

A young man with dark hair is shown in profile on the left side of the cover, looking towards the right. In the background, a person wearing a light blue lab coat and yellow gloves is visible, with their hands positioned near the man's head. The background is blurred, suggesting a clinical or laboratory setting.

FIFTEENTH EDITION

Abnormal PSYCHOLOGY

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Causal Factors and Viewpoints

chapter

3



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Theoretical Viewpoints and the Causes of Abnormal Behavior

We saw in the last chapter that speculation about the causes of abnormal behavior goes back very far in human history. From early times, those who observed disordered behavior grappled with the question of its cause. Hippocrates, for example, had a type of disease model and suggested that an imbalance in the four bodily humors produced abnormal behavior, with each humor connected with certain kinds of behavior. To other observers, the cause was possession by demons or evil spirits. Later, bodily dysfunction was suggested as a cause.

Each attempt at identifying a cause brought with it a theory, or model, of abnormal behavior. Today we are still puzzling over the causes of abnormal behavior, and speculation about causes continues to give rise to new models of abnormality. Since about 1900, several important schools of thought have developed elaborate models to explain the origins of abnormal behavior and to suggest how it might be treated. We will discuss the most influential of these theoretical perspectives in this chapter, paying special attention to the different types of causal factors that each perspective has identified. First, however, we need to address the very nature of the concept of causation as it is applied to abnormal behavior.

Causes and Risk Factors for Abnormal Behavior

Central to the field of abnormal psychology are questions about what causes people to experience mental distress and to behave maladaptively. If we knew the causes for given disorders, we might be able to prevent conditions that lead to them and perhaps reverse those that maintain them. We could also classify and diagnose disorders better if we clearly understood their causes rather than relying on clusters of symptoms, as we usually must do now.

Although understanding the causes of abnormal behavior is clearly a desirable goal, it is enormously difficult to achieve because human behavior is so complex. Even the simplest human behavior, such as speaking or writing a single word, is the product of thousands of prior events—the connections among which are not always clear. Attempting to understand a person's life in causal terms is a task of enormous magnitude, whether it be a fairly normal or adaptive life or a life characterized by severe mental disorders. As a result, many investigators now prefer to speak of *risk factors* (variables correlated with an abnormal outcome) rather than of causes (Rutter, 2006a).

Nevertheless, understanding causes remains the ultimate goal. However, this is particularly difficult to achieve when straightforward scientific approaches such as experiments using random assignment are generally not feasible for ethical reasons.

Necessary, Sufficient, and Contributory Causes

Regardless of one's theoretical perspective, several terms can be used to specify the role a factor plays in the **etiology**, or causal pattern, of abnormal behavior. A **necessary cause** (e.g., cause X) is a condition that must exist for a disorder (e.g., disorder Y) to occur. For example, general paresis (Y)—a degenerative brain disorder—cannot develop unless a person has previously contracted syphilis (X). Or more generally, if Y occurs, then X must have preceded it. Another example is Huntington's chorea—a rare degenerative brain disorder of the central nervous system—which can develop only if the person has the necessary gene (IT 15, or the Huntington's gene—see Chapter 14). To date, most mental disorders have not been found to have necessary causes, although there continues to be a search for such causes.

A **sufficient cause** (e.g., cause X) of a disorder is a condition that guarantees the occurrence of a disorder (e.g., disorder Y). For example, one current theory hypothesizes that hopelessness (X) is a sufficient cause of depression (Y) (Abramson et al., 1995; Abramson et al., 1989). Or, more generally, if X occurs, then Y will also occur. According to this theory, if you are hopeless enough about your future, then you will become depressed. However, a sufficient cause may not be a necessary cause. Continuing with the depression example, Abramson and colleagues (1989) acknowledge that hopelessness is not a necessary cause of depression; there are other causes of depression as well. Finally, what we study most often in psychopathology research are **contributory causes**. A contributory cause (e.g., cause X) is one that increases the probability of a disorder (e.g., disorder Y) developing but is neither necessary nor sufficient for the disorder to occur. Or, more generally, if X occurs, then the probability of Y occurring increases. For example, parental rejection could increase the probability that a child will later have difficulty in handling close personal relationships or could increase the probability that being rejected in a relationship in adulthood will precipitate depression. We say here that parental rejection is a contributory cause for the person's later difficulties, but it is neither necessary nor sufficient (Abramson et al., 1989; Abramson et al., 1995). See Figure 3.1 for a summary.

Necessary Cause	If Disorder Y occurs, then Cause X must have preceded it.
Sufficient Cause	If Cause X occurs, then Disorder Y will also occur.
Contributory Cause	If X occurs, then the probability of Disorder Y increases.

FIGURE 3.1

Abnormal Behavior: Types of Causes

In addition to distinguishing among necessary, sufficient, and contributory causes of abnormal behavior, we must also consider the time frame under which the different causes operate. Some causal factors occurring relatively early in life may not show their effects for many years; these would be considered *distal causal factors* that may contribute to a predisposition to develop a disorder. For example, loss of a parent early in life, or having abusive or neglectful parents as a child or adolescent, may serve as a distal contributory cause predisposing a person to depression or antisocial behaviors later in life. By contrast, other causal factors operate shortly before the occurrence of the symptoms of a disorder; these would be considered *proximal causal factors*. Sometimes a proximal causal factor may be a condition that proves too much for a child or adult and triggers the onset of a disorder. A crushing disappointment at school or work or severe difficulties with a school friend or a marital partner are examples of more proximal causal factors that could lead to depression. In other cases, proximal factors might involve biological changes such as damage to certain parts of the left hemisphere of the brain, which can lead to depression.

A *reinforcing contributory cause* is a condition that tends to maintain maladaptive behavior that is already occurring. An example is the extra attention, sympathy, and relief from unwanted responsibility that may come when a person is ill; these pleasant experiences may unintentionally discourage recovery. Another example occurs when a depressed person's behavior alienates friends and family, leading to a greater sense of rejection that reinforces the existing depression (Joiner, 2002; Joiner & Timmons, 2009).

For many forms of psychopathology, we do not yet have a clear understanding of whether there are necessary or sufficient causes, although answering this question remains the goal of much current research. We do, however, have a good understanding of many of the contributory causes for most forms of psychopathology. Some of the distal contributory causes, to be discussed later in this chapter, set up vulnerability during childhood to some disorder later in life. Other more proximal contributory causes appear to bring on a disorder directly, and still others may contribute to maintenance of a disorder. This complex causal picture is further complicated by the fact that what may be a proximal cause for a problem at one stage in life may also serve as a distal contributory cause that sets up a predisposition for another disorder later in life. For example, the death of a parent can be a proximal cause of a child's subsequent grief reaction, which might last a few months or a year; however, the parent's death may also serve as a distal contributory factor that increases the probability that when the child grows up he or she will become depressed in response to certain stressors.



