the same as pervasive worries about real problems, and compulsions are not repetitive actions that feel voluntary and seem harmless to the people who perform them.

**THE FEATURES OF OBSESSIONS** Obsessions are thoughts that feel both intrusive (“ego dystonic”) and foreign (“ego alien”) to the people who experience them. Attempts to ignore or resist these thoughts may arouse even more anxiety, and before long they come back more strongly than ever. Like Georgia, people with obsessions are quite aware that their thoughts are excessive and inappropriate. Many experience them as repugnant and painful.

Obsessions often take the form of obsessive *wishes* (for example, repeated wishes that one’s spouse would die), *impulses* (repeated urges to yell out obscenities at work or in church), *images* (fleeting visions of forbidden sexual scenes), *ideas* (notions that germs are lurking everywhere), or *doubts* (concerns that one has made or will make a wrong decision). In the following excerpt, a clinician describes a 20-year-old college junior who was plagued by obsessive doubts.

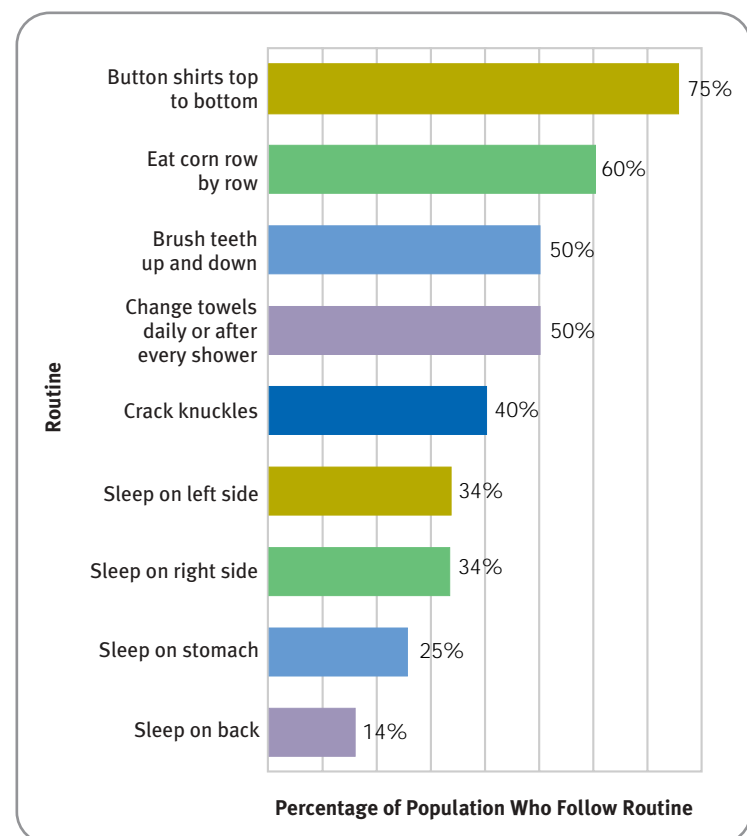
He now spent hours each night “rehashing” the day’s events, especially interactions with friends and teachers, endlessly making “right” in his mind any and all regrets. He likened the process to playing a videotape of each event over and over again in his mind, asking himself if he had behaved properly and telling himself that he had done his best, or had said the right thing every step of the way. He would do this while sitting at his desk, supposedly studying; and it was not unusual for him to look at the clock after such a period of rumination and note that, to his surprise, two or three hours had elapsed.

(Spitzer et al., 1981, pp. 20–21)

Certain basic themes run through the thoughts of most people troubled by obsessive thinking (APA, 2000, 1994). The most common theme appears to be dirt or contamination (see Box 5–4). Other common ones are violence and aggression, orderliness, religion, and sexuality.

**THE FEATURES OF COMPULSIONS** Although compulsive behaviors are technically under voluntary control, the people who feel they must do them have little sense of choice in the matter. Most of these individuals recognize that their behavior is unreasonable, but they believe at the same time something terrible will happen if they don’t perform the compulsions. After performing a compulsive act, they usually feel less anxious for a short while. Some people develop the act into a detailed and often elaborate compulsive *ritual*. They must go through the ritual in exactly the same way every time, according to certain rules.

Like obsessions, compulsions take various forms. *Cleaning compulsions* are very common. Like Georgia, people with these compulsions feel compelled to keep



**FIGURE 5-5 Normal routines** Most people find it comforting to follow set routines when they carry out everyday activities, and in fact, 40 percent become irritated if they are forced to depart from their routines. (Adapted from Kanner, 1998, 1995.)

#### >>LOOKING AROUND Repetitious Behaviors

Beethoven is said to have habitually dipped his head in cold water before trying to compose music.<<

According to surveys, almost half of adults double back after leaving home to make sure they have turned off an appliance.<<

More than half of all people who use an alarm clock check it repeatedly to be sure they’ve set it.<<

(Kanner, 1995)

## BOX 5-4

## Terror behind the Smile

Many of today's college students grew up watching *Double Dare* and *Family Double Dare*, two of the messiest game shows in television history. Young contestants were regularly splattered with goo and dunked in slime and muck (Summers, 1996). All the while, the host, Marc Summers, seemed to be having a great time, especially when the kids picked him up and threw him into the mess as well. In 1996, however, Summers revealed that his years on the show had been a personal nightmare because he had an obsessive-compulsive disorder.



Summers says that his disorder dates back to the age of 8. He remembers cleaning his room for hours, removing and dusting every book in his bookcase. When he got the opportunity to host *Double Dare*, he couldn't turn down the career opportunity. But the price was high. After the shows, he would spend hours in the shower. "It was the most uncomfortable feeling in the world—a feeling of physical revulsion." Only later did Summers recognize his disorder and receive successful treatment for it.

cleaning themselves, their clothing, or their homes. The cleaning may follow ritualistic rules and be repeated dozens or hundreds of times a day. People with *checking compulsions* check the same items over and over—door locks, gas taps, ashtrays, important papers—to make sure that all is as it should be. Another common compulsion is the constant striving for *symmetry, order, or balance* in one's actions and surroundings. People with this compulsion must place certain items (clothing, books, foods) in perfect order in accordance with strict rules.

Ted is a 13-year-old referred to a Midwestern inpatient psychiatric research ward because of "senseless rituals and attention to minutiae." He can spend 3 hours centering the toilet paper roll on its holder or rearranging his bed and other objects in his room. When placing objects down, such as books or shoelaces after tying them, he picks them up and replaces them several times until they seem "straight." Although usually placid, he becomes abusive with family members who try to enter his room for fear they will move or break his objects. When he is at school, he worries that people may disturb his room. He sometimes has to be forced to interrupt his routine to attend meals. Last year he hid pieces of his clothing around the house because they wouldn't lie straight in his drawers. Moreover, he often repeats to himself, "This is perfect; you are perfect."

(Spitzer et al., 1983, p. 15)

## &gt;&gt;PSYCH•NOTES

**An Obsession That Changed the World** The experiments that led Louis Pasteur to the pasteurization process may have been driven in part by his obsession with contamination and infection. Apparently he would not shake hands and regularly wiped his glass and plate before dining (Asimov, 1997).<<

**Losing Battle** People who try to avoid all contamination and rid themselves and their world of all germs are fighting a losing battle. While talking, the average person sprays 300 microscopic saliva droplets per minute, or 2.5 per word.<<

*Touching, verbal, and counting* compulsions are also common. People with touching compulsions repeatedly touch or avoid touching certain items whenever they see them. Individuals with verbal rituals feel compelled to repeat expressions, phrases, or chants. And those with counting compulsions constantly count things they see around them throughout the day.

**ARE OBSESSIONS AND COMPULSIONS RELATED?** Although some people with obsessive-compulsive disorder experience obsessions only or compulsions only, most of them experience both. In fact, compulsive acts are often a response to obsessive thoughts (Foa & Franklin, 2001). One investigation found that in most cases, compulsions seemed to represent a *yielding* to obsessive doubts, ideas, or urges (Akhtar et al., 1975). A woman who keeps doubting that her house is secure may yield to that obsessive doubt by repeatedly checking locks and gas jets.

Or a man who obsessively fears contamination may yield to that fear by performing cleaning rituals. The investigation also found that compulsions sometimes serve to help *control* obsessions. A teenager describes how she tried to control her obsessive fears of contamination by performing counting and verbal rituals:

**Patient:** If I heard the word, like, something that had to do with germs or disease, it would be considered something bad, and so I had things that would go through my mind that were sort of like “cross that out and it’ll make it okay” to hear that word.

**Interviewer:** What sort of things?

**Patient:** Like numbers or words that seemed to be sort of like a protector.

**Interviewer:** What numbers and what words were they?

**Patient:** It started out to be the number 3 and multiples of 3 and then words like “soap and water,” something like that; and then the multiples of 3 got really high, and they’d end up to be 124 or something like that. It got real bad then.

(Spitzer et al., 1981, p. 137)

**ISOLATION** An ego defense mechanism in which people unconsciously isolate and disown undesirable and unwanted thoughts, experiencing them as foreign intrusions.

**UNDOING** An ego defense mechanism whereby a person unconsciously cancels out an unacceptable desire or act by performing another act.

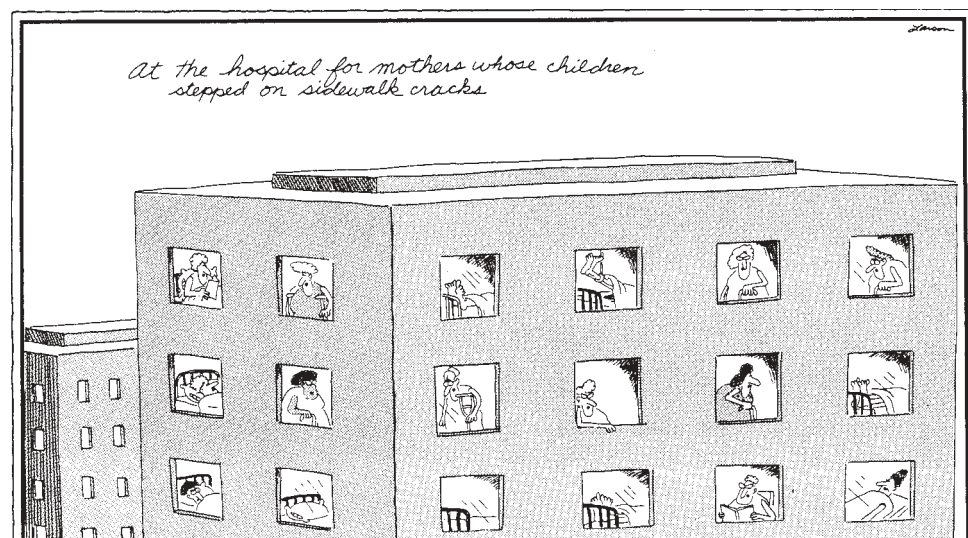
Many people with obsessive-compulsive disorder worry that they will act out their obsessions. A man with obsessive images of wounded loved ones may worry that he is but a step away from committing murder; or a woman with obsessive urges to yell out in church may worry that she will one day give in to them and embarrass herself. Most such concerns are unfounded. Although many obsessions lead to compulsive acts—particularly to cleaning and checking compulsions—they do not usually lead to violence or immoral conduct.

Obsessive-compulsive disorder was once among the least understood of the psychological disorders. In recent years, however, researchers have begun to learn more about it. The most influential explanations and treatments come from the psychodynamic, behavioral, cognitive, and biological models.

### The Psychodynamic Perspective: The Battle between the Id and Ego

As we have observed, psychodynamic theorists believe that an anxiety disorder develops when children come to fear their own id impulses and use ego defense mechanisms to lessen the resulting anxiety. What distinguishes obsessive-compulsive disorder from other anxiety disorders, in their view, is that here the battle between anxiety-provoking id impulses and anxiety-reducing defense mechanisms is not buried in the unconscious but is played out in explicit and dramatic thoughts and actions. The id impulses usually take the form of obsessive thoughts, and the ego defenses appear as counterthoughts or compulsive actions. A woman who keeps imagining her mother lying broken and bleeding, for example, may counter those thoughts with repeated safety checks throughout the house.

According to psychodynamic theorists, three ego defense mechanisms are particularly common in obsessive-compulsive disorder: *isolation*, *undoing*, and *reaction formation*. People who resort to **isolation** simply disown their undesirable and unwanted thoughts and experience them as foreign intrusions. People who engage in **undoing** perform acts that are meant to cancel out their undesirable impulses.



**REACTION FORMATION** An ego defense mechanism whereby a person suppresses an unacceptable desire by taking on a lifestyle that expresses the opposite desire.

**EXPOSURE AND RESPONSE PREVENTION** A behavioral treatment for obsessive-compulsive disorder that exposes clients to anxiety-arousing thoughts or situations and then prevents them from performing their compulsive acts.

Those who wash their hands repeatedly, for example, may be symbolically undoing their unacceptable id impulses. People who develop a **reaction formation** take on a lifestyle that directly opposes their unacceptable impulses. A person may live a life of compulsive kindness and devotion to others in order to counter unacceptably aggressive impulses. Another may lead a life of chastity to counteract obsessive sexual impulses.

Sigmund Freud believed that during the *anal stage* of development (occurring at about 2 years of age) some children experience intense rage and shame that fuel the battle between id and ego. He theorized that children at this stage get pleasure from their bowel movements. When their parents try to toilet train them, the children must learn to delay their anal pleasure. If parents are premature or too harsh in their toilet training, the children may feel such rage that they develop *aggressive id impulses*—antisocial impulses that repeatedly seek expression. They may soil their clothes all the more frequently and become generally destructive, messy, or stubborn.

If parents handle the child's aggressiveness by further pressure and embarrassment, the child may also feel ashamed, guilty, and dirty. The aggressive impulses will now compete with a strong desire to control them; the child who wants to soil will also have a desire to retain. If this intense conflict between the id and the ego continues, it may eventually blossom into obsessive-compulsive disorder.

Not all psychodynamic theorists agree with Freud's explanation. Some believe, for example, that the aggressive impulses of people with this disorder are rooted in feelings of insecurity rather than poor toilet-training experiences (Erikson, 1963; Sullivan, 1953; Horney, 1937). Even these theorists, however, agree with Freud that people with the disorder have intense aggressive impulses and a competing need to control them. Overall, research has not clearly supported the various psychodynamic theories (Fitz, 1990).

When treating patients with obsessive-compulsive disorder, psychodynamic therapists try to help the individuals uncover and overcome their underlying conflicts and defenses, using the customary techniques of free association and therapist interpretation. Research has offered little evidence, however, that a traditional psychodynamic approach is of much help. In fact, there is some suspicion that psychodynamic therapy may actually add to the difficulties of patients with obsessive-compulsive disorder (Salzman, 1985, 1980; Noonan, 1971). Free association and interpretation may play into their tendency to “think too much.” Thus some psychodynamic therapists now prefer to treat these patients with short-term psychodynamic therapies, which, as we observed in Chapter 3, are more direct and action-oriented than the classical techniques.

### >>PSYCH•LISTINGS

#### Origins of Superstitions

Avoid walking under a ladder: Egypt (3000 B.C.)<<

Knock on wood: North America (2000 B.C.)

Carry a rabbit's foot: Western Europe (pre-600 B.C.)<<

Break a wishbone: Italy (pre-400 B.C.)<<

Cross fingers: Western Europe (pre-100 B.C.)<<

Avoid broken mirrors: Rome (first century)<<

Hang a horseshoe: Greece (fourth century)<<

Avoid black cats: England (Middle Ages)<<

(Panati, 1987)

### The Behavioral Perspective: Learning by Chance

Behaviorists have concentrated on explaining and treating compulsions rather than obsessions. They propose that people happen upon their compulsions quite randomly. In a fearful situation, they happen just coincidentally to wash their hands, say, or dress a certain way. When the threat lifts, they link the improvement to that particular action. After repeated accidental associations, they believe that the action is bringing them good luck or actually changing the situation, and so they perform the same actions again and again in similar situations. The act becomes a key method of avoiding or reducing anxiety (Frost & Steketee, 2001).

The influential clinical investigator Stanley Rachman and his associates have shown that compulsions do appear to be rewarded by a reduction in anxiety. In one of their experiments, for example, 12 people with compulsive hand-washing rituals were placed in contact with objects that they considered contaminated (Hodgson & Rachman, 1972). As behaviorists would predict, the hand-washing rituals of these subjects seemed to lower their anxiety. Of course, although such investigations suggest that compulsions may eventually be rewarded by a reduction in anxiety, they do not show that compulsions are acquired in the first place as a result of such reductions.

If people keep performing compulsive behaviors in order to prevent bad outcomes and ensure positive outcomes, can't they be taught that such behaviors are not really serving this purpose? In a behavioral treatment called **exposure and response prevention**, first developed by the psychiatrist Victor Meyer (1966), clients are repeatedly exposed to objects or situations that produce anxiety, obsessive fears, and compulsive behaviors, but they are told to *resist* performing the behaviors they feel bound to perform. Because people find it very difficult to stop such behaviors, therapists often set an example. As the clients watch, the therapists put themselves in the anxiety-producing situation without performing any compulsive actions, and then they encourage the clients to do the same (see Figure 5-6).

Some behavioral therapists further have people carry out *self-help* procedures at home (Emmelkamp, 1994). That is, they assign homework in exposure and response prevention, such as these assignments given to a woman with a cleaning compulsion:

- Do not mop the floor of your bathroom for a week. After this, clean it within three minutes, using an ordinary mop. Use this mop for other chores as well without cleaning it.
- Buy a fluffy mohair sweater and wear it for a week. When taking it off at night do not remove the bits of fluff. Do not clean your house for a week.
- You, your husband, and children all have to keep shoes on. Do not clean the house for a week.
- Drop a cookie on the contaminated floor, pick the cookie up and eat it.
- Leave the sheets and blankets on the floor and then put them on the beds. Do not change these for a week.

(Emmelkamp, 1982, pp. 299–300)

Eventually this woman was able to set up a reasonable routine for cleaning herself and her home.

Exposure and response prevention has been offered in both individual and group therapy. Between 55 and 85 percent of clients with obsessive-compulsive disorder have been found to improve considerably with this approach (Foa & Franklin, 2001; Frost & Steketee, 2001). They also function better at home, socially, and at work. These changes continue to be observed for years.

The effectiveness of this approach suggests that people with obsessive-compulsive disorder are like the superstitious man in the old joke who keeps snapping his fingers to keep elephants away. When someone points out, "But there aren't any elephants around here," the man replies, "See? It works!" One review concludes, "With hindsight, it is possible to see that the obsessional individual has been snapping his fingers, and unless he stops (response prevention) and takes a look around at the same time (exposure), he isn't going to learn much of value about elephants" (Berk & Efran, 1983, p. 546).

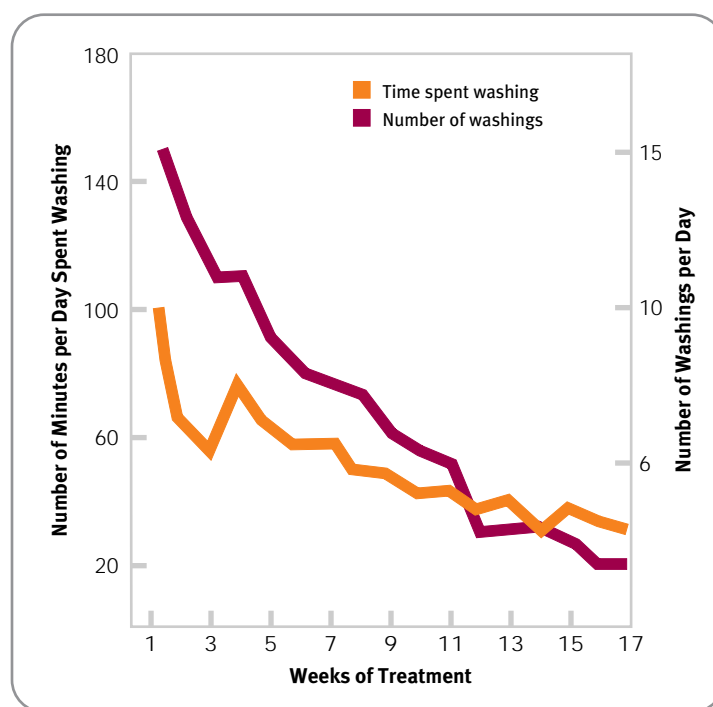
The same studies and statistics indicate the limitations of exposure and response prevention. Few clients who receive the treatment overcome all their symptoms, and as many as one-quarter fail to improve at all (Frost & Steketee, 2001; Marks & Swinson, 1992). Also, the approach is of limited



Philip Gould/Corbis

**Touch for luck** A University of Georgia football player touches a statue of the school mascot, a bulldog, before the homecoming game. Athletes often follow rituals that they believe will help them perform better on the field. Like compulsions, their superstitious behaviors may be reinforced by reductions in anxiety.

**FIGURE 5-6 Successful treatment for cleaning compulsions** When a client was treated by exposure and response prevention, he showed a steady decline in the frequency of his daily washings and in the total amount of time he spent at them. (Adapted from Rachman, Hodgson, & Marzillier, 1970, p. 390.)





help to those who have obsessions but no compulsions (Hohagen et al., 1998; Jenike, 1992). After all, the treatment makes its impact on obsessions by blocking closely linked compulsive acts. Finally, the favorable findings come mainly from studies of cleaning and checking compulsions. The effectiveness of this approach with other kinds of compulsions or with multiple compulsions is unclear (Ball, Baer, & Otto, 1996).

### The Cognitive Perspective: Overreacting to Unwanted Thoughts

Cognitive theorists have developed a promising explanation and treatment for obsessive-compulsive disorder. Their theory and treatment techniques also include a number of behavioral principles, leading some observers to describe the approach as cognitive-behavioral. The explanation begins by pointing out that everyone has repetitive, unwanted, and intrusive thoughts. Anyone might have thoughts of harming others, engaging in unacceptable sexual acts, or being contaminated by germs, but most people dismiss or ignore them with ease (Baer, 2001). Those who develop obsessive-compulsive disorder, however, typically blame themselves for such thoughts and expect that somehow terrible things will happen (Salkovskis, 1999, 1989, 1985). To avoid the consequences, they try to **neutralize** the thoughts—thinking or behaving in ways meant to put matters right internally or to make amends.

Neutralizing acts might include requesting special reassurance from others, deliberately thinking “good” thoughts, washing one’s hands, or checking for possible sources of danger (Freeston & Ladouceur, 1997). When a neutralizing effort of some kind brings about a temporary reduction in discomfort, it is reinforced and will likely be repeated. Eventually the neutralizing thought or act is used so often that it becomes, by definition, an obsession or compulsion. At the same time, the individual becomes more and more convinced that his or her unpleasant intrusive thoughts are dangerous. As the person’s fear of such thoughts increases, the thoughts begin to occur more frequently and they, too, become obsessions.

In support of this explanation, studies have found that people with obsessive-

compulsive disorder experience intrusive thoughts more frequently than other people, especially at times of stress, a difference that may be due to biological predisposition; they resort to more elaborate neutralizing strategies than other people when they try to stop unwanted thoughts; and they experience reductions in anxiety after using neutralizing techniques (Sketee & Barlow, 2002; Freeston et al., 1992; Roper et al., 1973).

Although everyone sometimes has undesired thoughts, only some people develop obsessive-compulsive disorder. Why do these individuals find such normal thoughts so disturbing to begin with? Researchers have found that this population tends (1) to be more depressed than other people (Frost & Steketee, 2001); (2) to have exceptionally high standards of conduct and morality (Rachman, 1993); (3) to believe that their intrusive negative

**Painful thoughts** Like the man in George Cruikshank’s painting *The Blue Devils*, some people may find unwanted thoughts particularly threatening and debilitating. According to cognitive theorists, their reactions to intrusive thoughts may set the stage for obsessive-compulsive disorder.

Philadelphia Museum of Art: William L. Helfand Collection



thoughts are equivalent to actions and capable of causing harm to themselves or others and to feel responsible for eliminating the imagined danger (Wilson & Chambless, 1999); and (4) generally to believe that they can and should have perfect control over all their thoughts and behaviors (Frost & Steketee, 2001; Bouchard, Rhéaume, & Ladouceur, 1999).

Cognitive practitioners have developed approaches to obsessive-compulsive disorder that combine cognitive and behavioral techniques (Freeston et al., 1996). Therapists may use **habituation training**, for example, and have clients call forth their obsessive thoughts again and again. The clinicians expect that intense exposure to the thoughts will reduce their power to frighten or threaten, so that the thoughts produce less anxiety and trigger fewer new obsessive thoughts or compulsive acts (Salkovskis & Westbrook, 1989). In one version of habituation training, clients are simply instructed to summon obsessive thoughts or images to mind and hold them for a while. In another version, clients spend up to an hour once or twice a day listening to their own voices on tape stating their obsessive thoughts again and again.

For people who experience obsessions only, habituation training is often the entire plan of treatment (Rachman & Hodgson, 1980). For others, however, therapists may add *covert-response prevention*: they teach clients to prevent or distract themselves from carrying out compulsive actions that may arise during habituation training. So far, support for these approaches has come mostly from case studies rather than empirical investigations (Ladouceur et al., 1995).

## The Biological Perspective

Partly because obsessive-compulsive disorder was so difficult to explain in the past, researchers tried repeatedly to identify hidden biological factors that might contribute to it. Their efforts have been rewarded in recent years, and promising biological treatments have been developed as well.

**BIOLOGICAL EXPLANATIONS** Two lines of research now offer great promise for explaining the biology of obsessive-compulsive disorder. One points to abnormally low activity of the neurotransmitter *serotonin*, the other to abnormal functioning in key areas of the brain.

**Serotonin**, like GABA and norepinephrine, is a brain chemical that carries messages from neuron to neuron. The first clue to its role in obsessive-compulsive disorder was the surprising finding by clinical researchers that two antidepressant drugs, *clomipramine* and *fluoxetine* (Anafranil and Prozac), reduce obsessive and compulsive symptoms (Grilly, 2002; Rapoport, 1991, 1989). Since these particular drugs also increase serotonin activity, some researchers concluded that the disorder is caused by low serotonin activity. In fact, only those antidepressant drugs that increase serotonin activity help in cases of obsessive-compulsive disorder; antidepressants that mainly affect other neurotransmitters typically have no effect on it (Jenike, 1992).

Another line of research has linked obsessive-compulsive disorder to abnormal brain functioning in specific regions of the brain: the **orbital region of the frontal cortex** (just above each eye) and the **caudate nuclei** (structures located within the brain region known as the *basal ganglia*, which lies under the cerebral cortex). Together, these parts set up a brain circuit that converts sensory information into thoughts and actions. The circuit begins in the orbital region, where sexual, violent, and other primitive impulses normally arise. These impulses next move on to the caudate nuclei, which act as filters that send only the most powerful impulses on to the *thalamus*, the next stop on the circuit (see Figure 5-7). If impulses reach the thalamus, the person is driven to think further about them and perhaps to act. Many biological theorists now believe that either the orbital region or the caudate nuclei of some people are too active, leading to a constant eruption of troublesome thoughts and actions (Peterson et al., 1999).

In support of this theory, medical scientists have observed for years that obsessive-compulsive symptoms do sometimes arise or subside after the orbital

**NEUTRALIZING** A person's attempt to eliminate unwanted thoughts by thinking or behaving in ways that put matters right internally, that make up for the unacceptable thoughts.

**HABITUATION TRAINING** A therapeutic technique in which a therapist tries to call forth a client's obsessive thoughts again and again, with the expectation that the thoughts will eventually lose their power to frighten and thus to cause anxiety.

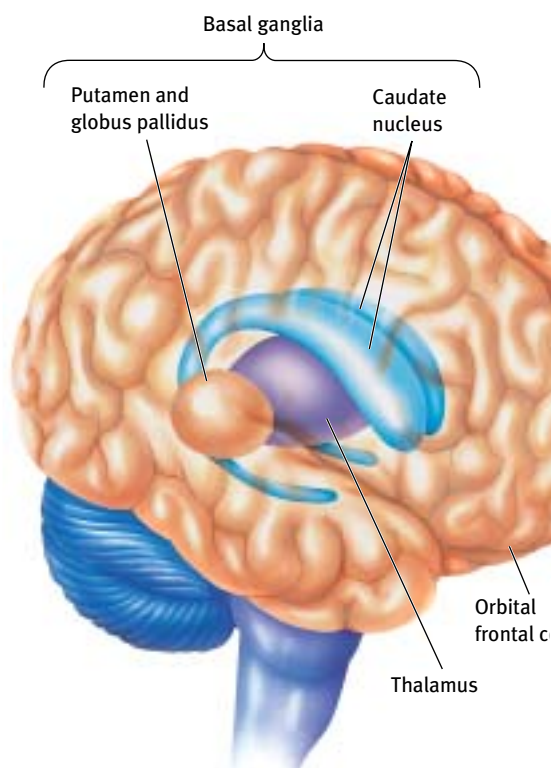
**SEROTONIN** A neurotransmitter whose abnormal activity is linked to depression, obsessive-compulsive disorder, and eating disorders.

**ORBITAL FRONTAL CORTEX** A region of the brain in which impulses involving excretion, sexuality, violence, and other primitive activities normally arise.

**CAUDATE NUCLEI** Structures in the brain, within the region known as the basal ganglia, that help convert sensory information into thoughts and actions.

### >> PSYCH•NOTES Obsessive Love

One team of researchers found that the serotonin activity of subjects who claimed to be newly in love was about as low as that of subjects with obsessive-compulsive disorder (Marazziti et al., 1999; Asimov, 1997). <<



**FIGURE 5-7** The biology of obsessive-compulsive disorder A three-dimensional view of the brain shows the regions that have been linked to obsessive-compulsive disorder. These areas may be too active in people with the disorder. (Adapted from Rapoport, 1989, p. 85.)

region, caudate nuclei, or related brain areas are damaged by accident or illness (Berthier et al., 2001). In one highly publicized case, a patient with obsessive-compulsive disorder tried to commit suicide by shooting himself in the head. Although he survived the shot, he did considerable damage to the brain areas in question. Perhaps as a result of the injury, his obsessive and compulsive symptoms declined dramatically. Similarly, PET scans, which offer pictures of brain functioning, have shown that the caudate nuclei and the orbital region of patients with obsessive-compulsive disorder are more active than those of control subjects (Baxter et al., 2001, 1990).

These biological notions may themselves be linked. It turns out that the neurotransmitter serotonin plays a very active role in the operation of the orbital region and the caudate nuclei; thus low serotonin activity might well disrupt the proper functioning of those brain parts.

**BIOLOGICAL THERAPIES** As we have seen, researchers have learned that certain antidepressant drugs are very useful in the treatment of obsessive-compulsive disorder (Janicak et al., 2001). Not only do they increase brain serotonin activity; they also produce more normal activity in the orbital region and caudate nuclei, the brain areas that have been implicated in the disorder (Baxter et al., 2001, 1992). Studies have found that clomipramine, fluoxetine, and fluvoxamine (Anafranil, Prozac, and Luvox) bring improvement to between 50 and 80 percent of those with obsessive-compulsive disorder (Grilly, 2002; Taylor, 1995). The obsessions and compulsions do not usually disappear totally, but on average they are cut almost in half within eight weeks of treatment (DeVeauugh-Geiss et al., 1992). People whose improvement is based on the drugs alone, however, tend to relapse if the medication is stopped (Maina, Albert, & Bogetta, 2001).

Thus the treatment of obsessive-compulsive disorder, like that of panic disorder, has improved greatly over the past decade. Once a very stubborn problem, obsessive-compulsive disorder is now helped by several forms of treatment, particularly exposure and response prevention and antidepressant drugs, often used in combination (Foster & Eisler, 2001). In fact, at least two important studies suggest that the behavioral and biological approaches may ultimately have the same effect on the brain. In these investigations, subjects who responded to exposure and response prevention and those who responded to antidepressant drugs all showed marked reductions in activity in the caudate nuclei (Schwartz et al., 1996; Baxter et al., 1992).

## CROSSROADS:

### Diathesis-Stress in Action

Clinicians and researchers have developed many ideas about generalized anxiety disorder, phobias, panic disorder, and obsessive-compulsive disorder. At times, however, the sheer quantity of concepts and findings makes it difficult to grasp what is and what is not really known about the disorders.

Overall, it is fair to say that clinicians know more about the causes of phobias, panic disorder, and obsessive-compulsive disorder than about generalized anxiety disorder, even though the latter problem has been studied the longest of all the anxiety disorders. It is worth noting that the insights about panic disorder and obsessive-compulsive disorder—once among the field's most puzzling patterns—did not emerge until clinical theorists took a look at the disorders from more than one perspective and integrated those views. Today's enlightening cognitive explanation of panic disorder, for example, builds squarely on the biological idea that the disorder begins with unusual physical sensations. Similarly, the cognitive explanation of obsessive-compulsive disorder takes its lead from the biological position that some persons are predisposed to experience more unwanted and intrusive thoughts than other persons.

It may be that a better understanding of generalized anxiety disorder awaits a similar integration of concepts and insights from the various models. In fact, a

growing number of theorists are already coming to believe that people develop generalized anxiety disorder only when biological, psychological, and sociocultural factors are *all* at work (Brown et al., 2001). Adopting a *diathesis-stress* perspective, these theorists suggest that individuals with the disorder typically have a biological vulnerability toward experiencing anxiety that is brought to fruition by psychological and sociocultural forces (Kazdin & Weisz, 1998). Genetic investigators have discovered that certain genes may combine to determine whether a person reacts to life's stressors calmly or in an uptight, anxious way, and developmental researchers have found that even during the earliest stages of life some infants consistently become very aroused when stimulated while other infants remain quiet (Barlow, 2002; Plomin et al., 1997; Kalin, 1993). Perhaps the easily aroused infants have inherited defects in GABA functioning or other biological limitations that predispose them to generalized anxiety disorder. If, over the course of their lives, these individuals also confront intense societal pressures and learn to interpret the world as a dangerous place, they may be candidates for developing the disorder.

An integration of insights from the various models may also shed light on phobias. Although today's leading phobia theories—especially the behavioral ones—are better supported than those for generalized anxiety disorder, combining them with genetic explanations may help us better predict who will and who will not develop phobias. Indeed, in one study, almost a third of subjects with a specific phobia had close relatives with a similar phobia (Fyer et al., 1990). In another, almost two-thirds of subjects with a phobic fear of blood and injuries had close relatives with the same problem (Ost, 1989). And in a related vein, several studies suggest that certain infants are born with a style of social inhibition or shyness that may increase their risk of developing a social phobia (Kagan & Snidman, 1999, 1991; Biederman et al., 1990). Thus, it could be that people must have both a genetic predisposition and unfortunate conditioning experiences if they are to develop particular phobias.

In the treatment realm, integration of the models is already becoming commonplace across all of the anxiety disorders. Therapists have discovered, for example, that treatment is at least sometimes more effective when medications are combined with cognitive techniques to treat panic disorders and with behavioral techniques to treat obsessive-compulsive disorder. Similarly, cognitive techniques such as self-instruction training are now often combined with relaxation training or biofeedback in the treatment of generalized anxiety disorder—a package known as a **stress management program**. And treatment programs for social phobias often include a combination of medications, exposure therapy, cognitive therapy, and social skills training. For many of the millions of people who suffer from these various disorders, such treatment combinations are an important and welcome development.

## SUMMARY AND REVIEW

- **Generalized anxiety disorder** People with *generalized anxiety disorder* experience excessive anxiety and worry about a wide range of events and activities. The various explanations and treatments for this disorder have received only limited research support, although recent cognitive and biological approaches seem to be promising.

According to the *sociocultural* view, increases in *societal dangers* and *pressures* create a climate in which cases of generalized anxiety disorder are more likely to develop.

In the original *psychodynamic* explanation, Freud said that generalized anxiety disorder may develop when anxiety is excessive and defense mechanisms break down and function poorly. Psychodynamic therapists use free association, interpretation, and related psychodynamic techniques to help people overcome this problem.

**STRESS MANAGEMENT PROGRAM** An approach to treating generalized and other anxiety disorders that teaches clients techniques for reducing and controlling stress.

## >>BY THE NUMBERS

### Fear Flicks

- 49% Respondents to online polls who rate *The Exorcist* the scariest movie of all time<<
- 16% Those who rate *The Shining* scariest<<
- 11% Those who rate *Silence of the Lambs* scariest<<
- 6% Those who rate *Nightmare on Elm Street* scariest<<
- 5% Those who rate *Psycho* scariest<<
- 5% Those who rate *Alien* scariest<<

(Infoplease.com online poll, 2001)

### >>PSYCH•LISTINGS

#### Famous Movie Phobias

Snakes (*Raiders of the Lost Ark*)<<

Illness (*Hannah and Her Sisters*) <<

The outside world (*Copycat*)<<

Social situations (*Annie Hall*)<<

Flying (*Rain Man*)<<

Heights (*Vertigo*)<<

The color red (*Marnie*) <<

Enclosed spaces (*Body Double*)<<

Spiders (*Arachnophobia*)<<

Carl Rogers, the leading *humanistic* theorist, believed that people with generalized anxiety disorder fail to receive *unconditional positive regard* from significant others during their childhood and so become overly critical of themselves. He treated such individuals with *client-centered therapy*.

*Cognitive* theorists believe that generalized anxiety disorder is caused by *maladaptive assumptions* and *beliefs* that lead people to view most life situations as dangerous. Cognitive therapists help their clients change such thinking, and they teach them how to cope during stressful situations.

*Biological* theorists hold that generalized anxiety disorder results from low activity of the neurotransmitter *GABA*. The most common biological treatment is *antianxiety drugs*, particularly *benzodiazepines*. *Relaxation training* and *biofeedback* are also applied in many cases. pp. 121–134

- **Phobias** A phobia is a severe, persistent, and unreasonable fear of a particular object, activity, or situation. There are three main categories of phobias: *specific phobias*, *social phobias*, and *agoraphobia*. Behavioral explanations of phobias, particularly specific phobias, are the most influential today. Behaviorists believe that phobias are learned from the environment through *classical conditioning* or through *modeling*, and then are maintained by avoidance behaviors.

Specific phobias have been treated most successfully by behavioral *exposure techniques* in which people are led to confront the objects they fear. The exposure may be gradual and relaxed (*desensitization*), intense (*flooding*), or vicarious (*modeling*).

Therapists who treat social phobias typically distinguish two components of this disorder: *social fears* and *poor social skills*. They try to reduce social fears by drug therapy, exposure techniques, group therapy, various cognitive approaches, or a combination of these interventions. They may try to improve social skills by *social skills training*. pp. 134–142

- **Panic disorder** *Panic attacks* are periodic, discrete bouts of panic that occur suddenly. Sufferers of *panic disorder* experience panic attacks repeatedly and unexpectedly, and without apparent reason. When panic disorder leads to *agoraphobia*, it is termed *panic disorder with agoraphobia*.

Biological theorists believe that abnormal *norepinephrine* activity in the brain's *locus ceruleus* is the key to panic disorder. Biological therapists use certain *antidepressant drugs* or powerful *benzodiazepines* to treat people with this disorder. Patients whose panic disorder is accompanied by agoraphobia may need a combination of drug therapy and behavioral *exposure treatment*.

Cognitive theorists suggest that panic-prone people become preoccupied with some of their bodily sensations, misinterpret them as signs of medical catastrophe, panic, and in some cases develop panic disorder. Such persons have a high degree of *anxiety sensitivity* and also experience greater anxiety during *biological challenge tests*. Cognitive therapists teach patients to interpret their physical sensations more accurately and to cope better with anxiety. In cases of panic disorder with agoraphobia, practitioners may combine a cognitive approach with behavioral exposure techniques. pp. 143–147

- **Obsessive-compulsive disorder** People with *obsessive-compulsive disorder* are beset by *obsessions*, perform *compulsions*, or display both. Common themes in obsessions are contamination and violence. Compulsions commonly center on cleaning or checking. Other common compulsions involve touching, verbal rituals, or counting. Compulsions are often a response to a person's obsessive thoughts.

According to the psychodynamic view, obsessive-compulsive disorder arises out of a battle between id impulses, which appear as obsessive thoughts, and ego defense mechanisms, which take the form of counterthoughts or compulsive actions. Behaviorists believe that compulsive behaviors develop through chance associations. The leading behavioral treatment combines prolonged *exposure* with *response prevention*.

Cognitive theorists believe that obsessive-compulsive disorder grows from a normal human tendency to have *unwanted and unpleasant thoughts*. The efforts of some people to understand, eliminate, or avoid such thoughts actually lead to obsessions and compulsions. A promising cognitive-behavioral treatment is *habituation training*, during which therapists encourage clients to summon their obsessive thoughts to mind for a prolonged period, expecting that such prolonged exposure will cause the thoughts to feel less threatening and to generate less anxiety. Biological researchers have tied obsessive-compulsive disorder to low *serotonin* activity and abnormal functioning in the *orbital region of the frontal cortex* and in the *caudate nuclei*. Antidepressant drugs that raise serotonin activity are a useful form of treatment. pp. 148–156

### »» CRITICAL THOUGHTS ««

1. The word “worry” initially meant “to choke.” Dogs that attack sheep are still said to “worry” them; otherwise, the term no longer connotes outward aggression (Ash, 1999). What connections do you see between the word’s original meaning and its present one? p. 122
2. Why might people whose childhoods were marked by unpredictable or uncontrollable events or by chronic family illnesses be inaccurate interpreters of their bodily sensations? pp. 128–129
3. How might anti-anxiety drugs be administered so as to take advantage of their helpful effects yet minimize their undesired effects? pp. 132–133
4. Today’s human-subject review boards probably would not permit Watson and Rayner to conduct their study on Little Albert. What concerns might they raise about the procedure? Do these concerns outweigh the insights gained from this study? p. 138
5. Why do so many professional performers seem particularly prone to social anxiety? Wouldn’t their repeated exposure to audiences lead to a reduction in fear? pp. 136, 141
6. Can you think of instances when you instinctively tried a simple version of exposure and response prevention in order to stop behaving in certain ways? Were your efforts successful? pp. 153–154

### CYBER STUDY

- ▲ How do persons with obsessive-compulsive disorder explain their behaviors?
- ▲ How disruptive are obsessions and compulsions? ▲ How do obsessions and compulsions interrelate? ▲ How do persons react to the trauma of losing a loved one to suicide?

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JOAN MIRÓ, Carnival of Harlequin, 1924–1925

## Topic Overview | :

**STRESS AND AROUSAL: THE FIGHT-OR-FLIGHT RESPONSE****THE PSYCHOLOGICAL STRESS DISORDERS: ACUTE AND POSTTRAUMATIC STRESS DISORDERS**

What Triggers a Psychological Stress Disorder?

Why Do People Develop a Psychological Stress Disorder?

How Do Clinicians Treat the Psychological Stress Disorders?

**THE PHYSICAL STRESS DISORDERS: PSYCHOPHYSIOLOGICAL DISORDERS**

Traditional Psychophysiological Disorders

New Psychophysiological Disorders

Psychological Treatments for Physical Disorders

**CROSSROADS: EXPANDING THE BOUNDARIES OF ABNORMAL PSYCHOLOGY**

Mark remembers his first “firefight” and encountering the VC [Viet Cong] for the first time. He lost all bladder and bowel control—in a matter of a few minutes. In his own words, “I was scared and literally shitless; I pissed all over myself, and shit all over myself too. Man, all hell broke loose. I tell you, I was so scared, I thought I would never make it out alive. I was convinced of that. Charlie had us pinned down and [was] hitting the shit out of us for hours. We had to call in the napalm and the bombing.” During the first fight, Mark, an infantryman, experienced gruesome sights and strange sounds in battle. He witnessed headless bodies. “One guy said to me, ‘Hey, Mark, new greenhorn boy, you saw that head go flying off that gook’s shoulder. Isn’t that something?’” Within 2 weeks Mark saw the head of a running comrade blown off his shoulders, the headless body moving for a few feet before falling to the ground. Mark, nauseous and vomiting for a long time, couldn’t see himself surviving much longer: “I couldn’t get that sight out of my head; it just kept on coming back to me in my dreams, nightmares. Like clockwork, I’d see R’s head flying, and his headless body falling to the ground. I knew the guy. He was very good to me when I first got to the unit. Nobody else seemed to give a damn about me; he broke me in. It’s like I would see his head and body, you know, man, wow!” Mark often found himself crying during his first weeks of combat. “I wanted to go home. I was so lonely, helpless, and really scared. But I knew I could not go home until my year was up.”