The loss of a parent at an early age may be a contributory cause for a child to develop depression in adulthood. Factors that may not show their effects for many years are called distal causal factors.

Feedback and Bidirectionality in Abnormal Behavior

Traditionally in the sciences, the task of determining cause-and-effect relationships has focused on isolating the condition X (cause) that can be demonstrated to lead to condition Y (effect). For example, when the alcohol content of the blood reaches a certain level, alcoholic intoxication occurs. When more than one causal factor is involved as is often the case, the term *causal pattern* is used. Here, conditions A, B, C, and so on lead to condition Y. In either case, this concept of cause follows a simple linear model in which a given variable or set of variables leads to a result either immediately or later. In the behavioral sciences, however, not only do we usually deal with a multitude of interacting causes but we also often have difficulty distinguishing between what is cause and what is effect because effects can serve

as feedback that can in turn influence the causes. In other words, the effects of feedback and the existence of mutual, two-way (bidirectional) influences must be taken into account.

Consider the following example, which illustrates that our concepts of causal relationships must take into account the complex factors of bidirectionality of feedback.

case study Perceived Hostility

A boy with a history of disturbed interactions with his parents routinely misinterprets the intentions of his peers as being hostile. He develops defensive strategies to counteract the supposed hostility of those around him such as rejecting the efforts of others to be friendly, which he misinterprets as patronizing. Confronted by the boy's prickly behavior, those around him become defensive, hostile, and rejecting, thus confirming and strengthening the boy's distorted expectations. In this manner, each opportunity for new experience and new learning is in fact subverted and becomes yet another encounter with a social environment that seems perversely and persistently hostile—exactly in line with the boy's expectations.

Diathesis-Stress Models

A predisposition toward developing a disorder is termed a **diathesis**. It can derive from biological, psychological, or sociocultural causal factors, and the different viewpoints that we will be discussing tend to emphasize the importance of different kinds of diatheses. Many mental disorders are believed to

develop when some kind of stressor operates on a person who has a diathesis or *vulnerability* for that disorder. Hence we will discuss what are commonly known as **diathesis-stress models** of abnormal behavior (e.g., Ingram & Luxton, 2005; Meehl, 1962; Monroe & Simons, 1991). To translate these terms into the types of causal factors described earlier, the diathesis is a relatively distal necessary or contributory cause, but it is generally not sufficient to cause the disorder. Instead, there generally must be a more proximal undesirable event or situation (the stressor), which may also be contributory or necessary but is generally not sufficient by itself to cause the disorder except in someone with the diathesis.

Stress, the response or experience of an individual to demands that he or she perceives as taxing or exceeding his or her personal resources (Folkman & Moskowitz, 2004; Monroe et al., 2009; Taylor & Stanton, 2007), will be the focus of Chapter 5. It usually occurs when an individual experiences chronic or episodic events that are undesirable and lead to behavioral, physiological, and cognitive accommodations (Baum & Posluszny, 1999). It is important to note that factors contributing to the development of a diathesis are themselves sometimes highly potent stressors, as when a child experiences the death of a parent and may thereby acquire a predisposition or diathesis for becoming depressed later in life.

Researchers have proposed several different ways that a diathesis and stress may combine to produce a disorder (Ingram & Luxton, 2005; Monroe & Simons, 1991). In what is called the *additive model*, individuals who have a high level of a diathesis may need only a small amount of stress before a disorder develops, but those who have a very low level of a diathesis may need to experience a large amount of stress for a disorder to develop. In other words, the diathesis and the stress sum together, and when one is high the other can be low, and vice versa; thus, a person with no diathesis or a very low level of diathesis could still develop a disorder when faced with truly severe stress. In what is called an *interactive model*, some amount of diathesis must be present before stress will have any effect. Thus, in the interactive model, someone with no diathesis will never develop the disorder, no matter how much stress he or she experiences, whereas someone with the diathesis will show increasing likelihood of developing the disorder with increasing levels of stress. More complex models are also possible because diatheses often exist on a continuum, ranging from zero to high levels. Each of these possibilities is illustrated in Figure 3.2.

Since the late 1980s, attention has been focused on the concept of **protective factors**, which are influences that modify a person's response to environmental stressors, making it less likely that the person will experience the adverse consequences of the stressors (Cicchetti & Garmezy, 1993; Masten et al., 2004; Rutter, 2006a, 2011). One important protective factor in childhood is having a family environment in which at least one parent is warm and supportive, allowing the development of a good attachment relationship between the child and parent that can protect against the harmful effects of an abusive parent (Masten & Coatsworth, 1998). Ordinarily, protective

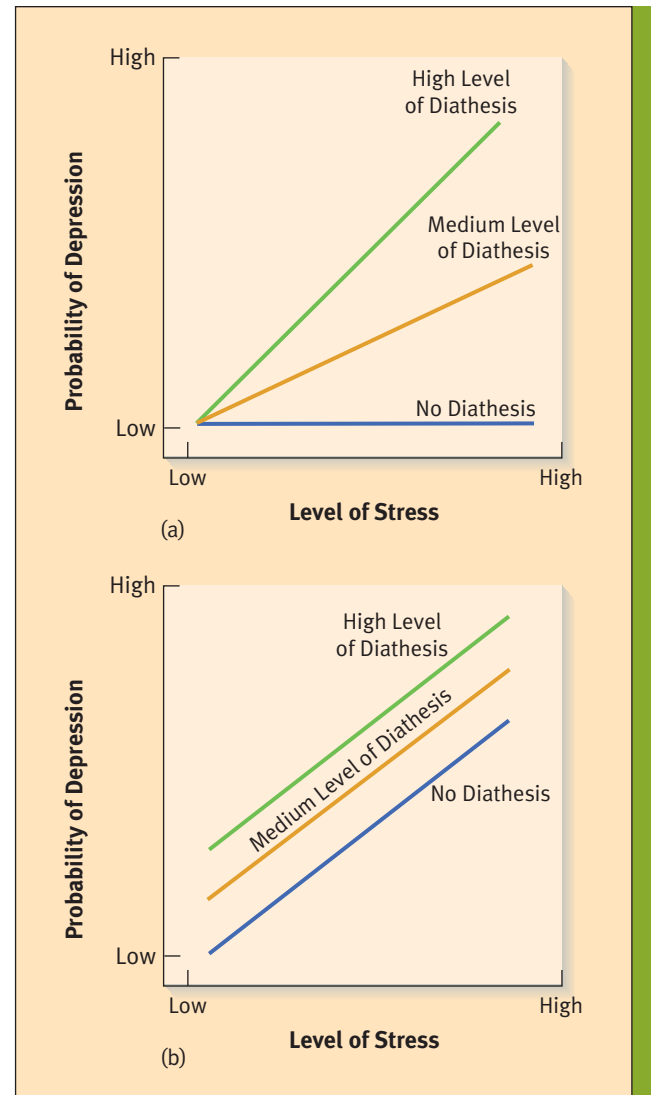


FIGURE 3.2

Diathesis-Stress Model

(a) Interactive model of diathesis-stress interaction. (b) Additive model of diathesis-stress interaction.

Source: Adapted from S. M. Monroe & A. D. Simons (1991). Diathesis-stress theories in the context of life stress research: Implications for the depressive disorders. *Psychological Bulletin*, 110, 406–25.

factors operate only to help resist against the effects of a risk factor rather than to provide any benefits to people without risk factors (Rutter, 2006a).

Protective factors are not necessarily positive experiences. Indeed, sometimes exposure to stressful experiences that are dealt with successfully can promote a sense of self-confidence or self-esteem and thereby serve as a protective factor; thus some stressors paradoxically promote coping. This “steeling” or “inoculation” effect is more likely to occur with moderate stressors than with mild or extreme stressors (Barlow, 2002; Hetherington, 1991; Rutter, 1987, 2009). And some protective

factors have nothing to do with experiences at all but are simply some quality or attribute of a person. For example, some protective attributes include an easygoing temperament, high self-esteem, high intelligence, and school achievement, all of which can help protect against a variety of stressors (Masten, 2001; Rutter, 1987; Sapienza & Masten, 2011).

Protective factors most often, but not always, lead to **resilience**—the ability to adapt successfully to even very difficult circumstances. An example is the child who perseveres and does well in school despite his or her parent’s drug addiction or physical abuse (Garmezy, 1993; Luthar, 2003; Sapienza & Masten, 2011). More generally, the term *resilience* has been used to describe the phenomenon that “some individuals have a relatively good outcome despite suffering risk experiences that would be expected to bring about serious sequelae” (Rutter, 2007, p. 205). A more everyday way of thinking of resilience is in terms of “overcoming the odds” against you. There is increasing evidence that if a child’s fundamental systems of adaptation (such as intelligence and cognitive development, ability to self-regulate, motivation to achieve mastery, effective parenting, and well-functioning neurobiological systems for handling stress) are operating normally, then most threatening circumstances will have minimal impact on him or her (Masten, 2001; Sapienza & Masten, 2011). Problems tend to arise when one or more of these systems of adaptation is weak to begin with (e.g., low intelligence or poorly functioning neurobiological systems for handling stress; Lester et al., 2006) or when a serious stressor damages one or more of these systems (e.g., when a parent dies). Problems can also arise when the level of challenge far exceeds human capacity to adapt (e.g., exposure to chronic trauma in war or chronic maltreatment in abusive families; Cicchetti, 2004; Cicchetti & Toth, 2005; Masten & Coatsworth, 1998; Sapienza & Masten, 2011). We should also note, however, that resilience should not be thought of as an all-or-none capacity, and some research has shown that resilient children (that is, those who show high social competence despite high stress) may nonetheless also experience considerable self-reported emotional distress. Moreover, children who show resilience in one domain may show significant difficulties in other domains.

In sum, we can distinguish between causes of abnormal behavior that lie within and are part of the biological makeup or prior experience of a person—diatheses, vulnerabilities, or predispositions—and causes that pertain to current challenges in a person’s life—stressors. Typically, neither the diathesis nor the stress is by itself sufficient to cause the disorder, but in combination they can sometimes lead the individual

to behave abnormally. In addition, we can also examine protective factors, which may derive either from particular types of experiences or from certain qualities of the person, that can promote resilience in the face of vulnerability and stress. The following hypothetical but highly plausible scenario nicely illustrates these concepts.

case study Nature and Nurture

Melinda and Tracy were identical twins whose parents were killed in a car accident when they were a year old. Their mother and grandmother both had histories of recurrent clinical depression. The twins were adopted into two loving middle-class families without a history of depression. Melinda’s adoptive family provided a loving and supportive environment and supported her through school and college. Tracy’s adoptive parents, by contrast, soon divorced, and she was raised by her adoptive mother, who developed a serious dependence on alcohol and who could not hold a job. Her mother’s living circumstances deteriorated and Tracy was forced to change schools four times. Because of her adoptive mother’s alcohol and other mental problems, she was unable to provide Tracy with a consistently loving and supportive environment, and when she was drunk she frequently punished Tracy for no good reason. Tracy somehow managed to graduate from high school and supported herself through a state college. Both Tracy and Melinda married after they graduated from college but, by age 27, both marriages resulted in divorce. Although Melinda developed some depressive symptoms for the first 6 weeks following the divorce, the depression was not severe and she quickly recovered. Tracy, by contrast, developed a major depressive episode that lasted for over a year.



A child growing up under conditions of adversity may be protected from problems later in life if he or she has a warm and supportive relationship with some adult—such as a grandmother. Encouraging children to ask questions, taking the time to listen to their problems and concerns, and trying to understand the conflicts and pressures they face are the important elements of such a supportive and protective relationship.

In this example, both Tracy and Melinda have identical genetic makeup and therefore the same genetic diathesis for depression. Both had experienced the same distal stressor (death of parents at an early age), and the same proximal stressor (divorce) at age 27. But Melinda had many protective factors growing up (loving and supportive family and adequate resources) that Tracy did not have (lack of a loving and supportive mother and inadequate resources). Thus Melinda showed resilience in the face of her divorce but Tracy did not.

Different models of abnormal behavior, as we shall see in the sections that follow, identify different diatheses and different stressors as the route to abnormality and different protective factors as the route to resilience in the face of adversity.

This discussion should make it very clear that diathesis-stress models need to be considered in a broad framework of *multicausal developmental models*. Specifically, in the course of development a child may acquire a variety of cumulative risk factors that may interact in determining his or her risk for psychopathology. These risk factors also interact, however, with a variety of protective processes, and sometimes with stressors, to determine whether the child develops in a normal and adaptive way—as opposed to showing signs of maladaptive behavior and psychopathology—in childhood, adolescence, or adulthood (e.g., Rutter, 2001, 2006a, 2009; Sapienza & Masten, 2011). It is also important to note, however, that to understand what is abnormal, one must always have a good understanding of normal human development at biological, psychological, and sociocultural levels of analysis. This has been the focus of the rapidly growing field of **developmental psychopathology**, which focuses on determining what is abnormal at any point in development by comparing and contrasting it with the normal and expected changes that occur in the course of development (e.g., Masten, 2006; Rutter, 2001). For example, an intense fear of the dark in a 3- to 5-year-old child may not be considered abnormal, given that most children have at least one specific fear that they bring into early adolescence (Antony et al., 1997; Barlow, 2002). However, an intense fear of the dark that causes considerable distress and avoidance behavior in a high school or college-age student would be considered a phobia.

In Review

- What is a necessary cause? a sufficient cause? a contributory cause?
- What is a diathesis-stress model of abnormal behavior?
- Define the terms *protective factors* and *resilience*. Give examples of each.
- Explain why diathesis-stress models need to be considered as multicausal developmental models.