(Brende & Parson, 1985, pp. 23–24)

Mark’s reaction to the horror of combat is normal and understandable. During battle, soldiers often become highly anxious and depressed and physically ill. And, indeed, for many the effects of such extraordinary stress continue well beyond the combat experience itself.

But it is not just combat soldiers who are affected by stress. Nor does stress have to rise to the level of combat trauma to have a profound effect on psychological and physical functioning. Stress comes in all sizes and shapes, and we are all greatly affected by it.

We feel some degree of stress whenever we are faced with demands or opportunities that require us to change in some manner. The state of stress has two components: a **stressor**, the event that creates the demands, and a **stress response**, the person’s reactions to the demands. The stressors of life may include annoying everyday hassles, such as rush-hour traffic or the appearance of unexpected company; turning-point events, such as college graduation or marriage; long-term problems, such as poverty, poor health, or overcrowded living conditions; or traumatic events, such as major accidents, assaults, tornadoes, or military combat. Our response to such stressors is influenced by the way we *appraise* both the events and our capacity to react to them in an effective way (Pretzer et al., 2002; Lazarus & Folkman, 1984). People who sense that they have the ability and the resources to cope are more likely to take stressors in stride and to respond constructively (see Box 6–1 on the next page).

When we appraise a stressor as threatening, a natural reaction is arousal and a sense of fear—a response frequently on display in Chapter 5. As we observed in that chapter, fear is actually a package of responses—*physical*, *emotional*, and *cognitive*. Physically, we perspire, our breathing quickens, our

**STRESSOR** An event that creates a sense of threat by confronting a person with a demand or opportunity for change.

**STRESS RESPONSE** A person’s particular reactions to stress.



## B O X 6-1

## Pressure and Sports: Do Arousal and Anxiety Hinder Performance?

I knew the stakes were high. . . . But I love pressure. The more competitive it gets, the better I do. Still, half an hour before the contest, my stomach was in knots. I wanted to puke. I didn't know if I could compete, I was so nervous. Then when I got the start, I got this amazing buzz of confidence. And I nailed my line. It was the best run of my life. |

—GUERLAIN CHICHERIT, WINNER OF THE 2001  
WORLD FREESKIING CHAMPIONSHIPS  
(BEADRY, 2002)

Just about everyone has tasted the stress, arousal, and anxiety of competitive sports, from first-graders participating in their gym class's kickball game to elite runners facing the 5,000-kilometer race in the Olympics. When individuals perform well in such athletic endeavors, we speak of their "competitive juices" or the "ice in their veins." In contrast, when they do poorly, we say they "choke" or "had an attack of nerves." Clearly, arousal and anxiety play a key role in sports performance, just as they influence behavior in other challenging and demanding areas of life, but what exactly is that role? Are stress and anxiety good or bad when it comes to sports?

Sports psychologists often use their own terms when they grapple

with these questions, but their points and distinctions run parallel to the broader concepts and observations about stress, arousal, and fear that scientists and clinicians have been making for years. According to these psychologists, competitive anxiety comes in two flavors. *Somatic anxiety* is physiological; its earmarks are the features of physical arousal, such as shakiness, racing heartbeat, and sweating (Hardy, Jones, & Gould, 1996). It is different from *cognitive anxiety*, which is characterized by psychological symptoms such as negative expectations about an upcoming performance. Although these two types of anxiety are conceptually distinct, they are often related, and experiencing one can trigger or intensify the other.

Interestingly, research suggests that these two types of anxiety tend to influence sports performance differently. Somatic anxiety actually improves performance up to a point; it makes athletes more alert and energetic—the result of the *sympathetic nervous system* "turning on," preparing the body for a *fight-or-flight* response to what the brain perceives as a threat. At a certain point, however, somatic anxiety can cause one's performance to deteriorate (Burton, 1988). If a person has too much epinephrine,

or adrenaline, coursing through the veins, arousal can deteriorate into distraction and shakiness.

Cognitive anxiety, in contrast, has little upside at all. Research indicates that it has a consistently negative relationship with competitive performance (Burton, 1988). Cognitive anxiety is, at heart, a fear of the consequences of failure. The more important an event, the higher the level of cognitive anxiety is likely to be. Thus, when coaches spend time emphasizing and reemphasizing the importance of an upcoming game to their players (Krane, Joyce, & Rafeld, 1994), or when they try to "psych up" their athletes before a meet by reminding them of the difficulty or dangers of the task ahead (Murphy & Woolfolk, 1987), they may be doing more harm than good.

According to sports psychologists, coaches should also pay attention to variables beyond somatic and cognitive anxiety that may influence athletes' perceptions and reactions to competition. For one thing, individuals vary greatly in *trait anxiety*; that is, in their general propensity to experience jitters. Persons high in trait anxiety tend to focus on threatening elements during competition, while their low-trait-anxious teammates are more likely to *ignore* such threats deliberately (MacLeod, 1990).

muscles tense, and our hearts beat faster. Turning pale, developing goose bumps, and feeling nauseated are other physical reactions. Emotional responses to extreme threats include horror, dread, and even panic, while in the cognitive realm fear can disturb our ability to concentrate and distort our view of the world. We may exaggerate the harm that actually threatens us or remember things incorrectly after the threat has passed.

Stress reactions, and the sense of fear they produce, are often at play in psychological disorders. People who experience a large number of stressful events are particularly vulnerable to the onset of generalized anxiety disorder, social phobia, panic

Stress reactions, and the sense of fear they produce, are often at play in psychological disorders. People who experience a large number of stressful events are particularly vulnerable to the onset of generalized anxiety disorder, social phobia, panic

**Computer challenged** *The modern world offers all kinds of opportunities for stress, both invited and uninvited. An audience watches as the human chess champion Gary Kasparov struggles against the computer champion Deep Blue.*



Adam Nadel/AP Photo

A recent longitudinal study in New Zealand suggests that differences in trait anxiety during childhood may help predict whether individuals will later succeed in competitive sports (Hagan, 2002; Poulton & Milne, 2002). In the study, children who displayed little fear of anything between the ages of 5 and 11 were three times more likely than their generally anxious peers to achieve success during adolescence or adulthood in sports ranging from badminton and tennis to rugby and soccer.

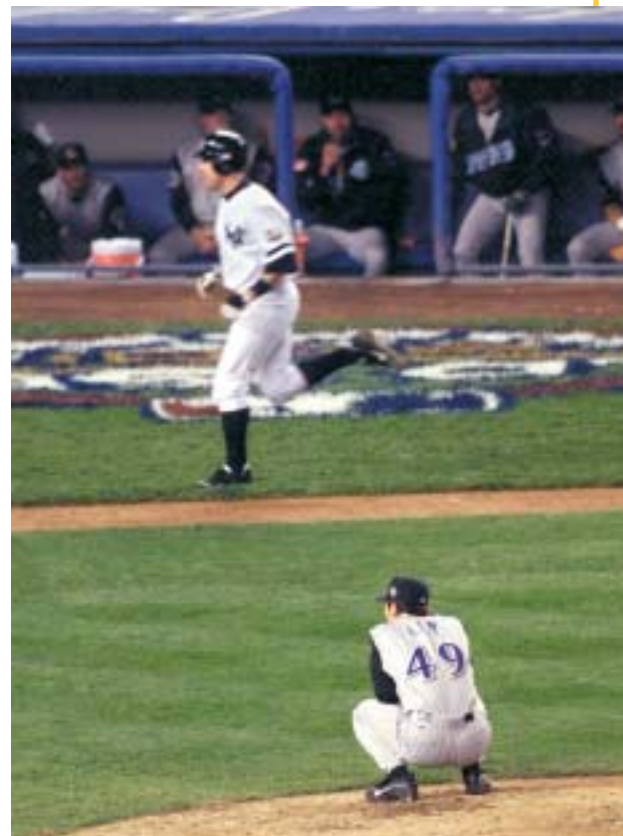
The effects and experiences of competitive anxiety also depend on the type of sport in question. Athletes on *teams* typically experience less anxiety than those in *individual* sports (Simon & Martens, 1977). Moreover, athletes playing explosive, or strength-based, sports such as rugby are more likely to be helped by somatic anxiety than are athletes in sports that depend primarily on fine motor skills, such as skeet shooting (Hanton, Jones, & Mullen, 2000). The athletes in the explosive sports also tend to experience less cognitive anxiety than those in the fine motor sports.

Not surprisingly, one of the strongest findings in this area of study is that athletes with more experience are better able to keep feelings of competitive anxiety under control and

harness its energy to competitive advantage (Gould, Petchlikoff, & Weinberg, 1984). Experienced athletes have had more opportunities to evaluate their previous performances and to judge their own preparedness for competition. Besides, they have experienced somatic arousal in the past and are more likely to have learned to cope with it and channel it positively. Because they perceive their feelings of somatic anxiety as constructive—as feelings that have facilitated their performances over the years—they are less likely to generate cognitive anxiety and its negative effects (Jones, Swain, & Cole, 1990). Indeed, bodily arousal becomes a familiar friend to them rather than a

**The agony of defeat** Few baseball fans will forget the anguished reaction of Arizona Diamondbacks pitcher Byung-Hyun Kim on November 1, 2001, after he gave up a tying home run to the New York Yankees with two outs in the ninth inning during game five of the World Series. It was the second night in a row that Kim, normally one of baseball's top pitchers, had lost the lead in that manner.

mysterious and potentially dangerous stranger, and with such constructive interpretations, experienced athletes avoid the cognitive anxieties that so often have a devastating effect on competitive performance (Jones et al., 1990).



AP Photo/Roberto Borea

disorder, and obsessive-compulsive disorder—the disorders that we examined in Chapter 5. Similarly, as we observed earlier, increases in stress have been linked to the onset of depression, schizophrenia, sexual dysfunctioning, and yet other psychological problems.

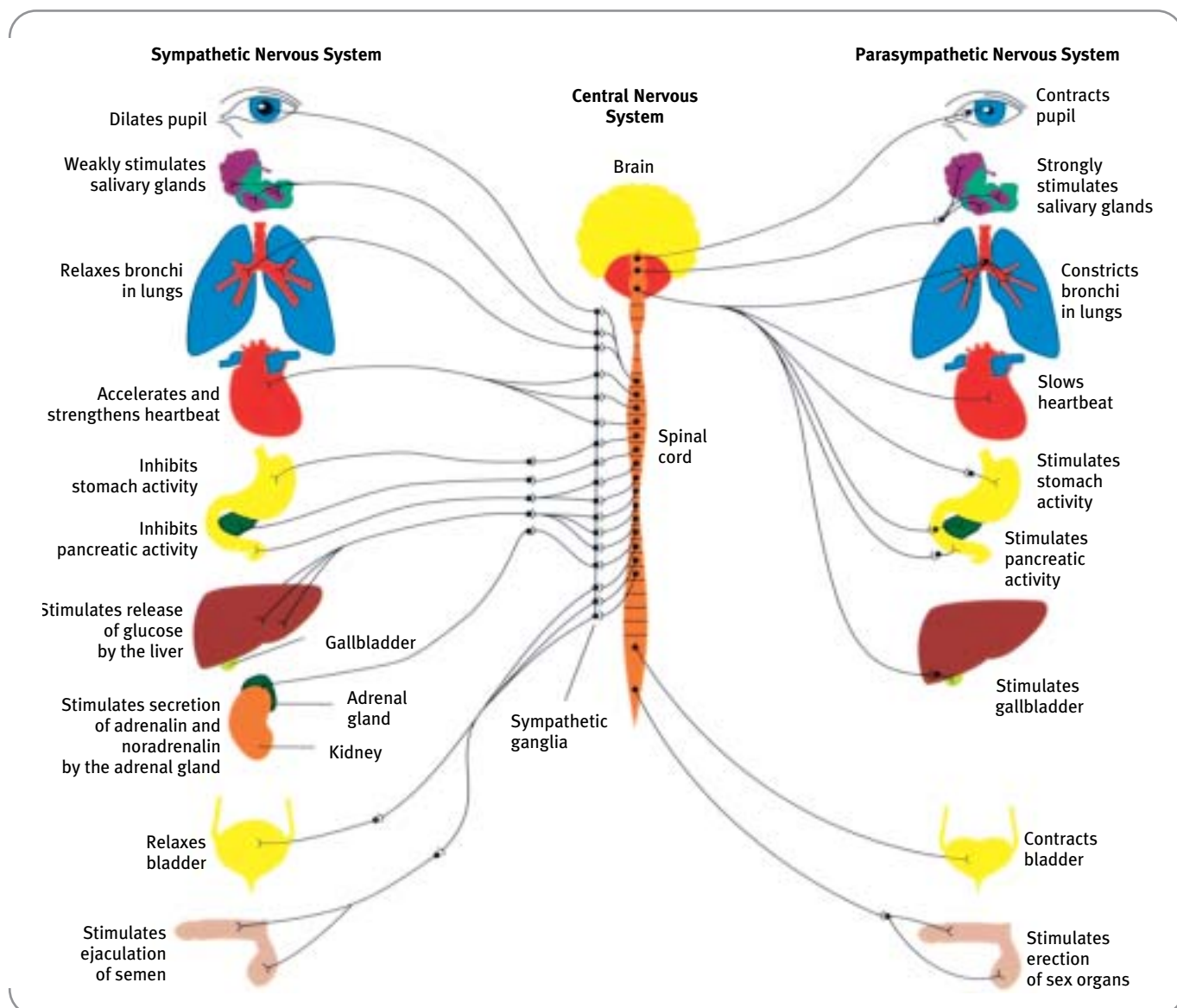
Beyond its role as a trigger for various psychological disorders, stress plays a more central role in certain psychological and physical disorders (Suinn, 2001). In such disorders, the features of stress become pronounced and debilitating, linger for a long period of time, and may make it impossible for the individual to live a normal life. The key psychological stress disorders are *acute stress disorder* and *posttraumatic stress disorder*. DSM-IV technically lists these patterns as anxiety disorders, but as we shall see, their features extend far beyond the symptoms of anxiety. The physical stress disorders are typically called *psychophysiological disorders*, problems that DSM-IV now lists under the heading *psychological factors affecting medical condition*. These psychological and physical stress disorders are the focus of this chapter. Before examining them, however, we need to understand just how the brain and body react to stress.

**AUTONOMIC NERVOUS SYSTEM (ANS)**  
The network of nerve fibers that connect the central nervous system to all the other organs of the body.

**SYMPATHETIC NERVOUS SYSTEM** The nerve fibers of the autonomic nervous system that quicken the heartbeat and produce other changes experienced as arousal and fear.

## Stress and Arousal: The Fight-or-Flight Response

The features of arousal and fear are set in motion by the brain area called the *hypothalamus*. When our brain interprets a situation as dangerous, neurotransmitters in the hypothalamus are released, triggering the firing of neurons throughout the brain and the release of chemicals throughout the body. In particular, the hypothalamus activates two important systems—the *autonomic nervous system* and the *endocrine system*. The **autonomic nervous system (ANS)** is the extensive network of nerve fibers that connect the *central nervous system* (the brain and spinal cord) to all the other organs of the body. These fibers help regulate the *involuntary* activities of the organs—breathing, heartbeat, blood pressure, perspiration, and the like (see Figure 6-1). The *endocrine system* is the network of *glands* located throughout the body. (As we observed in Chapter 3, glands release *hormones* into the bloodstream and on to the various body organs.) The autonomic nervous system and the endocrine system often overlap in their responsibilities and activ-



**FIGURE 6-1** The autonomic nervous system (ANS) When the sympathetic division of the ANS is activated, it stimulates some organs and inhibits others. The result is a state of general arousal. In contrast, activation of the parasympathetic division leads to an overall calming effect.

ities. There are two pathways, or routes, by which these systems produce arousal and fear reactions—the *sympathetic nervous system* pathway and the *hypothalamic-pituitary-adrenal* pathway.

When we confront a dangerous situation, the hypothalamus first excites the **sympathetic nervous system**, a special group of autonomic nervous system fibers that work to quicken our heartbeat and produce the other changes that we experience as fear or anxiety. These nerves may stimulate the organs of the body directly—for example, they may directly stimulate the heart and increase heart rate. The nerves may also influence the organs indirectly, by stimulating the *adrenal glands* (glands located on top of the kidneys), particularly the inner layer of these glands, an area called the *adrenal medulla*. When this layer of the adrenal glands is stimulated, the chemicals *epinephrine* (adrenaline) and *norepinephrine* (noradrenaline) are released. We have already observed that these chemicals are important neurotransmitters when they operate in the brain. When released from the adrenal medulla, however, they act as hormones and travel through the bloodstream to various organs and muscles, further producing the features of arousal and fear.

When the perceived danger passes, a second group of autonomic nervous system fibers, called the **parasympathetic nervous system**, helps return our heartbeat and other body processes to normal. Together the sympathetic and parasympathetic nervous systems help control our arousal and fear reactions. They enable our body to function reliably across all kinds of situations.

The second pathway by which arousal and fear reactions are produced is the **hypothalamic-pituitary-adrenal (HPA)** pathway (see Figure 6-2). When we are confronted by stressors, the hypothalamus also signals the *pituitary gland*, which lies nearby, to secrete the *adrenocorticotropic hormone (ACTH)*, sometimes called the body’s “major stress hormone.” ACTH, in turn, stimulates the outer layer of the adrenal glands, an area called the *adrenal cortex*, triggering the release of a group of stress hormones called **corticosteroids**, including the hormone *cortisol*. These corticosteroids travel to various body organs where they further generate arousal and fear reactions. Eventually the corticosteroids signal the *hippocampus*, the brain part that seems to control emotional memories, and the hippocampus helps turn off the body’s arousal.

The reactions on display in these two pathways are collectively referred to as the *fight-or-flight* response, precisely because they arouse our body and prepare us for a response to danger. We all have particular patterns of autonomic and endocrine functioning and so particular ways of experiencing arousal and fear. One person may respond to a threat by perspiring and being gripped by a sense of dread; another may breathe faster and have difficulty concentrating, yet perspire very little. Similarly, we each have our own level of ongoing arousal and fear. Some people are almost always relaxed, while others typically feel some tension, even when

#### PARASYMPATHETIC NERVOUS SYSTEM

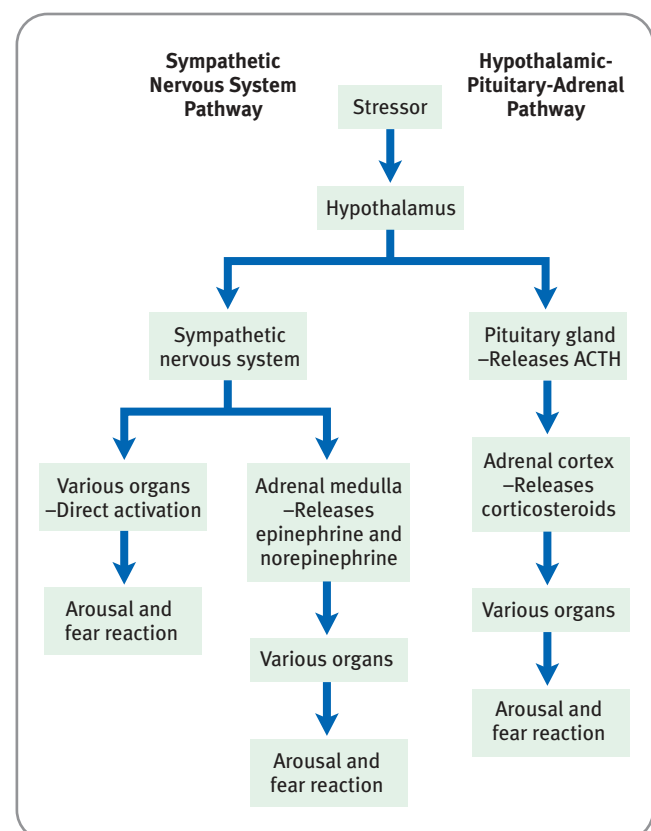
The nerve fibers of the autonomic nervous system that help maintain normal organ functioning. They also slow organ functioning after stimulation and return other bodily processes to normal.

#### HYPOTHALAMIC-PITUITARY-ADRENAL (HPA) PATHWAY

One route by which the brain and body produce arousal and fear. At times of stress, the hypothalamus signals the pituitary gland, which in turn signals the adrenal glands. Stress hormones are then released to various body organs.

**CORTICOSTEROIDS** A group of hormones, including cortisol, released by the adrenal glands at times of stress.

**FIGURE 6-2 Pathways of arousal and fear** When we are confronted by a stressor, our bodies produce arousal and fear reactions through two pathways. In one, the hypothalamus sends a message to the sympathetic nervous system, which then activates key body organs, either directly or by causing the adrenal medulla to release epinephrine and norepinephrine into the bloodstream. In the other pathway, the hypothalamus sends a message to the pituitary gland, which then signals the adrenal cortex to release corticosteroids—the stress hormones—into the bloodstream.





Thomas Ulrich/AdventurePhoto &amp; Film, Ventura, CA

**Individual experiences of anxiety** Although most people are terrified by the very thought of climbing a mountain, some are stimulated by the experience and others are even calmed by it. Such individual reactions represent differences in situation, or state, anxiety.

**TRAIT ANXIETY** The general level of anxiety that a person brings to the various events in his or her life.

**SITUATION ANXIETY** The various levels of anxiety produced in a person by different situations. Also called *state anxiety*.

**ACUTE STRESS DISORDER** An anxiety disorder in which fear and related symptoms are experienced soon after a traumatic event and last less than a month.