Viewpoints for Understanding the Causes of Abnormal Behavior

Students are often perplexed by the fact that in the behavioral sciences there often are several competing explanations for the same thing. In general, the more complex the phenomenon being investigated, the greater the number of viewpoints that develop in an attempt to explain it,

although inevitably they are not all equally valid. In each case, a particular viewpoint helps researchers and theoreticians to organize the observations they have made, provides a system of thought in which to place the observed data, and suggests areas of focus for research and treatment. In a fundamental way, viewpoints also help determine the kinds of potential causes that are even examined in the first place. It is important to remember, however, that each of these viewpoints is a theoretical construction devised to orient psychologists in the study of abnormal (and normal) behavior. One potential problem is that when adherents of a particular viewpoint are overly confident about the validity of that viewpoint, they may become blind to alternative interpretations.

As we saw in Chapter 2, Sigmund Freud helped shift the focus of abnormal psychology from biological illness or moral infirmity to unconscious mental processes within the person. In recent years, three other shifts in focus seem to have been occurring in parallel in the study of abnormal behavior. First, a newer, slightly different biological viewpoint is having a significant impact; it is the dominant force in psychiatry and has become very influential in clinical science more generally. Second, the behavioral and cognitive-behavioral viewpoints have become very influential paradigms among many empirically oriented clinical psychologists and some psychiatrists. Third, a sociocultural viewpoint has also become influential among psychologists and psychiatrists interested in the effects of sociocultural factors on abnormal behavior. In the long run, however, we also know from biological, psychological, and sociocultural research that only an integrated approach is likely to provide anything close to a full understanding of the origins of various forms of psychopathology or the form that a long-lasting cure for many serious forms of psychopathology might take. Thus, in recent years, many theorists have come to recognize the need for a more integrative, **biopsychosocial viewpoint** that acknowledges that biological, psychological, and sociocultural factors all interact and play a role in psychopathology and treatment.

With this in mind, we now turn to the major different viewpoints themselves. We will present the key ideas of each perspective, along with information about attempts to evaluate its validity. We will also describe the kinds of causal factors that each model tends to emphasize.

In Review

- What are the three traditional viewpoints that have dominated the study of abnormal behavior in recent years?
- What is the central idea of the more current biopsychosocial viewpoint?

The Biological Viewpoint and Biological Causal Factors

As we saw in Chapter 2 in the discussion of general paresis and its link to syphilis, the traditional biological viewpoint focuses on mental disorders as diseases, many of the primary symptoms of which are cognitive, emotional, or behavioral. Mental disorders are thus viewed as disorders of the central nervous system, the autonomic nervous system, and/or the endocrine system that are either inherited or caused by some pathological process. At one time, people who adopted this viewpoint hoped to find simple biological explanations. Today, however, most clinical psychologists and psychiatrists recognize that such explanations are rarely simple, and many also acknowledge that psychological and sociocultural causal factors play important roles as well.

The disorders first recognized as having biological or organic components were those associated with gross destruction of brain tissue. These disorders are neurological diseases—that is, they result from the disruption of brain functioning by physical or biochemical means and often involve psychological or behavioral aberrations. For example, damage to certain areas in the brain can cause memory loss, and damage to the left hemisphere that occurs during a stroke can cause depression.

However, most mental disorders are not caused by neurological damage per se. For example, abnormalities in neurotransmitter systems in the brain can lead to mental disorders without causing damage to the brain. Moreover, the bizarre content of delusions and other abnormal mental states like hallucinations can never be caused simply and directly by brain damage. Consider the example of a person with schizophrenia or general paresis who claims to be Napoleon. The content of such delusions must be the byproduct of some sort of functional integration of different neural structures, some of which have been “programmed” by personality and learning based on past experience (e.g., having learned who Napoleon was).



People’s behavior during alcohol intoxication is one good example of how a temporary biological condition can dramatically affect functioning—in this case engaging in behavior that normally would be inhibited.

- ▶ Neurotransmitter and hormonal abnormalities in neurotransmitter systems
- ▶ Genetic vulnerabilities
- ▶ Temperament
- ▶ Brain dysfunction and neural plasticity

FIGURE 3.3

Biological Causal Factors

We will focus here on four categories of biological factors that seem particularly relevant to the development of maladaptive behavior: (1) neurotransmitter and hormonal abnormalities in the brain or other parts of the central nervous system, (2) genetic vulnerabilities, (3) temperament, and (4) brain dysfunction and neural plasticity. (See also Figure 3.3.) Each of these categories encompasses a number of conditions that influence the quality and functioning of our bodies and our behavior. They are often not independent of each other but rather interact with one another. Moreover, different factors may play more or less important roles in different people.

Imbalances of Neurotransmitters and Hormones

In order for the brain to function adequately, neurons, or nerve cells, need to be able to communicate effectively with one another. The site of communication between the axon of one neuron and the dendrites or cell body of another neuron is the **synapse**—a tiny fluid-filled space between neurons. These interneuronal transmissions are accomplished by **neurotransmitters**—chemical substances that are released into the synapse by the presynaptic neuron when a nerve impulse occurs (for details, see Developments in Research 3.1 on page 62). There are many different kinds of neurotransmitters; some increase the likelihood that the postsynaptic neuron will “fire” (produce an impulse), and others inhibit the impulse. Whether the neural message is successfully transmitted to the postsynaptic neuron depends, among other things, on the concentration of certain neurotransmitters within the synapse.

IMBALANCES OF NEUROTRANSMITTER SYSTEMS The belief that imbalances in neurotransmitters in the brain can result in abnormal behavior is one of the basic tenets of the biological perspective today, although currently most researchers agree that this is only part of the causal pattern involved in the etiology of most disorders. Sometimes psychological stress can bring on *neurotransmitter imbalances*. These imbalances can be created in a variety of ways (see the figure in Developments in Research 3.1):

- There may be excessive production and release of the neurotransmitter substance into the synapses, causing a functional excess in levels of that neurotransmitter.