**POSTTRAUMATIC STRESS DISORDER** An anxiety disorder in which fear and related symptoms continue to be experienced long after a traumatic event.

no threat is apparent. A person's general level of arousal and anxiety is sometimes called **trait anxiety**, because it seems to be a trait or characteristic that each of us brings to the events in our lives (Spielberger, 1985, 1972, 1966). Psychologists have found that differences in trait anxiety appear soon after birth (Kagan & Snidman, 1999; Kalin, 1993).

People also differ in their sense of which situations are threatening (Soric, 1999; Walton et al., 1999). Walking through a forest may be fearsome for one person but relaxing for another. Flying in an airplane may arouse terror in some people and boredom in others. Such variations are called differences in **situation**, or **state**, **anxiety**.

## The Psychological Stress Disorders: Acute and Posttraumatic Stress Disorders

At the beginning of this chapter we observed Mark's reaction to the stress of combat and noted that it is common for persons in such traumatic situations to become anxious and depressed. For some, however, the symptoms of anxiety and depression, as well as other kinds of symptoms, persist well after the situation is over. These people may be suffering from **acute stress disorder** or **posttraumatic stress disorder**, patterns that arise in reaction to a psychologically traumatic event. The event usually involves actual or threatened serious injury to the person or to a family member or friend. Unlike the anxiety disorders that we examined in Chapter 5, which typically are triggered by objects or situations that most people would not find threatening, the situations that cause acute stress disorder or posttraumatic stress disorder—combat, rape, an earthquake, an airplane crash—would be traumatic for anyone.

If the symptoms begin within four weeks of the traumatic event and last for less than a month, DSM-IV assigns a diagnosis of *acute stress disorder* (APA, 2000, 1994). If the symptoms continue longer than a month, a diagnosis of *posttraumatic stress disorder* is assigned. The symptoms of posttraumatic stress disorder may begin either shortly after the traumatic event or months or years afterward (see Table 6-1). Many cases of acute stress disorder develop into posttraumatic stress disorder (Bremner, 2002; Brewin et al., 1999). Aside from the differences in onset and duration, the symptoms of these two disorders are almost identical:

**Reexperiencing the traumatic event** People may be battered by recurring memories, dreams, or nightmares connected to the event. A few relive the event so vividly in their minds (flashbacks) that they think it is actually happening again.

**Avoidance** People will usually avoid activities that remind them of the traumatic event and will try to avoid related thoughts, feelings, or conversations.

**Reduced responsiveness** Reduced responsiveness to events in the external world, often called “psychic numbing” or “emotional anesthesia,” may begin during or soon after the traumatic event. People feel detached or estranged from other people or lose interest in activities that once brought enjoyment. They may lose their ability to experience such intimate emotions as tenderness and sexuality. Some even experience symptoms of *dissociation*, or psychological separation: they feel dazed, have trouble remembering things, have a sense of derealization (feeling that the environment is unreal or strange), or experience depersonalization (their thoughts or body feel unreal or foreign to them).

**Increased arousal, anxiety, and guilt** People with these disorders may feel overly alert (hyperalertness), be easily startled, develop sleep problems, and have trouble concentrating. They may feel extreme guilt because they survived the traumatic event while others did not. Some also feel guilty about what they may have had to do to survive.

We can see these symptoms in the recollections of Vietnam combat veterans years after they returned home:

**Alan:** I can't get the memories out of my mind! The images come flooding back in vivid detail, triggered by the most inconsequential things, like a door slamming or the smell of stir-fried pork. Last night I went to bed, was having a good sleep for a change. Then in the early morning a storm-front passed through and there was a bolt of crackling thunder. I awoke instantly, frozen in fear. I am right back in Vietnam, in the middle of the monsoon season at my guard post. I am sure I'll get hit in the next volley and convinced I will die. My hands are freezing, yet sweat pours from my entire body. I feel each hair on the back of my neck standing on end. I can't catch my breath and my heart is pounding. I smell a damp sulfur smell.

(Davis, 1992)

**Lucas:** [My wife] said that I wasn't the loving guy she used to know and love, that something horrible must have happened to me over there to change me so completely. . . . She said that the look in my eyes was the look of a deeply terrorized person, with a long-distance stare, looking off into the beyond—not into the present with her at this time. She also mentioned that my frightened look and pallid complexion, my uptight way of sitting, talking, walking, you name it, my aloofness, and all that, made her too uncomfortable for us to continue our relationship. . . . Finally, as time went on, I realized that so many people couldn't be wrong about me. The change in me began to seem deep to me—deeper than I would ever have imagined to be the case.

(Brende & Parson, 1985, pp. 46–47)



Bettmann/Corbis

**The horror of combat** Soldiers often react to combat with severe anxiety or depression or both. These immediate responses to battle have at various times been called “shell shock,” “combat fatigue,” and most recently “acute stress disorder.”

Table 6-1 DSM-IV Checklist

#### POSTTRAUMATIC STRESS DISORDER

1. A history of having experienced, witnessed, or confronted event(s) involving death, serious injury, or threat to the physical integrity of self or others. Reaction of intense fear, helplessness, or horror produced by event.
2. Event persistently reexperienced in at least one of the following ways:
  - (a) Recurrent distressing recollections.
  - (b) Recurrent distressing dreams, illusions, flashbacks, or a sense of reliving the experience.
  - (c) Distress caused by reminders of event.
  - (d) Physical arousal produced by reminders of event.
3. Persistent avoidance of reminders of the event and a subjective sense of numbing, detachment, or emotional unresponsiveness.
4. At least two marked symptoms of increased arousal:
  - (a) Difficulty sleeping.
  - (b) Irritability.
  - (c) Poor concentration.
  - (d) Hypervigilance.
  - (e) Exaggerated startle response.
5. Significant distress or impairment, with symptoms lasting at least one month.

Based on APA, 2000, 1994.

**>>PSYCH•NOTES****The Legacy of War**

**Postnuclear Trauma** Major Claude Robert Eatherly was one of the pilots who dropped atom bombs on Hiroshima and Nagasaki in 1945. In subsequent years, feeling personally responsible for the nuclear devastation of the two cities, he made two suicide attempts and was hospitalized for psychological problems on several occasions (Hirsch et al., 1974).<<

**Returning Home** One-quarter of the 1.5 million combat soldiers who returned from Vietnam were arrested within two years of their return (Williams, 1983).<<

**Bosnian Victims** Studies indicate that between 18 and 50 percent of refugees from the wars in Bosnia and Kosovo developed a post-traumatic stress disorder (Favaro et al., 1999; Thulesius & Hakansson, 1999).<<

**What Triggers a Psychological Stress Disorder?**

An acute or posttraumatic stress disorder can occur at any age, even in childhood (Yule et al., 2001), and can affect one's personal, family, social, or occupational life (Resick, 2001). People with these stress disorders may also experience depression or substance abuse. A number become suicidal (Kotler et al., 2001; Amir et al., 1999). Around 4 percent of people in the United States experience one of the stress disorders in any given year; 8 percent suffer from one of them during their lifetimes (Bremner, 2002; Kessler et al., 1994). Women are at least twice as likely as men to develop the disorders: around 20 percent of women who are exposed to a serious trauma may develop one, compared to 8 percent of men (Ursano et al., 1999; Kessler et al., 1995). While any traumatic event can trigger a stress disorder, some are particularly likely to do so. Among the most common are combat, disasters, and abuse and victimization.

**COMBAT AND STRESS DISORDERS** For years clinicians have recognized that many soldiers develop symptoms of severe anxiety and depression during combat (Bremner, 2002; Oei et al., 1990). The pattern of symptoms was called “nostalgia” during the American Civil War because it was considered to be the result of extended absence from home (Bourne, 1970). It was called “shell shock” during World War I because it was thought to result from small brain hemorrhages or concussions caused by constant artillery explosions. During World War II and the Korean War, it was referred to as “combat fatigue” (Figley, 1978). Not until after the Vietnam War, however, did clinicians learn that a great many soldiers also experience serious psychological symptoms after combat.

In the first years after the Vietnam War, the psychological problems of combat veterans were generally overlooked, perhaps in part because of the nation's desire to leave this unpopular war behind. By the late 1970s, however, it had become apparent that many Vietnam combat veterans were still experiencing war-related psychological difficulties (Williams, 1983). We now know that as many as 29 percent of all veterans, male and female, who served in Vietnam suffered an acute or posttraumatic stress disorder, while another 22 percent suffered from at least some stress symptoms (Weiss et al., 1992). In fact, 10 percent of the veterans of this war still experience significant posttraumatic stress symptoms, including flashbacks, night terrors, nightmares, and persistent images and thoughts. Similarly, in a study of combat veterans of the Persian Gulf War, over one-third reported six months later that they were experiencing nightmares and were drinking more than before (Erickson et al., 2001; Labbate & Snow, 1992).

**DISASTERS AND STRESS DISORDERS** Acute and posttraumatic stress disorders may also follow natural and accidental disasters such as earthquakes, floods, tornadoes, fires, airplane crashes, and serious car accidents (see Table 6-2). In fact, because they occur more often, civilian traumas have been implicated in stress disorders at least 10 times as often as combat traumas (Bremner, 2002). Studies have found, for example, that as many as one-third of victims—adult or child—of serious traffic accidents may develop posttraumatic stress disorder within a year of the accident (Lowenstein, 2001; Ursano et al., 1999).

Similarly, several studies found stress reactions among the survivors of Hurricane Andrew, the storm that ravaged Florida and other parts of the southeastern United States in 1992 (Vernberg et al., 1996). By a month after the storm the number of calls received by the domestic violence hot line in Miami and the number of women applying for police protection had doubled (Treaster, 1992). By six months after the storm it was apparent that many elementary-school-age children were also victims of posttraumatic stress disorder; their symptoms ranged from misbehavior in school to failing grades and problems with sleep (Vernberg et al., 1996). One child said months afterward, “When I go to sleep, I think the storm is going to come, so I can't go to sleep.” Another recalled, “I was sleeping, and I thought it was coming again” (Gelman & Katel, 1993, p. 65).

**RAPE** Forced sexual intercourse or another sexual act committed against a nonconsenting person or intercourse with an underage person.

Table 6-2

## Worst Natural Disasters of the Twentieth Century

DISASTER	YEAR	LOCATION	NUMBER KILLED
Flood	1926	Huang He River, China	3,700,000
Earthquake	1926	Tangshan, China	242,419
Volcanic eruption	1902	Mont-Pélee, Martinique	40,000
Landslide	1970	Yungay, Peru	17,500
Tidal wave	1960	Agadir, Morocco	12,000
Avalanche	1916	Italian Alps	10,000
Tornado	1989	Shaturia, Bangladesh	1,300

Adapted from Ash, 2001, 1999, 1998.

**VICTIMIZATION AND STRESS DISORDERS** People who have been abused, victimized, or terrorized often experience lingering stress symptoms. More than one-quarter of all cases of posttraumatic stress disorder are the result of physical or sexual assault (Keane & Barlow, 2002; Norris, 1992). Indeed, research suggests that more than one-third of all victims of assault develop posttraumatic stress disorder (Jaycox & Foa, 2001). Similarly, as many as half of all civilians who are directly exposed to terrorism or torture may develop this disorder.

**SEXUAL ASSAULT** A common form of victimization in our society today is sexual assault. **Rape** is forced sexual intercourse or another sexual act committed against a nonconsenting person or intercourse with an underage person. Surveys suggest that in the United States more than 876,000 persons are victims of rape each year (NCVS, 1998). Most rapists are men and most victims are women. Around one in seven women is raped at some time during her life (Keane & Barlow, 2002). Surveys also suggest that most rape victims are young: 29 percent are under 11 years old, 32 percent are between the ages of 11 and 17, and 29 percent are between 18 and 29. More than 80 percent of the victims are raped by acquaintances or relatives (NCVS, 1998; Koss, 1992).

The psychological impact of rape on a victim is immediate and may last a long time (Koss & Kilpatrick, 2001). Rape victims typically experience enormous distress during the week after the assault. Stress continues to rise for the next 3 weeks, maintains a peak level for another month or so, and then starts to improve (Koss, 1993). In one study, 94 percent of rape victims fully qualified for a clinical diagnosis of acute stress disorder when they were observed an average of 12 days after the assault (Rothbaum et al., 1992). Although most rape victims improve psychologically within 3 or 4 months, the effects may persist for up to 18 months or longer. Victims typically continue to have higher than average levels of anxiety, suspiciousness, depression, self-esteem problems, self-blame, flashbacks, sleep problems, and sexual dysfunction (Arata, 1999; Moncrieff et al., 1996). The lingering psychological impact of rape is apparent in the following case description:



**Victimization and posttraumatic stress disorder**  
*Many survivors of Nazi concentration camps faced a long road back to psychological health. Because knowledge of posttraumatic stress disorder was nonexistent until recent years, most survivors had to find their way back without professional help.*



**>>PSYCH•NOTES****Victims of Violence**

**Gender Differences** Rates of reported rape and other sexual assaults against women are 10 times higher than those against men (U.S. Department of Justice, 1995). Over 80 percent of male rapes are committed by other men (NCVS, 1998).<<

**Violence Timetable** In the United States, a violent crime is committed every 16 seconds, a rape every 5 minutes, a murder every 21 minutes (FBI Uniform Crime Report).<<

**Rebound Effect** In one study, rape victims suffering from posttraumatic stress disorder were instructed to deliberately suppress all thoughts about their sexual assault. This strategy not only failed to help them but led to a rise in rape-related thoughts (Shipherd & Beck, 1999).<<

Mary Billings is a 33-year-old divorced nurse, referred to the Victim Clinic at Bedford Psychiatric Hospital for counseling by her supervisory head nurse. Mary had been raped two months ago. The assailant gained entry to her apartment while she was sleeping, and she awoke to find him on top of her. He was armed with a knife and threatened to kill her and her child (who was asleep in the next room) if she did not submit to his demands. He forced her to undress and repeatedly raped her vaginally over a period of 1 hour. He then admonished her that if she told anyone or reported the incident to the police he would return and assault her child.

After he left, she called her boyfriend, who came to her apartment right away. He helped her contact the Sex Crimes Unit of the Police Department, which is currently investigating the case. He then took her to a local hospital for a physical examination and collection of evidence for the police (traces of sperm, pubic hair samples, fingernail scrapings). She was given antibiotics as prophylaxis against venereal disease. Mary then returned home with a girlfriend who spent the remainder of the night with her.

Over the next few weeks Mary continued to be afraid of being alone and had her girlfriend move in with her. She became preoccupied with thoughts of what had happened to her and the possibility that it could happen again. Mary was frightened that the rapist might return to her apartment and therefore had additional locks installed on both the door and the windows. She was so upset and had such difficulty concentrating that she decided she could not yet return to work. When she did return to work several weeks later, she was still clearly upset, and her supervisor suggested that she might be helped by counseling.

During the clinic interview, Mary was coherent and spoke quite rationally in a hushed voice. She reported recurrent and intrusive thoughts about the sexual assault, to the extent that her concentration was impaired and she had difficulty doing chores such as making meals for herself and her daughter. She felt she was not able to be effective at work, still felt afraid to leave her home, to answer her phone, and had little interest in contacting friends or relatives.

. . . [Mary] talked in the same tone of voice whether discussing the assault or less emotionally charged topics, such as her work history. She was easily startled by an unexpected noise. She also was unable to fall asleep because she kept thinking about the assault. She had no desire to eat, and when she did attempt it, she felt nauseated. Mary was repelled by the thought of sex and stated that she did not want to have sex for a long time, although she was willing to be held and comforted by her boyfriend.

*(Spitzer et al., 1983, pp. 20–21)*

Although many rape victims are injured by their attacker or experience other physical problems as a result of their assault, only half receive the kind of formal medical care afforded Mary (Beebe, 1991; Koss, Woodruff, & Koss, 1991). Between 4 and 30 percent of victims develop a sexually transmitted disease (Koss, 1993; Murphy, 1990) and 5 percent become pregnant (Beebe, 1991; Koss et al., 1991), yet a national survey revealed that 60 percent of rape victims received no pregnancy testing or preventive measures and 73 percent received no information or testing for exposure to HIV (National Victims Center, 1992).

Female victims of rape and other crimes are also much more likely than other women to suffer serious long-term health problems (Leserman et al., 1996; Koss & Heslet, 1992). Interviews with 390 women revealed that such victims had poorer physical well-being for at least five years after the crime and made twice as many visits to physicians. It is not yet clear why rape and other assaults lead to these long-term health problems.

As we shall see in Chapter 19, ongoing victimization and abuse in the family—specifically spouse and child abuse—may also lead to psychological stress disorders



Alain Keler/Sigma

**Recovery from trauma** Many people eventually overcome the effects of traumatic stress. During a reunion, these concentration camp survivors proudly display their tattooed camp identification numbers as symbols of their triumph over their psychological wounds.

(Jones et al., 2001; McLeer et al., 1998). Because these forms of abuse may occur over the long term and violate family roles and trust, many victims develop other symptoms and disorders as well (Kemp et al., 1995).

**TERRORISM** People who are victims of terrorism or who live under the threat of terrorism often experience posttraumatic stress symptoms (Schlenger et al., 2002). Unfortunately, this source of traumatic stress is on the rise in our society. Few will ever forget the events of September 11, 2001, when hijacked airplanes crashed into and brought down the World Trade Center in New York City and partially destroyed the Pentagon in Washington, D.C., killing thousands of victims and rescue workers and forcing thousands more to desperately run, crawl, and even dig their way to safety. One of the many legacies of this infamous event is the lingering psychological effect that it has had on those people who were immediately affected and their family members, and on tens of millions of others who were traumatized simply by watching images of the disaster on their television sets as the day unfolded (Bremner, 2002). A number of recent studies clarify that acute stress reactions were common indeed among victims and observers in the days following the terrorist attacks, that thousands more experienced posttraumatic stress symptoms in the months that followed, and that these symptoms and disorders will, in many cases, linger for years (see Box 6-2 on the next page).

### Why Do People Develop a Psychological Stress Disorder?

Clearly, extraordinary trauma can cause a stress disorder. The stressful event alone, however, may not be the entire explanation. Certainly, anyone who experiences an unusual trauma will be affected by it, but only some people develop a disorder (Keane & Barlow, 2002; McNally, 2001). To understand the development of stress disorders more fully, researchers have looked to the survivors' biological processes, personalities, childhood experiences, and social support systems and to the severity of the traumas.

**BIOLOGICAL AND GENETIC FACTORS** Investigators have gathered evidence that traumatic events trigger physical changes in the brain and body that may lead to severe stress reactions and, in some cases, to stress disorders. They have, for example, found abnormal activity of the hormone *cortisol* and the neurotransmitter/hormone *norepinephrine* in the urine and blood of combat soldiers, rape victims,

#### >>Q & A

##### What Is Angst?

*Angst* (pronounced *ahnxt*) is a term for psychological suffering. The German for “anguish,” the term entered the English language in the early twentieth century. *Angst* may result from specific pressures during specific periods in one’s life—for example, it may be experienced by a teenager who discovers a friend has betrayed her or by a young adult who doesn’t know what he is doing with his life. (Padwa, 1999; *Oxford English Dictionary*, 1995).<<

## BOX 6-2

### September 11, 2001: The Psychological Aftermath



Spencer Platt / Getty Images

York City and the Pentagon in Washington, D.C. The attacks resulted in mass casualties and injuries, affecting not only the immediate victims and survivors but the entire nation, as millions witnessed the resulting death and destruction on television. Studies conducted since that fateful day have confirmed what psychologists knew all too well would happen—that in the aftermath of September 11, many individuals experienced immediate and long-term psychological and physical effects, ranging from brief stress reactions, such as shock, fear, and anger, to enduring psychological disorders, such as posttraumatic stress disorder.

In a survey conducted the week after the terrorist attacks, 560 randomly selected adults across the United States were interviewed. Forty-four percent of them reported substantial stress symptoms; 90 percent reported at least some degree of heightened stress (Schuster et al., 2001). Moreover, individuals closest to the disaster site experienced the most

substantial stress reactions: 61 percent of adults living within 100 miles of the World Trade Center had substantial stress symptoms, compared to 36 percent of those living over 1,000 miles from the site.

A later survey of close to 2,000 individuals revealed that many Americans were still feeling the psychological effects of September 11 five months after the terrorist attacks (Bossolo & Lichtenstein, 2002). Nearly 25 percent of Americans reported that they continued to feel more depressed or anxious since the time of the attacks, and 77 percent said that they were still trying to gain perspective on

**O**n September 11, 2001, the United States experienced the most catastrophic act of terrorism in history when four commercial airplanes were hijacked and three of them were crashed into the twin towers of the World Trade Center in New



AP Photo/Suzanne Plunkett

#### During the first week

*What percentage of the population had substantial stress reactions?*

Adults	44%
Children	35
Women	50
Men	37
Nonwhite Americans	62
White Americans	41
Residents within 100 miles of attack	61
Residents beyond 1,000 miles of attack	36
Viewed TV for more than 13 hours on Sept. 11	58
Viewed TV for less than 7 hours on Sept. 11	39

(Schuster et al., 2001)

#### One month later

*What percentage of the population developed posttraumatic stress disorder?*

Adults who live in New York City	11%
Adults who live in Washington, D.C.	3
Adults who live in the United States	4
Adults who had watched TV for more than 12 hours on September 11	10
Adults who had watched TV for fewer than 7 hours on September 11	4
Adults whose relatives or friends were injured or killed on September 11	13
Adults who did not know persons injured or killed on September 11	4

(Schlenger et al., 2002)



their lives and to reprioritize their goals. A related study indicated that people who had experienced a greater number of traumas in the past

were more likely than others to develop stress symptoms and disorders in the aftermath of September 11 (Pugh, 2003).

Research focusing specifically on New Yorkers indicated that they were almost twice as likely as those living elsewhere to develop depressive, anxiety, or posttraumatic stress disorders (Bossolo & Lichtenstein, 2002). In addition, 40 percent of New York residents (twice the national average) reported extreme nervousness and anxiety at the sound of sirens or the sight of airplanes flying above.

Still other studies have been conducted, each looking at a particular aspect of the September 11 attack and its enormous psychological impact. Presented here are some notable findings from these studies, each serving in its own way to build a more complete understanding of this trauma and its lingering effects, and each helping clinicians to better serve the victims of both this disaster and other kinds of disasters.

### One year later

*What percentage of adults changed their attitudes and behaviors as a result of the attacks?*

More accepting of psychotherapy	14%
Feel less safe in our homes	23
More distrustful of neighbors	11
Wrote or rewrote will	6
Purchased a house security system	4

(Fetto, 2002; Gardwyn, 2002)

*What percentage of parents changed their approach to family life as a result of the attacks?*

Consider family more of a priority	78%
Designate more family time to children	35
Call family members more often	30
Stricter about letting children go places alone	26
Worry more about children attending large-crowd events	26
Spend more money on gifts to family	19
Bought cell phone for family	15
Bought more life insurance	8

(Gardwyn, 2002)

*How were New Yorkers changed by the attacks?*

Consider life back to normal	65%
Feel uneasy about traveling by subway	36
Feel uneasy about entering skyscrapers	26
Concerned about another terrorist attack on city	70
Schoolchildren with posttraumatic stress disorder	11

(Connelly & Dutton, 2002; Lord, 2002)

*How did children's attitudes change as a result of the attacks?*

Think about attacks at least a few times a month	58%
Feel less safe traveling	46
Feel less safe in public places	35
Feel less safe at home	3
Feel less safe at school	16
Feel future bombings or other attacks are somewhat likely	51
Feel attacks have changed "the way I live my life"	27

(Time Poll, 2002)

**>>LOOKING AROUND**

**Generation Gap** Over 74% of middle-aged persons in the United States and United Kingdom believe that life is more stressful today than it was 50 years ago. Fewer than half of teenagers and young adults agree (Paul, 2002).<<

**The Pressures of Everyday Life** Almost one-third of surveyed adults report always feeling rushed, and more than half say they have felt considerable stress in the past two weeks (Americans Use of Time Project for 1995).<<

concentration camp survivors, and survivors of other severe stresses (Bremner, 2002; Tobin, 2001).

Perhaps people whose biochemical reactions to stress are particularly strong are more likely than others to develop acute and posttraumatic stress disorders (Kellner & Yehuda, 1999; Shalev, 1999). But why would certain people be prone to such strong biological reactions? It may be that the propensity is inherited. One study of approximately 4,000 pairs of twins who had served in the Vietnam War found that if one twin developed stress symptoms after combat, an identical twin was more likely than a fraternal twin to develop the same problems (True & Lyons, 1999; True et al., 1993). We must remember, though, that the similarities seen in identical twins do not always reflect genetic influences: childhood experiences, personalities, and support systems may also be more similar in identical twins than in fraternal twins and explain the greater similarity in their reactions to stress.

There is also evidence that once a stress disorder unfolds, other biological changes follow. Research suggests, for example, that people with posttraumatic stress disorder experience more health problems after the trauma than before it (Schnurr & Spiro, 1999). Apart from these changes, the heightened biochemical arousal that these victims continue to experience may eventually damage their hippocampus, the brain area that helps regulate the body's stress hormones (Bremner, 2002, 1999; Bremner et al., 1999). Such damage and the abnormal biochemical activity it produces may exacerbate the stress disorder.

**PERSONALITY** Some studies suggest that people with certain personality profiles, attitudes, and coping styles are more likely to develop stress disorders (McFarlane, 1999; Schnurr & Vielhauer, 1999). In the aftermath of Hurricane Hugo, for example, children who had been highly anxious before the storm were more likely than other children to develop severe stress reactions (Lonigan et al., 1994). Similarly, the victims who are most likely to develop stress disorders after being raped are the ones who had psychological problems before they were raped or who were struggling with stressful life situations (Darvres-Bornoz et al., 1995). The same is true of war veterans who had psychological problems before they went into combat (Orsillo et al., 1996). Finally, people who generally view life's negative events as beyond their control tend to develop more severe stress symptoms after sexual or other kinds of criminal assaults than people who feel greater control over their lives (Regehr, Cadell, & Jansen, 1999). These findings coincide with another discovery: that many people respond to stress with a set of positive attitudes, collectively called *resiliency* or *hardiness*, that enables them to carry on their lives with a sense of fortitude, control, and commitment (Bremner, 2002; Oulette, 1993).

**CHILDHOOD EXPERIENCES** A recent wave of studies has found that certain childhood experiences seem to leave some people at risk for later acute and posttraumatic stress disorders. People whose childhoods have been marked by poverty appear more likely to develop these disorders in the face of later trauma. So do people whose family members suffered from psychological disorders; who experienced assault, abuse, or catastrophe at an early age; or who were younger than 10 when their parents separated or divorced (Bremner, 2002; Breslau et al., 1999; Bremner et al., 1993).

Such childhood experiences may help produce the personality styles or attitudes that have been linked to stress disorders. Perhaps their early situations teach children that the world is an unpredictable and dangerous place. In Chapter 5 we observed that such a worldview may set the stage for generalized anxiety disorder. Similarly, it may lead people to react more hopelessly and fearfully to extraordinary trauma, and so increase their risk of developing a stress disorder.

**Protection by personality** Millions reacted to the San Francisco earthquake of 1989 with dread and panic, but some laid-back individuals thrived on all the excitement. Their "hardy" personality styles may have helped to protect them from the development of stress disorders.



**SOCIAL SUPPORT** It has been found that people whose social support systems are weak are also more likely to develop a stress disorder after a traumatic event (Perry et al., 1992). Rape victims who feel loved, cared for, valued, and accepted by their friends and relatives recover more successfully. So do those treated with dignity and respect by the criminal justice system (Davis, Brickman, & Baker, 1991; Sales, Baum, & Shore, 1984). In contrast, clinical reports have suggested that poor social support has contributed to the development of posttraumatic stress disorder in some combat veterans (Taft et al., 1999; Figley & Leventman, 1990).

**SEVERITY OF TRAUMA** As one might expect, the severity and nature of traumatic events help determine whether an individual will develop a stress disorder. Some events can override even a nurturing childhood, positive attitudes, and social support (Keane & Barlow, 2002) (see Table 6-3). One study examined 253 Vietnam War prisoners five years after their release. Some 23 percent qualified for a clinical diagnosis, though all had been evaluated as well adjusted before their imprisonment (Ursano, Boydston, & Wheatley, 1981).

Generally, the more severe the trauma and the more direct one's exposure to it, the greater the likelihood of developing a stress disorder (Bremner, 2002; King et al., 1996). Among the Vietnam prisoners of war, for example, the men who had been imprisoned longest and treated most harshly had the highest percentage of disorders. Mutilation and severe physical injury in particular seem to increase the risk of stress reactions, as does witnessing the injury or death of other people. It is, as a survivor of trauma once said, "hard to be a survivor" (Kolff & Doan, 1985, p. 45).

### >>PSYCH•NOTES

#### Disaster's Aftermath

"It Could Have Been Sammy" Disaster workers who deal with the remains of deceased victims are more likely to develop a stress disorder if they identify with the victims—"It could have been my family" (Ursano et al., 1999).<<

Unnatural Disaster Around one-third of the adults who were inside or just outside the Oklahoma City federal building at the time of the 1995 bombing developed posttraumatic stress disorder (North et al., 1999).<<

Table 6-3

#### Initial Reactions to 1963 Kennedy Assassination and 2001 Terrorist Attacks (percent)

SYMPTOM	KENNEDY ASSASSINATION	TERRORIST ATTACKS
Felt anger	44%	65%
Felt very nervous and tense	68	51
Felt sort of dazed and numb	57	46
Cried	53	60
Had trouble getting to sleep	48	50
Didn't feel like eating	43	29
Felt more tired than usual	42	36
Kept forgetting things	34	19
Had rapid heartbeats	26	16
Had headaches	25	20
Had an upset stomach	22	35
Hands sweat, felt clammy	17	9
Felt dizzy at times	12	8
Felt ashamed that this could happen in the U.S.	50	22

(Smith & Rasinski, 2002)

### >>LOOKING AROUND Crowded Conditions

Crowded living conditions are one form of societal stress that may arouse anxiety. The most crowded cities in the world are Manila (108,699 people per square mile), Shanghai, Cairo, Paris, and Bombay. The most crowded states in the United States are New Jersey (1,042 people per square mile), Rhode Island, Massachusetts, Connecticut, and Maryland (Cohl, 1997).<<

## How Do Clinicians Treat the Psychological Stress Disorders?

Treatment can make a major difference to a person who has been overwhelmed by traumatic events (Suinn, 2001) (see Box 6–3). One survey found that post-traumatic stress symptoms lasted an average of three years with treatment but five and a half years without it (Kessler & Zhao, 1999; Kessler et al., 1995). Today's treatment procedures for troubled survivors typically vary from trauma to trauma. Was it combat, sexual molestation, or a major accident? Yet all the programs share basic goals: they try to help survivors put an end to the lingering stress reactions, gain perspective on their traumatic experiences, and return to constructive living. Programs for combat veterans who suffer from posttraumatic stress disorder illustrate how these issues may be addressed.

**TREATMENT FOR COMBAT VETERANS** Therapists have used a variety of techniques to reduce veterans' posttraumatic symptoms. Among the most common are *drug therapy*, *exposure techniques*, *insight therapy*, *family therapy*, and *group therapy*. Typically the approaches are combined, as no one of them successfully reduces all the symptoms.

Antianxiety drugs help control the tension and exaggerated startle responses that many veterans experience. In addition, antidepressant medications may reduce the occurrence of nightmares, panic attacks, flashbacks, unwanted recollections, and feelings of depression (van der Kolk, 2001; Friedman, 2000).

Behavioral exposure techniques, too, have helped reduce specific symptoms, and they have often led to improvements in overall adjustment (Keane & Barlow, 2002). Flooding, along with relaxation training, helped rid a 31-year-old veteran of frightening flashbacks and nightmares (Fairbank & Keane, 1982). The therapist and the veteran first singled out combat scenes that the man had been reexperiencing frequently. The therapist then helped the veteran to imagine one of these scenes in great detail and urged him to hold on to the image until his anxiety stopped. After each of these flooding exercises, the therapist had the veteran switch to a positive image and led him through relaxation exercises.

A relatively new form of exposure therapy is **eye movement desensitization and reprocessing**, in which clients move their eyes in a *saccadic*, or rhythmic, manner from side to side while flooding their minds with images of the objects and situations they ordinarily try to avoid. According to some case studies, a variety of psychological problems have improved dramatically when treated with this approach, including posttraumatic fears and memories. In fact, a few clients are said to have improved after only one session (Lipke & Botkin, 1992; Puk, 1991). Controlled studies of the approach have reported more modest successes, but at least some of them suggest that this treatment can be helpful (Davidson & Parker, 2001; Jaycox & Foa, 2001).

Although drug therapy and exposure techniques bring some relief, most clinicians believe that veterans with posttraumatic stress disorder cannot fully recover with these approaches alone: they must also come to grips in some way with their combat experiences and the impact those experiences continue to have (Marmar et al., 1993). Thus clinicians often try to help veterans bring out deep-seated feelings, accept what they have done and experienced, become less judgmental of themselves, and learn to trust other people once again (Shay & Munroe, 1999). Similarly, cognitive therapists help individuals with posttraumatic stress disorder to systematically examine and change their dysfunctional attitudes and styles of interpretation that have emerged as a result of the traumatic event (Jaycox & Foa, 2001; Resick & Calhoun, 2001). In research along these lines, the psychologist James Pennebaker has found that talking (or even writing) about traumatic experiences can reduce lingering anxiety and tension, particularly if individuals try to develop perspective and growth in their discussions or writings (Smyth & Pennebaker, 2001).

People who have a psychological stress disorder are sometimes helped to express their feelings and develop insight in couple or family therapy formats (Glynn et al., 1995; Johnson, Feldman, & Lubin, 1995). The symptoms of post-

**EYE MOVEMENT DESENSITIZATION AND REPROCESSING** A behavioral exposure treatment in which clients move their eyes in a saccadic (rhythmic) manner from side to side while flooding their minds with images of objects and situations they ordinarily avoid.

**RAP GROUP** A group that meets to talk about and explore members' problems in an atmosphere of mutual support.

## B O X 6-3

**Adjustment Disorders: A Category of Compromise?**

Some people react to a major stressor in their lives with extended and excessive feelings of anxiety, depressed mood, or antisocial behaviors. The symptoms do not quite add up to acute stress disorder or posttraumatic stress disorder, nor do they reflect an anxiety or mood disorder, but they do cause considerable distress or interfere with the person's job, schoolwork, or social life. Should we consider such reactions normal? No, says DSM-IV. Somewhere between effective coping strategies and posttraumatic stress disorder or other such syndromes lie the *adjustment disorders* (APA, 2000, 1994).

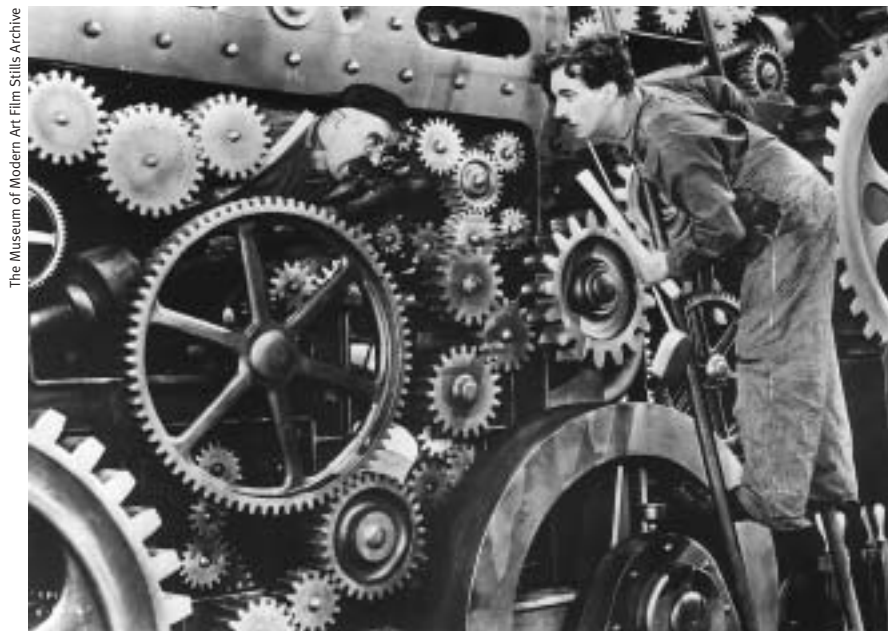
DSM-IV lists several types of adjustment disorders, including *adjustment disorder with anxiety* and *adjustment disorder with depressed mood*. People receive such diagnoses if they develop their symptoms within three months of the onset of a stressor. The symptoms may continue for as long as six months after the stressor subsides. If the stressor is long-term, such as a medical condition, the adjustment disorder may last indefinitely.

Almost any kind of stressor may trigger an adjustment disorder.

Common ones are the breakup of a relationship, marital problems, business difficulties, and living in a crime-ridden neighborhood. The disorder may also be triggered by developmental events such as going away to school, getting married, becoming a parent, or retiring from a job.

Up to 30 percent of all people in outpatient therapy receive this diagno-

sis; it accounts for far more claims for treatment submitted to insurance companies than any other (APA, 2000). However, some experts doubt that adjustment disorders are as common as this figure suggests. Rather, the diagnosis seems to be a favorite among clinicians—it can easily be applied to a range of problems yet is less stigmatizing than many other categories.



traumatic stress disorder tend to be particularly apparent to family members, who may be directly affected by the client's anxieties, depressive mood, or angry outbursts (Catherall, 1999). With the help and support of their family members, trauma victims may come to recognize the feelings they are grappling with, examine their impact on others, learn to communicate better, and improve their problem-solving skills.

Veterans may also benefit from **rap groups**, where they meet with others like themselves to share experiences and feelings, develop insights, and give mutual support. Many veterans find it easier to recall events in a rap group and to confront feelings they have been trying to avoid for years (Ford & Stewart, 1999). One of the major issues rap groups deal with is guilt—guilt about things the members may have done to survive or about the very fact that they did survive while close friends died. Once the veterans are finally able to talk openly about their combat experiences and guilt feelings, they may finally start to recover from them and weigh their responsibility for past actions more accurately (Lifton, 1973). Rap groups may also focus on the rage many combat veterans feel.

Today hundreds of small *Veteran Outreach Centers* across the country, as well as numerous treatment programs in Veterans Administration hospitals and mental health clinics, specialize in rap groups (Ford & Stewart, 1999). These agencies also offer individual therapy, counseling for the spouses and children of troubled





J.P. Laffont/Sygma

**Sharing painful memories and feelings** *Rap groups have helped many Vietnam veterans overcome the anxiety, depression, sleep problems, and flashbacks that still linger years after the war.*

veterans, family therapy, and aid in seeking jobs, education, and benefits. Research into the effectiveness of these programs has been limited (Funari, Piekarski, & Sherwood, 1991). However, the clinical reports and empirical studies that have been done suggest that they offer a necessary, sometimes life-saving treatment opportunity. Julius's search for help upon his return from Vietnam was, unfortunately, an ordeal that many veterans have shared:

When I got back from the 'Nam, I knew I needed psychotherapy or something like that. I just knew that if I didn't get help I was going to kill myself or somebody else. . . . I went to see this doctor; he barely looked at me. I felt he "saw me coming" and knew all about my sickness. I was the "sicky" to him. He just kept on asking me all that bullshit about how many children I had killed and was I guilty and depressed about it. He asked how it felt to kill people. He also kept on asking me about my brothers and sisters. But he never asked me about what my experiences were like in Vietnam. He never did. I saw him for treatment for about a month—about three visits, but I quit because we weren't getting anywhere. . . . He just kept on giving me more and more medications. I could've set up my own pharmacy. I needed someone to talk to about my problems, my real problems, not some bullshit about my childhood. I needed someone who wanted to help. The clinic later referred me to another shrink. . . . I guess she thought she was being honest with me, by telling me that she was not a veteran, was not in Vietnam, and did not know what was wrong with me. She also told me that she had no experience working with Vietnam veterans, and that I should go to the Veterans Administration for help. . . .

It was only in the last 3 years when my wife made an important phone call to a local Veterans Outreach Center that I started feeling I had hope, that something could be done for me. I received the help that I have always needed. Finally, I found it easier to hold a job and take care of my family. My nightmares are not as frightening or as frequent as they used to be. Things are better now; I am learning to trust people and give more to my wife and children.

*(Brende & Parson, 1985, pp. 206–208)*

### COMMUNITY THERAPY: THE SOCIOCULTURAL MODEL IN ACTION

People who are traumatized by disasters, victimization, or accidents may profit from many of the same treatments that are used to help survivors of combat. In addition, because their traumas occur in their own community, where mental health resources are close at hand, these individuals may profit from immediate community interventions. A case in point is the rapidly mobilized community care now offered by mental health professionals across the world to victims of large-scale disasters. These professionals typically receive special training in the delivery of emergency mental health services, called **critical incident stress debriefing** (Clay, 1999).

One of the largest such programs is the *Disaster Response Network (DRN)*, developed in 1991 by the American Psychological Association and the American Red Cross. The network is made up of more than 2,000 volunteer psychologists who offer free emergency mental health services at disaster sites throughout North America (Daw, 2002, 2001). They have been mobilized for such disasters as Hurricane Andrew in 1992, earthquakes in southern California, the 1995 Oklahoma City bombing, the 1999 shooting of 23 persons at Columbine High School in Colorado, and the 2001 World Trade Center attack.

Traditional long-term mental health services may not always be appropriate, available, or sought after a disaster. In fact, many survivors do not even recognize their own degree of upset in the aftermath of disaster (Michaelson, 1993). Thus the short-term community intervention provided by the Disaster Response Network and similar programs seems to fill a real need (Daw, 2002, 2001). People who live in poverty are in particular need of community-level interventions. These survivors apparently experience more psychological distress after disasters than survivors with higher incomes (Gibbs, 1989); they cannot afford private counseling, and they are less likely to know where to seek counseling.

The first aim of mental health professionals in disaster settings is to help survivors meet their basic needs as quickly as possible. During the Midwest flood of 1993, for example, professionals worked in shelters and service centers and rode in Red Cross emergency vehicles to deliver food and water along with counseling services. Some counselors joined flood victims in piling sandbags to protect their homes from further damage. The counselors also used these early contacts to determine which victims were most in need of psychological help.

Once mental health volunteers become involved in the community, they may act more directly to help meet the psychological needs of the disaster victims. They often use a four-stage approach (Michaelson, 1993):

- 1. Normalize people's responses to the disaster.** The counselors educate survivors about the symptoms they may be experiencing, such as sleep disturbances, difficulty concentrating, or feelings of grief. Essentially, survivors are given permission to have these reactions and told that they are normal responses to a disaster.
- 2. Encourage expressions of anxiety, anger, and frustration.** To reduce the anxiety, anger, and frustration that survivors often feel after a disaster, counselors help them talk about their experiences and their feelings.
- 3. Teach self-helping skills.** Counselors train survivors to develop stress management and other self-help skills.
- 4. Provide referrals.** The workers eventually may refer survivors to other professionals who can provide long-term counseling (Sleek, 1997). It is estimated that between 15 and 25 percent of survivors need this specialized assistance.

Relief workers, too, can become overwhelmed by the traumas they witness (Ursano et al., 1999). During the 1992 Los Angeles riots, for example, a key



Charles S. Porter IV/Sygma

**Everyone is affected** A fire captain cradles one-year-old Baylee Almon, a child killed in the bombing of the Oklahoma City federal building. This famous photograph reminds us that rescue workers are themselves subjected to enormous stress and trauma during disasters (Bryant & Harvey, 1995).

**CRITICAL INCIDENT STRESS DEBRIEFING**  
Training in how to help victims talk about their feelings and reactions to traumatic incidents.

responsibility of many community mental health counselors was to help Red Cross workers vent and accept their own feelings as well as teach them about stress disorders and how to identify victims who needed further treatment. Many mental health professionals who live in a disaster area need counseling themselves, since they, too, are survivors. The dual role they are thrown into may make it hard for them to deal with their own experiences.