3.1

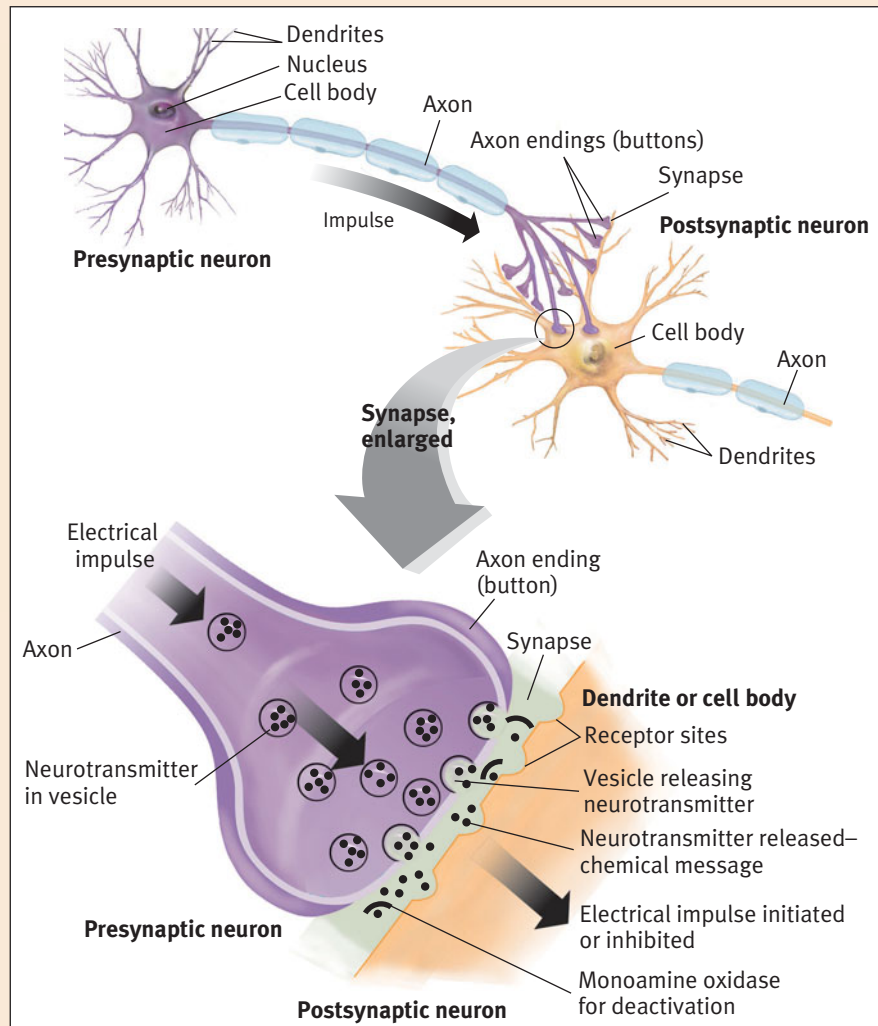
DEVELOPMENTS IN RESEARCH

Neurotransmission and Abnormal Behavior

A nerve impulse, which is electrical in nature, travels from the cell body of a neuron (nerve cell) down the axon. Although there is only one axon for each neuron, axons have branches at their ends called axon endings. These are the sites where neurotransmitter substances are released into a synapse—a tiny, fluid-filled gap between the axon endings of one neuron (the presynaptic neuron) and the dendrites or cell body of another neuron (the postsynaptic neuron). The synapse is the site of neural transmission—that is, of communication between neurons. The neurotransmitter substances are contained within synaptic vesicles near the axon endings. When a nerve impulse reaches the axon endings, the synaptic vesicles travel to the presynaptic membrane of the axon and release the neurotransmitter substance into the synapse. The neurotransmitter substances released into the synapse then act on the postsynaptic membrane of the dendrite of the receiving neuron, which has specialized receptor sites where the neurotransmitter substances pass on their message. The receptor sites then initiate the receiving cell's response. The neurotransmitters can stimulate that postsynaptic neuron to either initiate an impulse or inhibit impulse transmission. Both kinds of messages are important. Once the neurotransmitter substance is released into the synapse, it does not stay around indefinitely (otherwise, the second neuron would continue firing in the absence of a real impulse). Sometimes the neurotransmitters are quickly destroyed by an enzyme such as monoamine oxidase, and sometimes they are returned to storage vesicles in the axon endings by a reuptake mechanism—a process of reabsorption by which the neurotransmitters are reabsorbed or effectively sucked back up into the axon ending. The enzyme monoamine oxidase is also present in the presynaptic terminal and can destroy excess neurotransmitter there too.

Given that many forms of psychopathology have been associated with various abnormalities in neurotransmitter functioning and

with altered sensitivities of receptor sites, it is not surprising that many of the medications used to treat various disorders have the synapse as their site of action. For example, certain medications act to increase or decrease the concentrations of pertinent neurotransmitters in the synaptic gap. They may do so by blocking the reuptake process, by altering the sensitivity of the receptor sites, or by affecting the actions of the enzymes that ordinarily break down the neurotransmitter substances. Medications that facilitate the effects of a neurotransmitter on the postsynaptic neuron are called *agonists*, and those that oppose or inhibit the effects of a neurotransmitter on a postsynaptic neuron are called *antagonists*.



- There may be dysfunctions in the normal processes by which neurotransmitters, once released into the synapse, are deactivated. Ordinarily this deactivation occurs either through a process of reuptake of the released neurotransmitter from the synapse into the axon endings or through a process of degradation by certain enzymes that may be present in the synapse and in the presynaptic axon endings.
- Finally, there may be problems with the receptors in the postsynaptic neuron, which may be either abnormally sensitive or abnormally insensitive.

Neurons that are sensitive to a particular neurotransmitter tend to cluster together, forming neural paths between different parts of the brain known as *chemical circuits*. As we will see, different disorders are thought to stem from different patterns of neurotransmitter imbalances in various brain areas (e.g., Lambert & Kinsley, 2005; Thompson, 2000). Different medications used to treat various disorders are often believed to operate by correcting these imbalances. For example, the widely prescribed antidepressants Prozac and Zoloft appear to slow the reuptake of the neurotransmitter serotonin, thereby prolonging how long serotonin remains in the synapse (see Chapters 7 and 16).

Although over a hundred neurotransmitters have been discovered to date, five different kinds of neurotransmitters have been most extensively studied in relationship to psychopathology: (1) norepinephrine, (2) dopamine, (3) serotonin, (4) glutamate, and (5) gamma aminobutyric acid (known as GABA; Carlson, 2007; Lambert & Kinsley, 2005; Thompson, 2000). The first three belong to a class of neurotransmitters called *monoamines* because each is synthesized from a single amino acid (*monoamine* means “one amine”). Norepinephrine has been implicated as playing an important role in the emergency reactions our bodies show when we are exposed to an acutely stressful or dangerous situation, as well as in attention, orientation, and basic motives (see Chapters 5 and 6). Some of the functions of dopamine include pleasure and cognitive processing, and it has been implicated in schizophrenia (see Chapter 13) as well as in addictive disorders (see Chapter 11). Serotonin has been found to have important effects on the way we think and process information from our environment as well as on behaviors and moods. Not surprisingly, then, it seems to play an important role in emotional disorders such as anxiety and depression, as well as in suicide, as we will see in Chapters 6 and 7. In Chapter 13 we discuss the excitatory neurotransmitter glutamate, which has recently been implicated in schizophrenia. Finally, in Chapter 6, we discuss the neurotransmitter GABA, which is strongly implicated in reducing anxiety as well as other emotional states characterized by high levels of arousal. Each will be discussed at greater length when the relevant disorders are discussed.