Although this approach has detractors (see Box 6-4), most professionals believe that intervention at the community level is highly useful after a disaster. And sadly, our world seems to offer ever-increasing opportunities to test that belief. In the immediate aftermath of the explosion of TWA Flight 800 in July 1996, close to 500 mental health professionals were mobilized to counsel family members, flight crews, rescue personnel, and others affected by the disaster (Seppa, 1996). Similarly, 1,600 mental health workers reached out to more than 57,000 people during the weeks following the World Trade Center attack in 2001 (Pepe, 2002).

#### BOX 6-4

##### Disaster Counseling: The Other Side

Rapid-mobilization mental health programs for disaster victims are growing in number and popularity. Studies of these programs typically yield favorable results, and personal testimonials are supportive as well. At the same time, a number of clinical theorists question the effectiveness of these interventions (Stoil, 2001; Gist & Woodall, 1999).

An investigation conducted several years ago was among the first to raise concerns about the disaster mental health programs (Bisson & Deahl, 1994). Crisis counselors worked with

62 British soldiers whose job during the Gulf War was to handle and identify the bodies of individuals who had been killed. After receiving nine months of crisis counseling, half of the soldiers nevertheless displayed post-traumatic stress symptoms, a finding that led some theorists to conclude that disaster intervention programs do not really make much difference. Still worse, some clinicians now worry that the programs may encourage victims to dwell too long on the traumatic events that they have experienced. Moreover, certain clinicians are con-

cerned that early disaster counseling may inadvertently “suggest” problems to victims, thus helping to produce stress disorders in the first place (McClelland, 1998).

Finally, questions have been raised about the *cultural competence* of the crisis counselors. When hundreds of clinicians were mobilized in New York City after the attacks of September 11, 2001, for example, many wound up working with residents of the Chinatown neighborhood, near the World Trade Center. It is not clear that the crisis intervention techniques of these counselors were fully appropriate for a population that prefers to speak Cantonese and whose culture is often uncomfortable with the kinds of self-revelations that characterize Western therapy (Stoil, 2001).

The current clinical climate continues to favor disaster counseling, and such programs may indeed prove to be as helpful as many clinicians believe. However, the concerns that have been raised merit serious consideration. We are reminded here, as elsewhere, of the constant need for careful research in the field of abnormal psychology.

**Essential or excessive?** A relief worker comforts the family member of a victim of Egypt Air Flight 990, the plane that crashed off Nantucket Island in 1999 under mysterious circumstances, killing all 217 aboard.



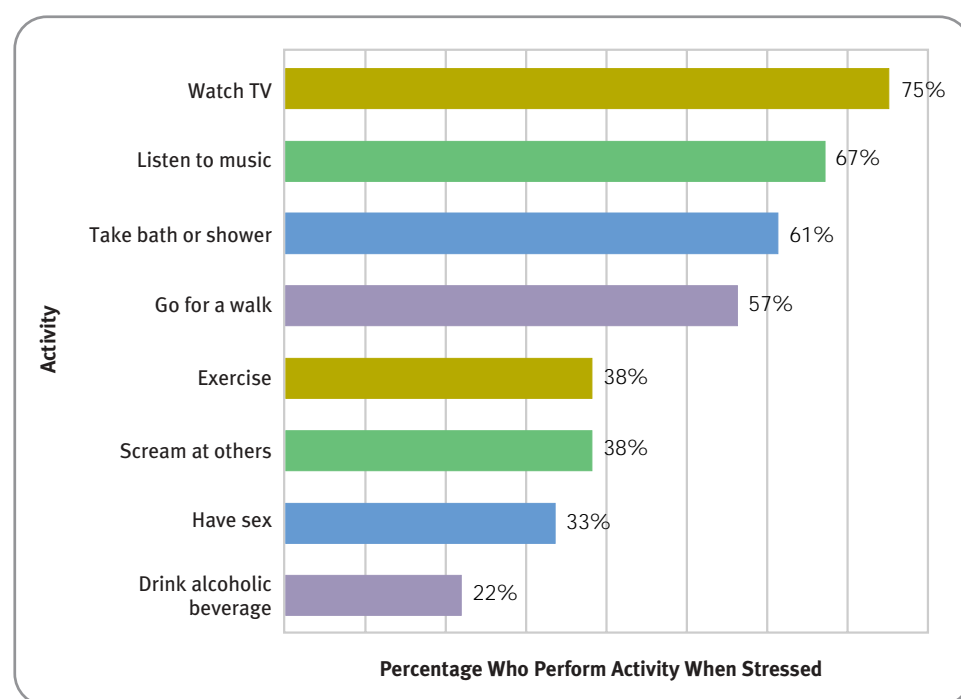
Paul Comer/AP Photo

## The Physical Stress Disorders: Psychophysiological Disorders

As we have seen, stress can greatly affect our psychological functioning (see Figure 6-3). Similarly, it can have an enormous impact on our physical functioning, contributing in some cases to the development of significant medical problems and disorders (Dougall & Baum, 2001; Suinn, 2001). The idea that stress and related psychosocial factors may contribute to somatic illnesses has ancient roots, yet it had few supporters before the twentieth century. The seventeenth-century French philosopher René Descartes went so far as to claim that the mind, or soul, is separate from the body—a position called **mind-body dualism**.

**MIND-BODY DUALISM** René Descartes's position that the mind is separate from the body.

**PSYCHOPHYSIOLOGICAL DISORDERS** Illnesses that result from an interaction of psychosocial and organic factors. Also known as *psychosomatic disorders*.



**FIGURE 6-3** What do people do to relieve stress? According to one large survey, most of us watch television or listen to music (Kanner, 1995).

Not until the twentieth century were medical scientists persuaded that stress and related psychosocial factors can sometimes contribute greatly to physical illness. This belief began to take hold about 75 years ago, when clinicians first identified a group of physical illnesses that seemed to result from an interaction of biological, psychological, and sociocultural factors (Dunbar, 1948; Bott, 1928). Early versions of the DSM labeled these illnesses **psychophysiological**, or **psychosomatic disorders**, but DSM-IV labels them *psychological factors affecting medical condition* (see Table 6-4). We shall use the more familiar term “psychophysiological” in discussing them.

It is important to recognize that psychophysiological disorders bring about *actual* physical damage. They are different from “apparent” physical illnesses—*factitious disorders* or *somatoform disorders*—disorders that are accounted for entirely by factors such as hidden needs, repression, or reinforcement. People with a factitious disorder, for example, intentionally produce or fake physical symptoms in order to fulfill a deep wish to be a patient. We shall be examining apparent physical disorders of this kind in the next chapter. Consistent with our current interest in stress and its direct role in certain psychological and physical disorders, we shall focus here only on psychophysiological disorders.

**Table 6-4** DSM-IV Checklist

### PSYCHOLOGICAL FACTORS AFFECTING GENERAL MEDICAL CONDITION

1. The presence of a general medical condition.
2. Psychological factors adversely affecting the general medical condition in one of the following ways:
  - (a) Influencing the course of the general medical condition.
  - (b) Interfering with the treatment of the general medical condition.
  - (c) Posing additional health risks.
  - (d) Stress-related physiological responses precipitating or exacerbating the general medical condition.

Based on APA, 2000, 1994.

- **ULCER** A lesion that forms in the wall of the stomach or of the duodenum.
- **ASTHMA** A medical problem marked by narrowing of the trachea and bronchi, which results in shortness of breath, wheezing, coughing, and a choking sensation.
- **INSOMNIA** Difficulty falling or staying asleep.
- **MUSCLE CONTRACTION HEADACHE** A headache caused by the narrowing of muscles surrounding the skull. Also known as *tension headache*.
- **MIGRAINE HEADACHE** An extremely severe headache that occurs on one side of the head, often preceded by a warning sensation and sometimes accompanied by dizziness, nausea, or vomiting.
- **HYPERTENSION** Chronic high blood pressure.
- **CORONARY HEART DISEASE** Illness of the heart caused by a blocking of the coronary arteries.

## Traditional Psychophysiological Disorders

Before the 1970s, clinicians believed that only a limited number of illnesses were psychophysiological. The best known and most common of these disorders were ulcers, asthma, insomnia, chronic headaches, high blood pressure, and coronary heart disease. Recent research, however, has shown that many other physical illnesses—including bacterial and viral infections—may be caused by an interaction of psychosocial and physical factors. We will look first at the traditional psychophysiological disorders and then at the newer illnesses in this category.

**Ulcers** are lesions (holes) that form in the wall of the stomach or of the duodenum, resulting in burning sensations or pain in the stomach, occasional vomiting, and stomach bleeding. This disorder is experienced by up to 10 percent of all people in the United States and is responsible for more than 6,000 deaths each year. Ulcers are often caused by an interaction of stress factors, such as environmental pressure or intense feelings of anger or anxiety, and physiological factors, such as bacterial infections (Carr, 2001; Levenstein, 2000).

**Asthma** causes the body's airways (the trachea and bronchi) to narrow periodically, making it hard for air to pass to and from the lungs. The resulting symptoms are shortness of breath, wheezing, coughing, and a terrifying choking sensation. Some 15 million people in the United States suffer from asthma, twice as many as 20 years ago (NCHS, 1999). Most victims are children or young teenagers at the time of the first attack (Melamed, Roth, & Fogel, 2001). Seventy percent of all cases appear to be caused by an interaction of stress factors, such as environmental pressures, troubled family relationships, or anxiety, and physiological factors, such as allergies to specific substances, a slow-acting sympathetic nervous system, or a weakened respiratory system traceable to respiratory infections or genetic inheritance (Melamed et al., 2001; Lehrer, 1998).

**Insomnia**, difficulty falling asleep or maintaining sleep, plagues 35 percent of the population each year (Carr, 2001; APA, 2000). Although many of us have temporary bouts of insomnia that last a few nights or so, a large number of people experience insomnia that lasts months or years. They feel as though they are almost constantly awake. Chronic insomniacs are often very sleepy during the day and may have difficulty functioning effectively. Their problem may be caused by a combination of psychosocial factors, such as high levels of anxiety or depression, and physiological problems, such as an overactive arousal system or certain medical ailments (Espie, 2002; Hauri, 2000;).

*Chronic headaches* are frequent intense aches of the head or neck that are not caused by another physical disorder. There are two types. **Muscle contraction**, or **tension headaches** are identified by pain at the back or front of the head or the back of the neck (Peterson et al., 1995). These occur when the muscles surrounding the skull tighten, narrowing the blood vessels. Approximately 40 million Americans suffer from such headaches. **Migraine headaches** are extremely severe, often near-paralyzing aches located on one side of the head. They are often preceded by a warning sensation called an *aura* and are sometimes accompanied by dizziness, nausea, or vomiting. Migraine headaches are thought by some medical theorists to develop in two phases: (1) blood vessels in the brain narrow, so that the flow of blood to parts of the brain is reduced, and (2) the same blood vessels later expand, so that blood flows through them rapidly, stimulating many neuron endings and causing pain. Migraines are suffered by about 23 million people in the United States.

Research suggests that chronic headaches are caused by an interaction of stress factors, such as environmental pressures or general feelings of helplessness, anger, anxiety, or depression (McGrath & Hillier, 2001), and physiological factors, such as abnormal activity of the neurotransmitter serotonin, vascular problems, or muscle weakness (Hargreaves & Shephard, 1999; Park, 1996).

Lester Sloan/Woodfin Camp and Associates



**Treating asthma** Children who suffer from asthma may use an *aerochamber*, or *inhaler*, to help them inhale helpful medications. The child pumps the medication into the device's plastic tube and then inhales it.

**Hypertension** is a state of chronic high blood pressure. That is, the blood pumped through the body's arteries by the heart produces too much pressure against the artery walls. Hypertension has few outward symptoms (Fahrenberg et al., 1995), but it interferes with the proper functioning of the entire cardiovascular system, greatly increasing the likelihood of stroke, coronary heart disease, and kidney problems. It is estimated that 40 million people in the United States have hypertension, 14,000 die directly from it annually, and millions more perish because of illnesses caused by it (NCHS, 1999; Johnson, Gentry, & Julius, 1992). Around 10 percent of all cases are caused by physiological abnormalities alone; the rest result from a combination of psychosocial and physiological factors and are called *essential hypertension* (Carr, 2001). Some of the leading psychosocial causes of essential hypertension are constant environmental danger and general feelings of anger or depression (Gidron et al., 1999; Dubbert, 1995). Physiological causes include faulty *baroreceptors*—sensitive nerves in the blood vessels responsible for signaling the brain that blood pressure is becoming too high (Julius, 1992; Schwartz, 1977).

**Coronary heart disease** is caused by a blocking of the *coronary arteries*—the blood vessels that surround the heart and are responsible for carrying oxygen to the heart muscle. The term actually refers to several problems, including *angina pectoris*, extreme chest pain caused by a partial blockage of the coronary arteries; *coronary occlusion*, a complete blockage of a coronary artery that halts the flow of blood to various parts of the heart muscle; and *myocardial infarction* (a “heart attack”). Together such problems are the leading cause of death in men over the age of 35 and of women over 40 in the United States, accounting for over 700,000 deaths each year, almost one-third of all deaths in the nation (Blanchard, 1994). The majority of all cases of coronary heart disease are related to an interaction of psychosocial factors, such as job stress or high levels of anger or depression, and physiological factors, such as a high level of cholesterol, obesity, hypertension, the effects of smoking, or lack of exercise (Williams, 2001).

Over the years, clinicians have identified a number of variables that may contribute to the development of psychophysiological disorders (see Figure 6-4 on the next page). Given the close link between psychological and physical functioning, it should not surprise us that several of these variables are the same as those that contribute to the onset of acute and posttraumatic stress disorders. The variables may be grouped as sociocultural, psychological, and biological factors.

**SOCIOCULTURAL FACTORS** The stressful demands placed on people by their culture or social group may set the stage for psychophysiological disorders (see Box 6-5 on page 25). The stress may be wide-ranging, such as that produced by wars or natural disasters. After a 1979 nuclear accident at Three Mile Island in Pennsylvania, for example, people who lived near the nuclear plant experienced a high number of psychophysiological disorders, and they continued to do so for years (Schneiderman & Baum, 1992; Baum et al., 1983). Alternatively, local social conditions may produce persistent feelings of tension, such as living in a crime-ridden neighborhood or working in an unsatisfying job (Landsbergis et al., 1994). For example, hypertension is 50 percent more common among African Americans than among white Americans (Macera et al., 2001). Although physiological factors may largely explain this difference, some theorists believe that it is also linked to the dangerous environments in which so many African Americans live, the unsatisfying jobs at which so many must work, and the racial discrimination most face (Clark et al., 1999; Dorr, 1998). Finally, temporary stressors that occur in one's immediate environment, such as a death in the family, divorce, or loss of a job, may lead to disregulation and contribute to psychophysiological disorders (Levy et al., 1997).

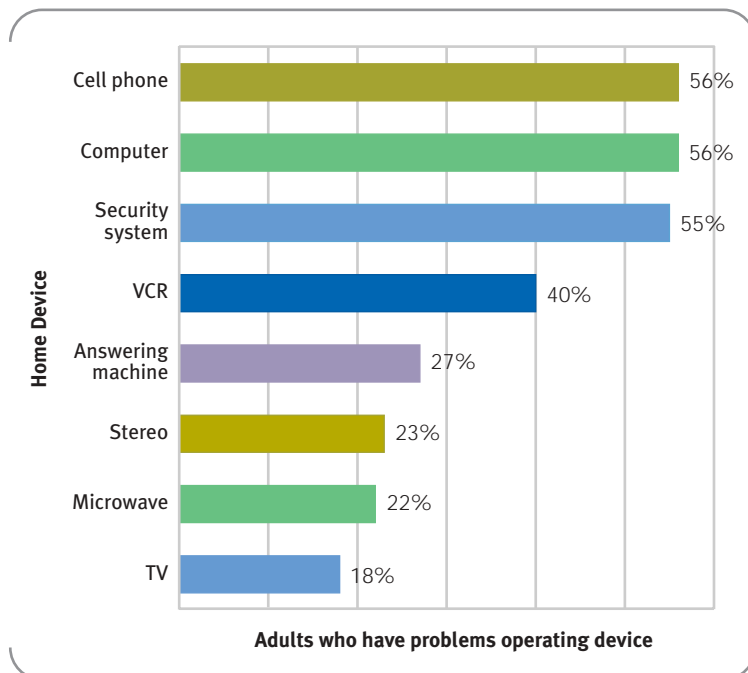
**PSYCHOLOGICAL FACTORS** According to many theorists, certain needs, attitudes, emotions, or coping styles may cause people to overreact repeatedly to stressors, and so increase their chances of developing psychophysiological disorders (Smith,



**The silent killer** High blood pressure, a psychophysiological disorder with few outward signs, kills tens of thousands of people each year, prompting health care professionals to regularly provide free blood pressure checks in the workplace or other community settings.



“What do you mean I have an ulcer?  
I give ulcers, I don't get them!”



**FIGURE 6-4 Stress at home** In our ever-changing high-tech world, even the operation of everyday home devices may present problems and produce stress. In a survey of 3,000 American adults, the majority of respondents admitted that they often have difficulty operating their cell phones, home computers, and security system. Almost one-fifth typically have problems operating their television sets. (Adapted from NFO World Group, 2002.)

**TYPE A PERSONALITY STYLE** A personality pattern characterized by hostility, cynicism, drivenness, impatience, competitiveness, and ambition.

**TYPE B PERSONALITY STYLE** A personality pattern in which persons are more relaxed, less aggressive, and less concerned about time.

2001). Researchers have found, for example, that men with a *repressive coping style* (a reluctance to express discomfort, anger, or hostility) tend to experience a particularly sharp rise in blood pressure and heart rate when they are stressed (Coy, 1998; NAMHC, 1996). Increased rates of asthma have also been found among some people with this coping style (Lehrer, 1998).

Another personality style that may contribute to psychophysiological disorders is the **Type A personality style**, an idea introduced by two cardiologists, Meyer Friedman and Raymond Rosenman (1959). People with this personality style are said to be consistently angry, cynical, driven, impatient, competitive, and ambitious. They interact with the world in a way that, according to Friedman and Rosenman, produces continual stress and often leads to coronary heart disease. People with a **Type B personality style**, by contrast, are thought to be more relaxed, less aggressive, and less concerned about time. They are less likely to experience cardiovascular deterioration. In reality, of course, most people fall between these two extremes, tending toward one or the other but showing features of both.

The link between the Type A personality style and coronary heart disease has been supported by many studies. In one well-known investigation of more than 3,000 people, Friedman and Rosenman (1974) separated healthy men in their forties and fifties into Type A and Type B categories and then followed their health over the next eight years. More than twice as many Type A men developed coronary heart disease. Later studies found that Type A functioning correlates similarly with heart disease in women (Haynes, Feinleib, & Kannel, 1980).

In recent studies the link found between the Type A personality style and heart disease has not been as strong as the earlier studies suggest. They do show, nevertheless, that some of the characteristics that supposedly make up the Type A style, particularly *hostility*, are very likely to be related to heart disease (Williams, 2001; Siegman et al., 2000). In fact, some studies have found that feelings of anger may directly impair the heart's pumping action and efficiency (Ironson et al., 1992).

**BIOLOGICAL FACTORS** We saw earlier that one way in which the brain activates body organs is through the operation of the autonomic nervous system (ANS), the network of nerve fibers that connect the central nervous system to the body's organs. Hans Selye (1976, 1974) was one of the first researchers to describe the relationship between stress and the ANS. He proposed that people typically respond to stress in three stages, which he called, collectively, the *general adaptation syndrome*. In the presence of threat, the sympathetic nervous system increases its activity and arouses responses throughout the body (*alarm stage*). The parasympathetic nervous system next attempts to counteract these responses (*resistance stage*). Finally, if exposure to stress continues, the resistance may fail and organs controlled by the ANS may become overworked and break down (*exhaustion stage*).

Because the ANS is one of the body systems responsible for "normal" stress reactions, defects in this system are believed to contribute to the development of psychophysiological disorders (Hugdahl, 1995). If one's ANS is stimulated too easily, for example, it may overreact to situations that most people find only mildly stressful, eventually damaging certain organs and causing a psychophysiological disorder (Boyce et al., 1995).

Other more specific biological problems may also contribute to psychophysiological disorders. A person with a weak gastrointestinal system, for example, may be a prime candidate for an ulcer, whereas someone with a weak respiratory

## B O X 6-5

## Working with Death

One of the most unpleasant jobs in our society is that of tying up loose ends after a disaster or murder. Yet the work must be done, regardless of the toll it may take on the workers. It turns out that reactions to such responsibilities vary widely.

In 1993, 83 persons died in the fire at the Branch Davidian compound in Waco, Texas, when federal agents tried to end a 51-day standoff between the Branch Davidian sect and the FBI. Thirty-one dentists had to examine the dental remains of the dead. A study later revealed that these dentists went on to develop more psychological and physical symptoms of severe stress than did a control group of other dentists (McCarroll et al., 1996).

Then there are Ray and Louise Barnes, who run a business called Crime Scene Clean-Up. They and their staffers are hired by police departments, funeral homes, and grieving families to clean up after homicides, suicides, and accidents. They use latex gloves, mops, respirators, and other tools of the trade to “scrub away the detritus of human disaster” (Howe & Nugent, 1996). Ray Barnes says that his former jobs with a funeral home and a medical examiner’s office helped prepare him for this work. While hardly indifferent to the grisly scenes, he has grown somewhat used to them, and he and his wife now have a thriving business.

Vickie Lewis/People Weekly



system may develop asthma readily. In a related vein, people may display favored biological reactions that heighten their chances of developing psychophysiological disorders. Some individuals perspire in response to stress, others develop stomachaches, and still others experience a rise in blood pressure (Fahrenberg, Foerster, & Wilmers, 1995). Although such variations are perfectly normal, the repeated overuse of a single system may wear it down and eventually help cause a psychophysiological disorder. Research has indicated, for example, that some individuals are particularly likely to experience temporary rises in blood pressure when stressed (McDaniel et al., 1994). It may be that they are prone to develop hypertension. Similarly, some infants produce much more gastric acid under stress than other infants (Weiner, 1977; Mirsky, 1958). Perhaps, over the years, this physical reaction wears down the lining of the stomach or duodenum, leaving the individuals more vulnerable to ulcers.