HORMONAL IMBALANCES Some forms of psychopathology have also been linked to *hormonal imbalances*. **Hormones** are chemical messengers secreted by a set of

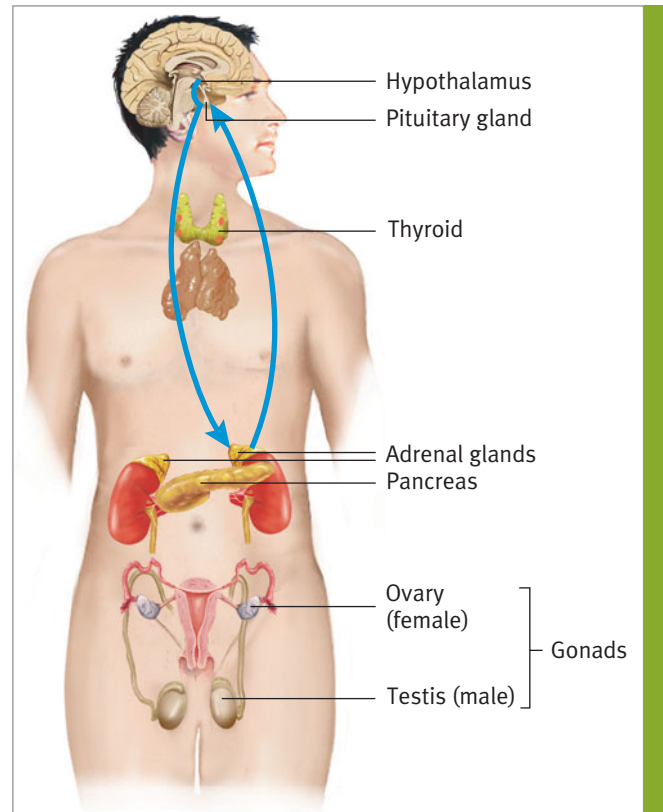


FIGURE 3.4

Major Glands of the Endocrine System

This figure illustrates some of the major glands of the endocrine system, which produce and release hormones into the bloodstream. The hypothalamic-pituitary-adrenal axis is also shown (blue arrows). The hypothalamus and pituitary are closely connected, and the hypothalamus periodically sends hormone signals to the pituitary (the master gland), which in turn sends another hormone to the cortical part of the adrenal glands (above the kidneys) to release epinephrine and the stress hormone cortisol.

endocrine glands in our bodies. Each of the endocrine glands produces and releases its own set of hormones directly into our bloodstream. The hormones then travel and directly affect target cells in various parts of our brain and body, influencing diverse events such as fight-or-flight reactions, sexual responses, physical growth, and many other physical expressions of mental states. Our central nervous system is linked to the endocrine system (in what is known as the *neuroendocrine system*) by the effects of the hypothalamus on the **pituitary gland**, which is the master gland of the body, producing a variety of hormones that regulate or control the other endocrine glands (see Figure 3.4).

One particularly important set of interactions occurs in the **hypothalamic-pituitary-adrenal axis (HPA axis)**. Activation of this axis involves:

1. Messages in the form of corticotrophin-releasing hormone (CRH) travel from the hypothalamus to the pituitary.

- In response to CRH, the pituitary releases adrenocorticotropic hormone (ACTH), which stimulates the cortical part of the adrenal gland (located on top of the kidney) to produce epinephrine (adrenaline) and the stress hormone **cortisol**, which are released into general circulation. Cortisol mobilizes the body to deal with stress.
- Cortisol in turn provides negative feedback to the hypothalamus and pituitary to decrease their release of CRH and ACTH, which in turn reduces the release of adrenaline and cortisol. This negative feedback system operates much as a thermostat does to regulate temperature.

As we will see, malfunctioning of this negative feedback system has been implicated in various forms of psychopathology such as depression and posttraumatic stress disorder.

Sex hormones are produced by the gonadal glands, and imbalance in these (such as the male hormones, the *androgens*) can also contribute to maladaptive behavior. Moreover, gonadal hormonal influences on the developing nervous system also seem to contribute to some of the differences between behavior in men and in women (e.g., Hayward, 2003; Hines, 2004; Money & Ehrhardt, 1972).

Genetic Vulnerabilities

The biochemical processes described above are themselves affected by **genes**, which consist of very long molecules of DNA (deoxyribonucleic acid) and are present at various locations on chromosomes. **Chromosomes** are the chain-like structures within a cell nucleus that contain the genes. Genes are the carriers of genetic information that we inherit from our parents and other ancestors, and each gene exists in two or more alternate forms called *alleles*. Although neither behavior nor mental disorders are ever determined exclusively by genes, there is substantial evidence that most mental disorders show at least some genetic influence ranging from small to large (e.g., Plomin et al., 2008; Rutter, 2006a). Some of these genetic influences, such as broad temperamental features, are first apparent in newborns and children. For example, some children are just naturally more shy or anxious, whereas others are more outgoing (e.g., Carey & DiLalla, 1994; Fox et al., 2010; Kagan & Fox, 2006). However, some genetic sources of vulnerability do not manifest themselves until adolescence or adulthood, when most mental disorders appear for the first time.

Healthy human cells have 46 chromosomes containing genetic materials that

encode the hereditary plan for each individual, providing the potentialities for development and behavior of that individual throughout a lifetime. The normal inheritance consists of 23 pairs of chromosomes, one of each pair from the mother and one from the father. Twenty-two of these chromosome pairs determine, by their biochemical action, an individual's general anatomical and other physiological characteristics. The remaining pair, the *sex chromosomes*, determine the individual's sex. In a female, both of these sex chromosomes—one from each parent—are designated as X chromosomes. In a male, the sex chromosome from the mother is an X, but that from the father is a Y chromosome (see Figure 3.5).

Research in developmental genetics has shown that abnormalities in the structure or number of the chromosomes can be associated with major defects or disorders. For example, Down syndrome is a type of mental retardation (also associated with recognizable facial features such as a flat face and slanted eyes) in which there is a trisomy (a set of three chromosomes instead of two) in chromosome 21 (see Chapter 15). Here the extra chromosome is the primary cause of the disorder. Anomalies may also occur in the sex chromosomes, producing a variety of complications, such as ambiguous sexual characteristics, that may predispose a person to develop abnormal behavior. Fortunately, advances in research have enabled us to detect chromosomal abnormalities even before birth, thus making it possible to study their effects on future development and behavior.



FIGURE 3.5

Human Chromosome Pairs

A normal human male has 23 pairs of chromosomes, including an X chromosome and a Y chromosome.

Source: "Human Chromosome Pairs," from Thomas D. Gelehrter et al. (1998). *Principles of Medical Genetics*. Reprinted with permission of Lippincott/Williams & Wilkins and Dr. Thomas D. Gelehrter.