Lionel Cihes/AP Wide World Photos



**Risky business** A currency dealer shouts orders during trading at the Paris Stock Exchange. The stresses of working in high-pressure environments apparently increase one’s risk of developing a medical illness, including coronary heart disease.

### >>LOOKING AROUND

#### Reactions to Danger

Some people overreact to danger, others underreact. In response to a public health warning about contaminated ice cream, 26 percent of the people who heard the warning refused to believe it and 31 percent ate the ice cream anyway. Many of the latter became sick (Centers for Disease Control and Prevention, 1999).<<



**>>LOOKING AROUND****Stress and the Workplace**

Unscheduled absences from work have risen 11 to 25 percent since 1995, with stress and personal matters cited as the fastest-growing causes (Shellenbarger, 1998).<<

In surveys, 35 percent of white Americans report being dissatisfied with their jobs, as compared with 44 percent of African Americans (Watson Wyatt Worldwide, 1995).<<

Almost two-thirds of workers say that their financial well-being is of more concern to them than their mortality (Yin, 2002).<<

Clearly, sociocultural, psychological, and biological variables combine to produce psychophysiological disorders. The interaction of such variables to produce medical problems was once considered an unusual occurrence. However, the interaction of psychosocial and physical factors is now considered the rule of bodily functioning, not the exception, and, as the years have passed, more and more illnesses have been added to the list of traditional psychophysiological disorders. Let us turn next to the “new” psychophysiological disorders.

**New Psychophysiological Disorders**

Since the 1960s, researchers have found many links between psychosocial stress and a wide range of physical illnesses. Let us look first at how these links were established and then at *psychoneuroimmunology*, the new area of study that ties stress and illness to the body’s immune system.

**ARE PHYSICAL ILLNESSES RELATED TO STRESS?** In 1967 two researchers, Thomas Holmes and Richard Rahe, developed the *Social Adjustment Rating Scale*, which assigns numerical values to the stresses that most people experience at some time in their lives (see Table 6-5). Answers given by a large sample of subjects indicated that the most stressful event on the scale should be the death of a spouse, which receives a score of 100 *life change units (LCUs)*. Lower on the scale is retirement (45 LCUs), and still lower is a minor violation of the law (11 LCUs).

**Table 6-5****Most Stressful Life Events****ADULTS: SOCIAL ADJUSTMENT RATING SCALE\***

1. Death of spouse	12. Pregnancy
2. Divorce	13. Sex difficulties
3. Marital separation	14. Gain of new family member
4. Jail term	15. Business readjustment
5. Death of close family member	16. Change in financial state
6. Personal injury or illness	17. Death of close friend
7. Marriage	18. Change to different line of work
8. Fired at work	19. Change in number of arguments with spouse
9. Marital reconciliation	20. Mortgage over \$10,000
10. Retirement	21. Foreclosure of mortgage or loan
11. Change in health of family member	22. Change in responsibilities at work

\*Full scale has 43 items.  
Source: Holmes & Rahe, 1967.

**STUDENTS: UNDERGRADUATE STRESS QUESTIONNAIRE†**

1. Death (family member or friend)	12. Went into a test unprepared
2. Had a lot of tests	13. Lost something (especially wallet)
3. It's finals week	14. Death of a pet
4. Applying to graduate school	15. Did worse than expected on test
5. Victim of a crime	16. Had an interview
6. Assignments in all classes due the same day	17. Had projects, research papers due
7. Breaking up with boy-/girlfriend	18. Did badly on a test
8. Found out boy-/girlfriend cheated on you	19. Parents getting divorce
9. Lots of deadlines to meet	20. Dependent on other people
10. Property stolen	21. Having roommate conflicts
11. You have a hard upcoming week	22. Car/bike broke down, flat tire, etc.

†Full scale has 83 items.  
Source: Crandall et al., 1992.

Even positive events, such as an outstanding personal achievement (28 LCUs), are somewhat stressful. This scale gave researchers a yardstick for measuring the total amount of stress a person faces over a period of time. If, for example, in the course of a year a businesswoman started a new business (39 LCUs), sent her son off to college (29 LCUs), moved to a new house (20 LCUs), and experienced the death of a close friend (37 LCUs), her stress score for the year would be 125 LCUs, a considerable amount of stress for such a period of time.

With the Social Adjustment Rating Scale in hand, the researchers were able to examine the relationship between life stress and the onset of illness. They found that the LCU scores of sick people during the year before they fell ill were much higher than those of healthy people (Holmes & Rahe, 1989, 1967). If a person's life changes totaled more than 300 LCUs over the course of a year, that person was particularly likely to develop a serious health problem.

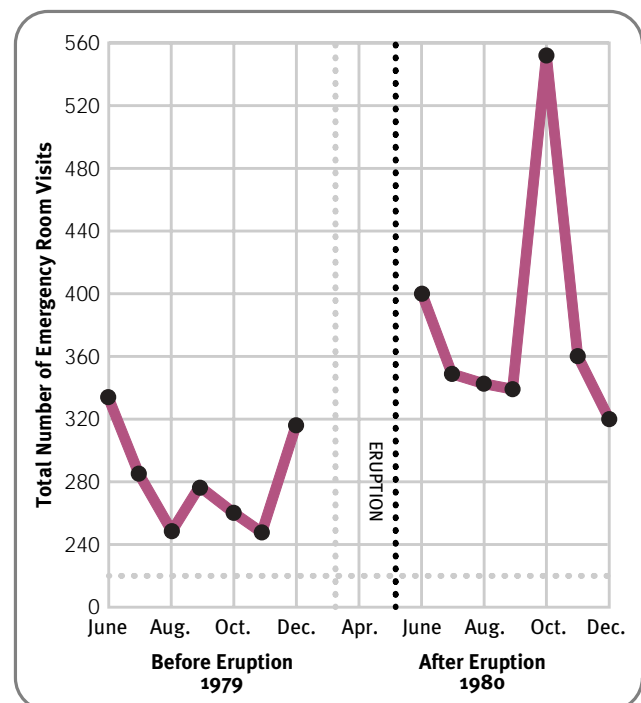
In one study Rahe (1968) divided 2,500 healthy naval personnel into a high-risk group (highest LCU scores over the previous six months) and a low-risk group (lowest LCU scores); he then kept track of the health changes of the two groups when they went to sea. Twice as many high-risk as low-risk sailors developed illnesses during their first month at sea; the high-risk sailors also continued to develop more illnesses each month for the next five months.

The Social Adjustment Rating Scale has been updated and revised by various researchers over the years (Hobson et al., 1998; Miller & Rahe, 1997). Using either the original or the revised scales, studies have linked stresses of various kinds to a wide range of physical conditions, from trench mouth and upper respiratory infection to cancer (Cobb & Steptoe, 1998; Kiecolt-Glaser et al., 1991). Overall, the greater the amount of life stress, the greater the likelihood of illness (see Figure 6-5). Researchers even have found a relationship between traumatic stress and death. Widows and widowers, for example, display an increased risk of death during their period of bereavement (Rees & Lutkin, 1967; Young et al., 1963). A particularly striking instance of death after the loss of a loved one is seen in the following case:

Charlie and Josephine had been inseparable companions for 13 years. In a senseless act of violence Charlie, in full view of Josephine, was shot and killed in a melee with police. Josephine first stood motionless, then slowly approached his prostrate form, sunk to her knees, and silently rested her head on the dead and bloody body. Concerned persons attempted to help her away, but she refused to move. Hoping she would soon surmount her overwhelming grief, they let her be. But she never rose again; in 15 minutes she was dead. Now the remarkable part of the story is that Charlie and Josephine were llamas in the zoo! They had escaped from their pen during a snow storm and Charlie, a mean animal to begin with, was shot when he proved unmanageable. I was able to establish from the zoo keeper that to all intents and purposes Josephine had been normally frisky and healthy right up to the moment of the tragic event.

(Engel, 1968)

One shortcoming of Holmes and Rahe's Social Adjustment Rating Scale is that it does not take into consideration the particular life stress reactions of specific populations. For example, in their development of the scale, the researchers sampled white Americans predominantly. Less than 5 percent of the subjects were African Americans. But since their ongoing life experiences often differ in significant ways, might not African Americans and white Americans differ in their stress reactions to various kinds of life events? One study indicates that indeed they do (Komaroff, Masuda, & Holmes, 1989, 1986). Both white and African



**FIGURE 6-5 Catastrophic stress** Paul and Gerald Adams (1984) found that during the months immediately after the eruption of Mount St. Helens on May 18, 1980, there was a 34 percent increase in emergency room visits and a 19 percent rise in deaths in nearby Othello, Washington.



**Joyful stress** According to the Social Adjustment Rating Scale, even positive events such as pregnancy are stressful for everyone involved.

**PSYCHONEUROIMMUNOLOGY** The study of the connections between stress, the body's immune system, and illness.

**IMMUNE SYSTEM** The body's network of activities and cells that identify and destroy antigens and cancer cells.

**ANTIGEN** A foreign invader of the body, such as a bacterium or virus.

**LYMPHOCYTES** White blood cells that circulate through the lymph system and bloodstream, helping the body identify and destroy antigens and cancer cells.

Americans rank death of a spouse as the single most stressful life event, but African Americans experience greater stress than white Americans from such events as a major personal injury or illness, a major change in work responsibilities, or a major change in living conditions. Similarly, studies have shown that women and men differ in their reactions to certain life changes on the scale (Miller & Rahe, 1997). Women, for example, tend to experience more stress than men when faced with the death of a close family member, loss of a job, a major injury or illness, a decrease in income, credit problems, or a change in residence.

Finally, college students may face stressors that are different from those listed in the Social Adjustment Rating Scale (Crandall et al., 1992). Instead of having marital difficulties, being fired, or applying for a job, a college student may have trouble with a roommate, fail a course, or apply to graduate school. When researchers developed special scales to measure life events more accurately in this population (see bottom half of Table 6-5 on page 26), they found the expected relationships between stressful events and illness (Crandall et al., 1992).

**PSYCHONEUROIMMUNOLOGY** How do stressful events result in a viral or bacterial infection? Researchers have increasingly looked to the body's immune system as the key to this relationship and have developed an area of study called **psychoneuroimmunology** to examine the links between psychosocial stress, the immune system, and health (DeAngelis, 2002; Ader et al., 2001).

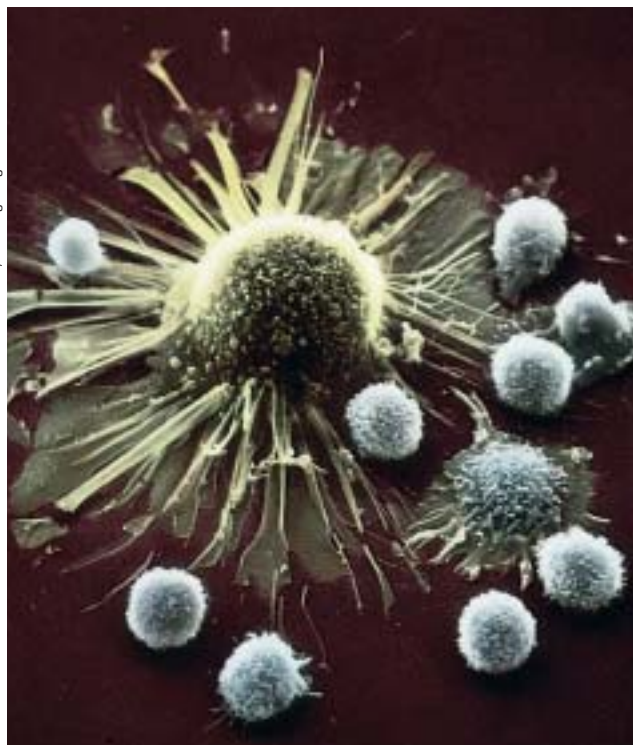
The **immune system** is the body's network of activities and cells that identify and destroy **antigens**—foreign invaders, such as bacteria, viruses, fungi, and parasites—and cancer cells. Immune cells are located in the bone marrow, thymus, lymph nodes, spleen, tonsils, appendix, and small intestine. Among the most important cells in this system are billions of **lymphocytes**, white blood cells that circulate through the lymph system and the bloodstream. When stimulated by antigens, lymphocytes spring into action to help the body overcome the invaders.

One group of lymphocytes, called *helper T-cells*, identify antigens and then multiply and trigger the production of other kinds of immune cells. Another group, *natural killer T-cells*, seek out and destroy body cells that have already been infected by viruses, thus helping to stop the spread of a viral infection. A third group of lymphocytes, *B-cells*, produce *antibodies*, protein molecules that recognize and bind to antigens, mark them for destruction, and prevent them from causing infection.

Researchers now believe that stress can interfere with the activity of lymphocytes, slowing them down and thus increasing a person's susceptibility to viral and bacterial infections (Ader et al., 2001). When laboratory animals have been subjected to stressors of various kinds, their lymphocytes and antibodies reproduce more slowly than usual and destroy antigens less effectively (Hibma & Griffin, 1994). Studies of humans tell a similar story. For example, scientists who monitored Skylab astronauts during various phases of their extended space mission discovered that their T-cell reactions to antigens decreased within a few hours after the stress of splashdown and returned to normal three days later (Kimzey et al., 1976; Kimzey, 1975).

In a landmark study, R. W. Bartrop and his colleagues (1977) in New South Wales, Australia, compared the immune systems of 26 people whose spouses had died eight weeks earlier with those of 26 matched control subjects whose spouses had not died. Blood samples revealed that lymphocyte functioning was much lower in the bereaved people than in the controls. Still other studies have shown slow immune functioning in persons who are exposed to long-term stress. For example, researchers have found poorer immune functioning among people who face the challenge of providing ongoing care for a relative with Alzheimer's disease (Kiecolt-Glaser et al., 2002, 1996, 1987).

**Killer T-cells at work** These killer T-cells surround a larger cancer cell and destroy it, thus helping to prevent the spread of cancer.





**Laboratory insights** Laboratory animals are widely used in research on the immune system. The destruction of the immune systems of these mice, which has caused their hair to fall out, enables researchers to produce and investigate invasions by various cells and viruses.

These studies seem to be telling a remarkable story. During periods when healthy individuals happened to experience unusual levels of stress, they remained healthy on the surface, but their experiences apparently slowed their immune systems so that they became susceptible to illness. If stress affects our capacity to fight off illness, it is no wonder that researchers have repeatedly found a relationship between life stress and illnesses of various kinds. But why and when does stress interfere with the immune system? Several factors influence whether stress will result in a slowdown of the system, including *biochemical activity, behavioral changes, personality style, and degree of social support.*

**BIOCHEMICAL ACTIVITY** We observed earlier that abnormal activity of *norepinephrine* and of the *corticosteroids* may contribute to the development of acute and posttraumatic stress disorders. Similarly, these chemicals have been implicated in slowdowns of the immune system during prolonged periods of stress. Remember that stress leads to increased activity by the sympathetic nervous system, including an increase in the release of the neurotransmitter and hormone *norepinephrine* throughout the brain and body. It appears that, beyond supporting the activity of the sympathetic nervous system, this chemical eventually helps slow the functioning of the immune system (Ader et al., 2001; McEwen, 2000). During low stress or early stages of stress, *norepinephrine* travels to certain lymphocyte receptors and gives a message for the lymphocytes to increase their activity. As the stress continues or heightens, however, the chemical travels to yet other receptors on the lymphocytes and gives them an *inhibitory message* to stop their activity. Thus, while the release of *norepinephrine* improves immune functioning at low levels of stress, it actually slows down immune functioning at higher levels.

Similarly, the *corticosteroids*—*cortisol* and other so-called stress hormones—contribute to poorer immune system functioning during periods of prolonged stress. Remember that when a person is under stress, the adrenal glands release these *corticosteroids*. At first the release of such hormones stimulates body organs to greater activity. After stress continues for 30 minutes or more, however, the stress hormones travel to certain receptor sites in the body and give inhibitory messages, which help calm down the overstressed body (Manuck et al., 1991). One such group of receptor sites is located on the lymphocytes. When the *corticosteroids* bind to these receptors, their inhibitory messages actually slow down the activity of the lymphocytes (Bellinger et al., 1994). Thus, again, the very chemicals that initially help people to deal with stress eventually serve to slow the immune system.

**BEHAVIORAL CHANGES** Stress may set in motion a series of behavioral changes that indirectly affect the immune system. Some people under intense or chronic stress may, for example, become anxious or depressed, perhaps even develop an anxiety or mood disorder. As a result, they may sleep badly, eat poorly, exercise

#### >>LAB NOTES

##### The Immune System at Work

**Virtues of Laughter** After watching a humorous video, subjects who had laughed at and enjoyed the film showed decreases in stress and improvements in natural killer cell activity (Bennett, 1998).<<

**Direct Impact** Studies indicate that the abnormal biochemical activity that accompanies depression also directly disrupts lymphocyte activity (Azar, 1996). Correspondingly, the immune systems of depressed people do not function as well as those of other people (Schleifer et al., 1999, 1996; Cohen & Herbert, 1996).<<

**Marital Stress** During and after marital spats, women typically experience a greater release of stress hormones than men, and so a greater decrease in immune functioning (Kiecolt-Glaser et al., 1996).<<



Frank Fournier/Woodfin Camp and Associates

**In need of support** AIDS is a disease in which certain immune cells become infected by the human immunodeficiency virus (HIV) and, in turn, launch a full-scale attack on the immune system. Studies reveal that victims who receive positive social support are better able to fight off the disease than are those who are stigmatized and discriminated against by their social network (Nott & Vedhara, 1999; Schneiderman, 1999).

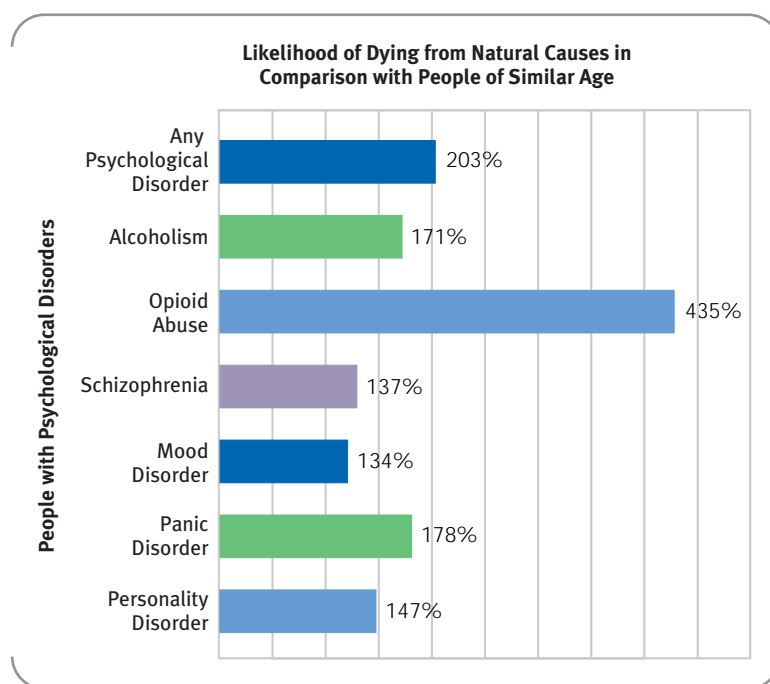
less, or smoke or drink more—behaviors known to slow down the immune system (Kiecolt-Glaser & Glaser, 2002, 1999, 1988; Cohen & Herbert, 1996).

**PERSONALITY STYLE** An individual’s personality style may also play a role in determining how much the immune system is slowed down by stress (Kemeny & Laudenslager, 1999). According to research, people who generally respond to life stress with optimism, constructive coping strategies, and resilience—that is, people who welcome challenge and are willing to take control in their daily encounters—experience better immune system functioning and are better prepared to fight off illness (Taylor et al., 2000). Some studies find, for example, that people with “hardy” or resilient personalities remain healthy after stressful events, while those whose personalities are less hardy seem more susceptible to illness (Oulette & DiPlacido, 2001; Oulette, 1993). One study even discovered that men with a general sense of hopelessness die at above-average rates from heart disease, cancer, and other causes (Everson et al., 1996) (see Figure 6-6). Similarly, a growing body of research suggests that people who are spiritual tend to be healthier than individuals without spiritual beliefs, and a few studies have linked spirituality to better immune system functioning (Koenig & Cohen, 2002).

In related work, some studies have noted a relationship between certain personality characteristics and recovery from cancer (Greer, 1999; Garsen & Goodkin, 1999). They have found that patients with certain forms of cancer who display a helpless coping style and who cannot easily express their feelings, particularly anger, tend to have less successful recoveries than patients who do express their emotions. Other studies, however, have found no relationship between personality and cancer outcome (Garsen & Goodkin, 1999; Holland, 1996).

**SOCIAL SUPPORT** Finally, people who have few social supports and feel lonely seem to display poorer immune functioning in the face of stress than people who do not feel lonely (Cohen, 2002; Kiecolt-Glaser et al., 2002, 1988, 1987). In one study, medical students were given the *UCLA Loneliness Scale* and then divided into “high” and “low” loneliness groups (Kiecolt-Glaser et al., 1984). The high-loneliness group showed lower lymphocyte responses during a final exam period.

**FIGURE 6-6** Warning: psychological disorders may be dangerous to your health Psychological disorders are themselves a source of stress that can lead to medical problems. People with such disorders are twice as likely to die of natural causes (medical illnesses) as people in the same age group without psychological difficulties. (Adapted from Harris & Barraclough, 1998.)