More typically, however, personality traits and mental disorders are not affected by chromosomal abnormalities per se. Instead they are more often influenced either by abnormalities in some of the genes on the chromosomes or by naturally occurring variations of genes known as *polymorphisms*. Although you will often hear about discoveries that “the gene” for a particular disorder has been discovered, vulnerabilities to mental disorders are almost always **polygenic**, which means they are influenced by multiple genes or by multiple polymorphisms of genes, with any one gene having only very small effects (Kendler, 2005; Plomin et al., 2008). In other words, a genetically vulnerable person has usually inherited a large number of genes, or polymorphisms of genes, that operate together in some sort of additive or interactive fashion to increase vulnerability (e.g., Kendler, 2005; Plomin et al., 2008; Rutter, 2006b). Collectively these genes may, for example, lead to structural abnormalities in the central nervous system, to abnormalities in the regulation of brain chemistry and hormonal balance, or to excesses or deficiencies in the reactivity of the autonomic nervous system, which is involved in mediating many of our emotional responses.

In the field of abnormal psychology, genetic influences rarely express themselves in a simple and straightforward manner. This is because behavior, unlike some physical characteristics such as eye color, is not determined exclusively by genetic endowment; it is a product of the organism’s interaction with the environment. In other words, genes can affect behavior only indirectly. Gene “expression” is normally not a simple outcome of the information encoded in DNA but is, rather, the end product of an intricate process that may be influenced by the internal (e.g., intrauterine) and external environment. Indeed, certain genes can actually be “turned on,” or activated, and “turned off,” or deactivated, in response to environmental influences such as stress (e.g., Plomin et al., 2008; Rutter, 2006b).

THE RELATIONSHIP OF GENOTYPES TO PHENOTYPES

A person’s total genetic endowment is referred to as her or his **genotype** and, except for identical twins, no two humans ever begin life with the same endowment. The observed structural and functional characteristics that result from an interaction of the genotype and the environment are referred to as a person’s **phenotype**. In some cases, the genotypic vulnerability present at birth does not exert its effect on the phenotype until much later in life. In many other cases, the genotype may shape the environmental experiences a child has, thus affecting the phenotype in yet another very important way. For example, a child who is genetically predisposed to aggressive behavior may be rejected by his or her peers in early grades because of the aggressive behavior. Such rejection may lead the child to go on to associate with similarly aggressive and delinquent peers in later grades, leading to an increased likelihood of developing a full-blown pattern of delinquency in adolescence. When the genotype shapes the environmental experiences a child has in this way, we refer to this phenomenon as a **genotype–environment correlation** (Plomin et al., 2008; Rutter, 2006, 2007).

GENOTYPE–ENVIRONMENT CORRELATIONS Researchers have found three important ways in which an individual’s genotype may shape his or her environment (Jang, 2005; Plomin et al., 2008).

1. The child’s genotype may have what has been termed a *passive effect* on the environment, resulting from the genetic similarity of parents and children. For example, highly intelligent parents may provide a highly stimulating environment for their child, thus creating an environment that will interact in a positive way with the child’s genetic endowment for high intelligence. Conversely, parents who exhibit antisocial behavior tend to create a risky environment characterized by family dysfunction, thereby increasing the probability of certain mental disorders in their children (e.g., Rutter, 2006b; see also Chapter 10).
2. The child’s genotype may evoke particular kinds of reactions from the social and physical environment—a so-called *evocative effect*. For example, active, happy babies evoke more positive responses from others than do passive, unresponsive infants (Lytton, 1980). Similarly, musically talented children may be picked out at school and given special opportunities (Plomin et al., 2008).
3. The child’s genotype may play a more active role in shaping the environment—a so-called *active effect*. In this case the child seeks out or builds an environment that is congenial—a phenomenon known as “niche building.” For example, extraverted children may seek the company of others, for example, thereby enhancing their own tendencies to be sociable (Baumrind, 1991; Plomin et al., 2008).

GENOTYPE–ENVIRONMENT INTERACTIONS With the type of genotype–environment correlations just discussed, we see the effects that genes have on a child’s exposure to the environment. But an additional, fascinating complication is that people with different genotypes may be differentially sensitive or susceptible to their environments; this is known as a **genotype–environment interaction**. One important example is illustrated by a disorder known as PKU-induced mental retardation (see Chapter 15). Children with the genetic vulnerability to PKU react very differently to many common foods with phenylalanine than do normal children because they cannot metabolize the phenylalanine (an amino acid), and as its metabolic products build up, they damage the brain (Plomin et al., 2008; Rutter, 2006b). Fortunately, this mental retardation syndrome can be prevented if the young child’s diet is changed so as to eliminate foods with phenylalanine.

Another example occurs in people at genetic risk for depression, who have been shown to be more likely to respond to stressful life events by becoming depressed than are people without the genetic risk factors who experience the same stressful life events (Kendler, Kessler, et al., 1995; Moffitt, Caspi, & Rutter, 2005, 2006; Silberg, Rutter, Neale & Eaves, 2001). In one landmark study of nearly 850 young adults who

had been followed since age 3, investigators found evidence for a genotype–environment interaction involving several variants on a specific gene involved in the transport of the neurotransmitter serotonin. Which of two variants of this gene a person had affected the likelihood that she or he would develop major depression in her or his 20s, but only when considered in interaction with life stress (Caspi et al., 2003). Specifically, individuals with one variant of the gene (two short alleles) who also experienced four or more major life stressors had twice the probability of developing major depression than individuals with another variant of the gene (two long alleles) who also experienced four or more major life stressors (see Chapter 7 for more details). Since then, this basic pattern of results has been replicated in many studies (and not in others), but recent evidence suggests that the effects are robust if sophisticated interview-based measures of life stress (not checklists) are used (Uher & McGuffin, 2010; see also Karg et al., 2011).

METHODS FOR STUDYING GENETIC INFLUENCES

Although advances are beginning to be made in identifying faulty genetic endowment, for the most part we are not yet able to isolate, on the genes themselves, specific defects for mental disorders. Therefore, most of the information we have on the role of genetic factors in mental disorders is based not on studies of genes but on studies of people who are related to each other. Three primary methods have traditionally been used in **behavior genetics**, the field that focuses on studying the heritability of mental disorders (as well as other aspects of psychological functioning): (1) the family history (or pedigree) method, (2) the twin method, and (3) the adoption method. More recently, two additional methods, linkage studies and association studies, have also been developed.

The **family history** (or pedigree) **method** requires that an investigator observe samples of relatives of each *proband* or *index case* (the subject, or carrier, of the trait or disorder in question) to see whether the incidence increases in proportion to the degree of hereditary relationship. In addition, the incidence of the disorder in a normal population is compared (as a control) with its incidence among the relatives of the index cases. The main limitation of this method is that people who are more closely related genetically also tend to share more similar environments, which makes it difficult to disentangle genetic and environmental effects.