Other studies have found that social support and affiliation may actually help protect people from stress, poor immune system functioning, and subsequent illness, or help speed up recovery from illness or surgery (Cohen, 2002; Kiecolt-Glaser et al., 2002, 1998, 1991). In one study, hepatitis B vaccine inoculations were administered to 48 medical students on the last day of a three-day examination period (Glaser et al., 1992). The students who reported the greatest amount of social support had stronger immune responses to the hepatitis B vaccine. Similarly, some studies have suggested that patients with certain forms of cancer who receive social support in their personal lives or supportive therapy often have better immune system functioning and, in turn, more successful recoveries than patients without such supports (Spiegel & Fawzy, 2002) (see Box 6–6 on the next page).

### Psychological Treatments for Physical Disorders

As clinicians have discovered that stress and related psychosocial factors may contribute to physical disorders, they have applied psychological treatments to more and more medical problems (Baum et al., 2001). The most common of these interventions are relaxation training, biofeedback, meditation, hypnosis, cognitive interventions, insight therapy, and support groups. The field of treatment that combines psychological and physical interventions to treat or prevent medical problems is known as **behavioral medicine**.

**RELAXATION TRAINING** As we saw in Chapter 5, people can be taught to relax their muscles at will, a process that sometimes reduces feelings of anxiety. Given the positive effects of relaxation on anxiety and the nervous system, clinicians believe that **relaxation training** can be of help in preventing or treating medical illnesses that are related to stress.

Relaxation training, often in combination with medication, has been widely used in the treatment of high blood pressure (Stetter & Kupper, 2002). One study assigned hypertensive subjects to one of three forms of treatment: medication, medication plus relaxation training, or medication plus supportive psychotherapy (Taylor et al., 1977). Those who received relaxation training in combination with medication showed the greatest reduction in blood pressure. Relaxation training has also been of some help in treating headaches, insomnia, asthma, the undesirable effects of cancer treatments, pain after surgery, and Raynaud's disease, a disorder of the vascular system marked by throbbing, aching, and pain (Stetter & Kupper, 2002; Powers et al., 2001).

**BIOFEEDBACK** As we also have seen in Chapter 5, patients given **biofeedback training** are connected to machinery that gives them continuous readings about their involuntary body activities. This information enables them gradually to gain control over those activities. Somewhat helpful in the treatment of anxiety disorders, the procedure has also been applied to a growing number of physical disorders.

In one study, *electromyograph* (EMG) feedback was used to treat 16 patients who were experiencing facial pain caused in part by tension in their jaw muscles (Dohrmann & Laskin, 1978). In an EMG procedure, electrodes are attached to a person's muscles so that the muscle contractions are detected and converted into a tone for the individual to hear. Changes in the pitch and volume of the tone indicate changes in muscle tension. After "listening" to EMG feedback repeatedly, the 16 patients in this study learned how to relax their jaw muscles at will and later reported a reduction in facial pain. In contrast, 8 control subjects, who were wired to similar equipment but not given biofeedback training, showed little improvement in muscle tension or their experience of pain.

**BEHAVIORAL MEDICINE** A field of treatment that combines psychological and physical interventions to treat or prevent medical problems.

**RELAXATION TRAINING** A treatment procedure that teaches clients to relax at will.

**BIOFEEDBACK TRAINING** A treatment technique in which a client is given information about physiological reactions as they occur and learns to control the reactions voluntarily.

**Relaxation, the hard way** Clinicians are always developing techniques to help people relax. A climber dangles from Alaska's Mount Barrille to demonstrate the use of "Tranquillite" sleep goggles, which are supposed to produce relaxation with blue light and a soothing "pink sound."



Louis Psihoyos/Matrix

## BOX 6-6

## Sharing the Pain

A few years ago, 13 fifth-grade boys in San Marcos, California, went to a barbershop and proceeded to have their heads shaved. The purpose of this seemingly

strange group action? To show support and compassion for their 11-year-old friend and classmate Ian O’Gorman. Ian was undergoing chemotherapy for cancer at the time

and was beginning to lose his hair. His friends didn’t want him to feel left out or further traumatized, so they undertook this selfless display of support. Their teacher, who had his head shaved, too, said that the idea came from the boys, who nicknamed themselves the Bald Eagles. All parents gave their blessings to the group action. Ian gratefully reported, “What my friends did really made me feel stronger. It helped me get through all this. . . . I was really amazed that they would do something like this for me.”

No doubt the generous behavior of his friends had an enormous impact on Ian’s state of mind. Just as important, the growing body of research in psychoneuroimmunology suggests that such acts may have had a positive effect on his health and recovery as well. Clearly, our society is more sensitive today than in the past to the psychosocial issues at work in illnesses such as Ian’s.



Rick Rickman/Matrix

EMG feedback has also been used successfully in the treatment of headaches and muscular disabilities caused by strokes or accidents. Still other forms of biofeedback training have been of some help in the treatment of heartbeat irregularities, asthma, migraine headaches, high blood pressure, stuttering, pain from burns, and Raynaud’s disease (Martin, 2002; Gatchel, 2001).

**MEDITATION** Although meditation has been practiced since ancient times, Western health care professionals have only recently become aware of its effectiveness in relieving physical distress. **Meditation** is a technique of turning one’s concentration inward, achieving a slightly changed state of consciousness, and temporarily ignoring all stressors. In the most common approach, meditators go to a quiet place, assume a comfortable posture, utter or think a particular sound (called a *mantra*) to help focus their attention, and allow their minds to turn away from all outside thoughts and concerns.

Many people who meditate regularly report feeling more peaceful, engaged, and creative (Carrington, 1993, 1978). Meditation has been used to

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**Uniting the mind, body, and universe** Major league baseball player Barry Zito is known for doing yoga before games in which he pitches — a practice that combines the principles of meditation, hypnosis, and relaxation. Zito, one of baseball’s most successful pitchers, performs this and related techniques in order to feel mentally and physically stronger during the game.

help manage pain in cancer patients (Goleman & Gurin, 1993) and to help treat high blood pressure, heart problems, asthma, skin disorders, diabetes, and even viral infections (Andresen, 2000). It has also been useful in relieving the stress-related problem of insomnia (Woolfolk et al., 1976).

**HYPNOSIS** As we discussed in Chapter 1, individuals who undergo **hypnosis** are guided by a hypnotist into a sleeplike, suggestible state during which they can be directed to act in unusual ways, to experience unusual sensations, to remember seemingly forgotten events, or to forget remembered events. With training some people are even able to induce their own hypnotic state (*self-hypnosis*). Hypnosis is now used as an aid to psychotherapy; to help conduct research on pain, memory, and various other topics; and to help treat many physical conditions (Temes, 1999; Barber, 1993, 1984).

Hypnosis seems to be particularly helpful in the control of pain, whether caused by a medical condition or by medical procedures (Kiecolt-Glaser et al., 1998). One case study describes a patient who underwent dental surgery under hypnotic suggestion: after a hypnotic state was induced, the dentist suggested to the patient that he was in a pleasant and relaxed setting listening to a friend describe his own success at undergoing similar dental surgery under hypnosis. The dentist then proceeded to perform a successful 25-minute operation (Gheorghiu & Orleanu, 1982). Although only some people are able to undergo surgery while anesthetized by hypnosis alone, hypnosis combined with chemical forms of anesthesia is apparently helpful to many patients (Fredericks, 2001). Beyond its use in the control of pain, hypnosis has been used successfully to help treat such problems as skin diseases, asthma, insomnia, high blood pressure, warts, and other forms of infection (Hackman et al., 2000; Hornyak et al., 2000).

**COGNITIVE INTERVENTIONS** People with physical ailments have sometimes been taught new attitudes or cognitive responses toward their ailments as part of treatment (Kiecolt-Glaser et al., 2002, 1998; Compas et al., 1998). For example, **self-instruction training** has helped patients cope with severe pain, including pain from burns, arthritis, surgical procedures, headaches, back disorders, ulcers, multiple sclerosis, and cancer treatment (Meichenbaum, 1997, 1993, 1977, 1975). As we saw in Chapter 5, self-instruction therapists teach people to rid themselves of negative self-statements (“Oh, no, I can’t take this pain”) and to replace them with coping self-statements (“When pain comes, just pause; keep focusing on what you have to do”).

**INSIGHT THERAPY AND SUPPORT GROUPS** If anxiety, depression, anger, and the like contribute to a person’s physical ills, therapy to reduce these negative emotions should help reduce the ills. In such cases, physicians may recommend insight therapy, support groups, or both to help patients overcome their medical difficulties (Dobkin & DaCosta, 2000). Research suggests that the discussion of past and present upsets may indeed have beneficial effects on one’s physical health, just as it may help one’s psychological functioning (Smyth & Pennebaker, 2001). In one study, asthma and arthritis patients who simply wrote down their thoughts and feelings about stressful events for a handful of days showed lasting improvements in their conditions. In addition, as we have seen, recovery from cancer and certain other illnesses is sometimes improved by participation in support groups (Spiegel & Fawzy, 2001).

**COMBINATION APPROACHES** Studies have found that the various psychological interventions for physical problems tend to be equal in effectiveness (Brauer, 1999; Newton et al., 1995). Relaxation and biofeedback training, for example, are equally helpful (and more helpful

**MEDITATION** A technique of turning one’s concentration inward and achieving a slightly changed state of consciousness.

**HYPNOSIS** A sleeplike suggestible state during which a person can be directed to act in unusual ways, to experience unusual sensations, to remember seemingly forgotten events, or to forget remembered events.

**SELF-INSTRUCTION TRAINING** A cognitive treatment that teaches clients to use coping self-statements at times of stress or discomfort.

**Fighting HIV on all fronts** As part of his treatment at the Wellness Center in San Francisco, this man meditates and writes letters to his HIV virus.



Joe McNally/Life ©Time Warner, Inc.



**>>PSYCH•LISTINGS****Favorite Nights for Taking a Break from Stress**

<b>MONDAY</b>	Most common night for “working out”<<
<b>TUESDAY</b>	Most popular night for attending a club meeting<<
<b>FRIDAY</b>	Most common night for staying at home and watching TV<<
<b>SATURDAY</b>	Most popular night for going out to dinner and/or a movie<<
<b>SUNDAY</b>	Most common night for catching up on correspondence<<

(Fetto, 2001)

than placebos) in the treatment of high blood pressure, headaches, asthma, and Raynaud’s disease. Psychological interventions are, in fact, often of greatest help when they are combined with other psychological interventions and with medical treatments (Suinn, 2001; Hermann et al., 1995). In one study, ulcer patients who were given relaxation, self-instruction, and assertiveness training along with medication were found to be less anxious and more comfortable, to have fewer symptoms, and to have a better long-term outcome than patients who received medication only (Brooks & Richardson, 1980).

Interventions have also been helpful in changing Type A behavior patterns and in reducing the risk of coronary heart disease among Type A people (Williams, 2001; Cohen et al., 1997). In one study, 862 patients who had suffered a heart attack within the previous six months were assigned to one of two groups (Friedman et al., 1984). The control group was given three years of cardiological counseling (diet, exercise, and medical advice). The experimental group received the same counseling *plus* Type A behavioral counseling. They were taught about the Type A personality style and to recognize their excessive physiological, cognitive, and behavioral responses in stressful situations. They were also trained in relaxation and taught to change counterproductive attitudes.

The addition of the Type A behavioral counseling led to major differences in lifestyle and health. Type A behavior was reduced in almost 80 percent of the patients who received both Type A counseling and cardiological counseling for three years, compared to only 50 percent of those who received cardiological counseling alone. Moreover, fewer of those who received the combined counseling suffered another heart attack—only 7 percent, compared to 13 percent of the subjects in the control group.

Clearly, the treatment picture for physical illnesses has been changing markedly. While medical treatments continue to dominate, the use of psychological approaches is on the rise. Today’s scientists and practitioners are traveling a course far removed from the mind-body dualism of centuries past.

**CROSSROADS:****Expanding the Boundaries of Abnormal Psychology**

The concept of stress is familiar to everyone, yet only in recent decades have clinical scientists and practitioners had much success in understanding and treating it and recognizing its pervasive impact on our lives and our functioning. Indeed, the psychological and physical stress disorders that we have examined in this chapter have been identified only in recent editions of the DSM.

Now that the importance and impact of stress have been identified, however, research efforts in this area are moving forward at near-lightning speed. The number of studies devoted to this subject has risen steadily during the past 30 years. What researchers once saw as a vague tie between stress and psychological dysfunctioning or between stress and physical illness is now understood as a complex interaction of many variables. Such factors as life changes, individual psychological and somatic reactions, social support, neurotransmitter and hormonal activity, and depression of the immune system are all recognized as contributors to psychological and physical stress disorders.

Insights into the treatment of the various stress disorders have been accumulating just as rapidly. In recent years clinicians have learned that a combination of approaches—from drug therapy to behavioral techniques to community interventions—are needed to best address acute and posttraumatic stress disorders. Similarly, psychological approaches such as relaxation training and cognitive therapy are being applied to physical ills of various kinds, usually in combination with traditional medical treatments. Small wonder that more and more practitioners are becoming convinced that such treatment combinations will eventually be the norm in treating the majority of physical ailments.

One of the most exciting aspects of these recent developments is the field's growing emphasis on the *interrelationship* of the social environment, the brain, and the rest of the body. Researchers have observed repeatedly that mental disorders are often best understood and treated when sociocultural, psychological, and biological factors are all taken into consideration. They now know that this interaction also helps explain medical problems. We are reminded that the brain is part of the body and that both are part of a social context. For better and for worse, the three are inextricably linked.

Another exciting aspect of this work on stress and its wide-ranging impact is the interest it has sparked in *illness prevention* and *health promotion* (Compas & Gotlib, 2002; Kaplan, 2000). If stress is indeed key to the development of both psychological and physical disorders, perhaps such disorders can be prevented or reduced by eliminating or reducing stress—for example, by helping people to cope better generally or by better preparing their bodies for stress's impact. With this notion in mind, illness prevention and health promotion programs are now being developed around the world. Clinical theorists have, for example, designed school-curriculum programs to help promote *social competence* in children (Weissberg, 2000) and teach children more *optimistic ways of thinking* (Gillham et al., 2000, 1995). Similarly, prevention programs have been developed that teach coping skills to children whose parents are divorcing and conflict-reduction skills to the parents themselves (Wolchick et al., 2000). And in the realm of acute and post-traumatic stress disorders, one team of clinical researchers has developed a program that *immediately* offers rape victims a combination of relaxation training, exposure techniques, cognitive interventions, and education about rape's impact, all before the onset of psychological or physical symptoms (Foa et al., 1995). Research indicates that women who receive such preventive measures do indeed develop fewer stress symptoms in the months following their attacks than do other rape victims.

Amidst these exciting and rapidly unfolding developments also lies a cautionary tale. When problems are studied heavily, it is common for the public, as well as some researchers and clinicians, to make claims and draw conclusions that may be too bold. In the psychological realm, for example, many individuals—perhaps too many—are now receiving diagnoses of posttraumatic stress disorder partly because the symptoms of the disorder are many, because a variety of life events can be considered traumatic, and because the disorder has received so much attention. Similarly, given the growing body of work on psychophysiological disorders and psychoneuroimmunology, some people, including a number of clinicians, are all too quick to explain medical problems by pointing simplistically to psychosocial factors such as counterproductive attitudes, too little faith, or lack of social support. Explanations of this kind reflect a misunderstanding and misapplication of the complex research that has been unfolding in the study of stress and health. We shall see such potential problems again when we look at other problems that are currently receiving great focus, such as attention-deficit hyperactivity disorder, repressed memories of childhood abuse, and multiple personality disorder. The line between enlightenment and overenthusiasm is often thin.

## SUMMARY AND REVIEW

- **Effects of stress** When we appraise a *stressor* as threatening, we often experience a *stress response* consisting of arousal and a sense of fear. The features of arousal and fear are set in motion by the *hypothalamus*, a brain area that activates the *autonomic nervous system* and the *endocrine system*. There are two pathways by which these systems produce arousal and fear—the *sympathetic*



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"Under our holistic approach, Mr. Wyndot, we not only treat your symptoms, we also treat your dog."

### >>LOOKING AROUND Recovery from Illness

**Surgical Risk** People who experience more fear or stress before surgery tend to experience more pain and more complications after surgery and stay longer in the hospital (Kiecolt-Glaser et al., 1998).<<

**Room with a View** According to one hospital's records of individuals who underwent gallbladder surgery, those in rooms with a good view from their window had shorter hospitalizations and needed fewer pain medications than those in rooms without a good view (Ulrich, 1984).<<

**>>LOOKING AROUND****Pressure behind the Wheel**

Traffic congestion is a major source of stress for automobile drivers. According to a study of 75 metropolitan areas in the United States, the average amount of time that today's roadways are congested is 8 hours a day, almost double the average of 20 years ago (Fetto, 2002). Los Angeles leads the nation with 10.8 hours of congested traffic each day, followed by San Francisco, Atlanta, Chicago, San Diego, and Washington, D.C. In contrast, Corpus Christi, Texas has only 1.4 hours of traffic congestion each day (Fetto, 2002; TTI, 2002). <<

**>>IN THEIR WORDS**

"As for me, except for the occasional heart attack, I feel as young as I ever did." <<

Robert Benchley

"The trouble with life in the fast lane is that you get to the other end in an awful hurry." <<

John Jensen

"I can't express anger; I grow a tumor instead." <<

Woody Allen

"The advantage of the emotions is that they lead us astray." <<

Oscar Wilde

"When the heart is at ease, the body is healthy." <<

Chinese proverb

*nervous system* pathway and the *hypothalamic-pituitary-adrenal* pathway. pp. 1–6.

- **Psychological stress disorders** People with *acute stress disorder* or *post-traumatic stress disorder* react with anxiety and related symptoms after a traumatic event, including reexperiencing the traumatic event, avoiding related events, being markedly less responsive than normal, and experiencing increased arousal, anxiety, and guilt. The traumatic event may be *combat experience*, a *disaster*, or *victimization*. The symptoms of *acute stress disorder* begin soon after the trauma and last less than a month. Those of *posttraumatic stress disorder* may begin at any time (even years) after the trauma, and may last for months or years.

In attempting to explain why some people develop a psychological stress disorder and others do not, researchers have focused on *biological factors*, *personality*, *childhood experiences*, *social support*, and the *severity of the traumatic event*. Techniques used to treat the stress disorders include drug therapy and behavioral exposure techniques. Clinicians may also use insight therapy, family therapy, and group therapy (including *rap groups* for combat veterans) to help sufferers develop insight and perspective. Rapidly mobilized *community therapy*, such as that offered by the *Disaster Response Network*, follows the principles of *critical incident stress debriefing*. It can be helpful after large-scale disasters. pp. 6–20

- **Psychophysiological disorders** *Psychophysiological disorders* are those in which psychosocial and physiological factors interact to cause a physical problem. Factors linked to these disorders are sociocultural factors, such as society-wide stressors or persistent social conditions; psychological factors, such as particular needs, attitudes, or personality styles; and biological factors, such as defects in the autonomic nervous system or particular organs.
- For years clinical researchers singled out a limited number of physical illnesses as psychophysiological. These traditional psychophysiological disorders include *ulcers*, *asthma*, *insomnia*, *chronic headaches*, *hypertension*, and *coronary heart disease*. Recently many other psychophysiological disorders have been identified. Scientists have linked many physical illnesses to stress and have developed a new area of study called *psychoneuroimmunology*. pp. 21–28

- **Psychoneuroimmunology** The body's *immune system* consists of *lymphocytes* and other cells that fight off *antigens*—bacteria, viruses, and other foreign invaders—and cancer cells. Stress can slow *lymphocyte* activity, thereby interfering with the immune system's ability to protect against illness during times of stress. Factors that seem to affect immune functioning include *norepinephrine* and *corticosteroid* activity, *behavioral changes*, *personality style*, and *social support*. pp. 28–31

- **Psychological treatments for physical disorders** *Behavioral medicine* combines psychological and physical interventions to treat or prevent medical problems. Psychological approaches such as *relaxation training*, *biofeedback training*, *meditation*, *hypnosis*, *cognitive techniques*, *insight therapy*, and *support groups* are increasingly being included in the treatment of various medical problems. pp. 31–34

- **Illness prevention and health promotion** In recent years clinicians have increasingly designed programs that aim to eliminate or reduce stress by helping people generally to cope better or to prepare their bodies for stress's impact. The logic behind such programs is that the better people handle stress, the less likely they will be to develop the psychological and physical disorders that often result from stress. pp. 34–35

»» **CRITICAL THOUGHTS** ««

1. What types of events in modern society might trigger acute and post-traumatic stress disorders? What kinds of factors might serve to relieve the stresses of modern society? pp. 8–11
2. Do you think the vivid images seen daily on television, in movies, in rock videos, and the like would make people more vulnerable to developing psychological stress disorders or less vulnerable? Why? pp. 8–15
3. Have you, a friend, or a relative ever reacted to stress in ways that might suggest a diagnosis of “adjustment disorder”? Is this category too vague or too easily applied? p. 17
4. How might physicians, police, the courts, and other agents better meet the psychological needs of rape victims? pp. 9–11, 14–15
5. What jobs in our society might be particularly stressful and traumatizing? p. 25
6. Holmes and Rahe’s Social Adjustment Rating Scale has been criticized for assigning a specific stress score to each major life event. Why might such a number fail to be a good indicator of the amount of stress the event actually causes for a particular individual? pp. 26–28
7. Some observers fear that today there may be too much emphasis on psychosocial factors in explaining physical illness. What problems might result from an overemphasis on the role of psychosocial factors? pp. 26–34

 **CYBER STUDY**

▲ Witness “fight-or-flight” reactions in operation ▲ See the impact of stress on judgment, emotions, job performance, and health ▲ How do people react after horrific events? ▲ How can we protect ourselves against physical illnesses?

**SEARCH THE ABNORMAL PSYCHOLOGY CD-ROM FOR**

- ▲ Video cases
  - “Claude & Claude”—*Emotion, Stress, and Health*
  - “Elaine”—*Posttraumatic Stress Disorder*
  - “Joseph”—*Health at Risk*
- ▲ Research exercise
  - Stress and Physical Illness: Which Causes Which?*
- ▲ Decision-making
  - “Assessing and Diagnosing Stress Disorders”
  - “Choosing the Best Treatment”
- ▲ Chapter 6 practice test and feedback

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