The **twin method** is the second approach used to study genetic influences on abnormal behavior. *Identical (monozygotic) twins* share the same genetic endowment because they develop from a single zygote, or fertilized egg. Thus if a given disorder or trait were completely heritable, one would expect the **concordance rate**—the percentage of twins sharing the disorder or trait—to be 100 percent. That is, if one identical twin had a particular disorder, the other twin would as well. However, there are no forms of psychopathology in *DSM-IV-TR* where the concordance rates for identical twins are this high, so we can safely conclude that no mental disorders are completely heritable. Nevertheless, as we will see, there are

relatively high concordance rates for identical twins in some more severe forms of psychopathology. These concordance rates are particularly meaningful when they differ from those found for nonidentical twins. **Nonidentical (dizygotic) twins do not share any more genes than do siblings** from the same parents because they develop from two different fertilized eggs. One would therefore expect concordance rates for a disorder to be much lower for dizygotic (DZ) than for monozygotic (MZ) twins if the disorder had a strong genetic component. Thus evidence for genetic transmission of a trait or a disorder can be obtained by comparing the concordance rates between identical and nonidentical twins. For most of the disorders we will discuss, concordance rates are indeed much lower for nonidentical twins than for identical twins.

Some researchers have argued that finding higher concordance rates for a disorder in monozygotic twins than in dizygotic twins is not conclusive evidence of a genetic contribution because it is always possible that identical twins are treated more similarly by their parents and others than are nonidentical twins (Bouchard & Propping, 1993; Torgersen, 1993). However, research has provided reasonably strong evidence that the genetic similarity is more important than the similarity of the parents' behavior (e.g., Hettema, Neale, & Kendler, 1995; Plomin et al., 2008; Rutter, 2006). Nevertheless, the ideal study of genetic factors in psychopathology involves identical twins who have been reared apart in significantly different environments.



This set of identical twins from Bouchard's University of Minnesota Study of Twins Reared Apart pose here with Dr. Nancy Segal, co-director of the project. Mark Newman (left) and Gerry Levey (right) were separated at birth and raised by different parents. Both were dedicated firefighters in different New Jersey towns and met after someone mistook one of them at a firemen's convention for his twin. Both had highly similar patterns of baldness and were 6'4" tall. They both loved Budweiser beer (which they both held by placing their pinky finger under the beer can) as well as Chinese and Italian food. Both had been smokers until recently, when one had quit. They both also liked hunting and fishing and always carried knives. These eerie similarities between identical twins reared apart have been observed in many other such twins as well (Segal, 2005).

Unfortunately, finding such twins is extremely difficult (there are probably only a few hundred pairs in the United States), and so only a few such small studies have been done.

The third method used to study genetic influences is the **adoption method**. This method capitalizes on the fact that adoption creates a situation in which individuals who do not share a common family environment are nonetheless genetically related (e.g., Plomin et al., 2008). In one variation on this method, the biological parents of individuals who have a given disorder (and who were adopted away shortly after birth) are compared with the biological parents of individuals without the disorder (who also were adopted away shortly after birth) to determine their rates of disorder. If there is a genetic influence, one expects to find higher rates of the disorder in the

biological relatives of those with the disorder than in those without the disorder. In another variation, researchers compare the rates of disorder in the adopted-away offspring of biological parents who have a disorder with those seen in the adopted-away offspring of normal biological parents. If there is a genetic influence, then there should be higher rates of disorder in the adopted-away offspring of the biological parents who have the disorder.

Although pitfalls can arise in interpreting each of these methods, if the results from studies using all three strategies converge, one can draw reasonably strong conclusions about the genetic influence on a disorder (Plomin et al., 2008; Rutter, 1991). Developments in Thinking 3.2 considers various misconceptions about studies of genetics and psychopathology.

3.2

DEVELOPMENTS IN THINKING

Nature, Nurture, and Psychopathology: A New Look at an Old Topic

People have abundant misconceptions and stereotypes about studies of genetic influences on behavior, traits, and psychopathology, many stemming from outdated ideas that nature and nurture are separate rather than in constant interplay. Indeed, as we have seen in the examples of genotype-environment correlations and interactions, “In the great majority of cases, both psychological traits and mental disorders are multifactorial in origin—meaning that they involve some kind of combination, and interplay, among several genetic factors providing contributions to susceptibility or liability and several environmental factors that similarly play a part in the causal pathway” (Rutter, 2006, p. 29). Several of the more important misconceptions are presented here (Plomin et al., 2008; Rutter, 1991, 2006).

1. Misconception: Strong genetic effects mean that environmental influences must be unimportant. *Fact:* Even if we are discussing a trait or disorder that has a strong genetic influence, environmental factors can have a major impact on the level of that trait (Rutter, 2006). Height, for example, is strongly genetically determined, and yet nutritional factors have a very large effect on the actual height a person attains. Between 1900 and 1960 the average height of boys reared in London increased about 4 inches, thanks only to improvements in diet (Tizard, 1975).

2. Misconception: Genes provide a limit to potential. *Fact:* One’s potential can change if one’s environment changes, as the height example above illustrates. Another example comes from children born to socially disadvantaged parents but who are adopted and reared with socially advantaged parents. These children have a mean IQ about 12 points higher than those reared in the socially disadvantaged environment (Capron & Duyme, 1989; see also Duyme et al., 2004).

3. Misconception: Genetic strategies are of no value for studying environmental influences. *Fact:* The opposite is true because genetic research strategies provide critical tests of environmental influences on personality and psychopathology (Rutter, 2006). For example, because monozygotic twins have identical genes, concordance rates of less than 100 percent clearly illustrate the importance of environmental influences (Bouchard & Loehlin, 2001; Rutter, 2006a).

4. Misconception: Genetic effects diminish with age. *Fact:* Although many people assume that genetic effects should be maximal at birth, with environmental influences getting stronger with increasing age, it is now evident that this is not always true (Plomin, 1986; Rutter, 2006). For height, weight, and IQ, dizygotic twins are almost as alike as monozygotic twins in early infancy, but over time dizygotic twins show greater differences than monozygotic twins. For whatever reasons, many genetic effects on psychological characteristics increase with age up to at least middle childhood or even young adulthood. Moreover, other genetic effects do not appear until much later in life, as in cases like Huntington’s disease, to be discussed in Chapter 14.

5. Misconception: Disorders that run in families must be genetic, and those that do not run in families must not be genetic. *Fact:* Many examples contradict these misconceptions. For example, teenage-onset juvenile delinquency tends to run in families, and yet this seems to be due primarily to environmental rather than genetic influences (Plomin et al., 2008; Rutter, 2006a). Conversely, autism is such a rare disorder that it doesn’t appear to run in families (only about 3 percent of siblings have the disorder), and yet there seems to be a very powerful genetic effect (Plomin et al., 2008; Rutter, 2006a).

SEPARATING GENETIC AND ENVIRONMENTAL INFLUENCES

Because all of the three types of heritability studies separate heredity from environment to some extent, they also allow for testing the influence of environmental factors and even for differentiating “shared” and “nonshared” environmental influences (Plomin & Daniels, 1987; Plomin et al., 2008; Rutter, 2006). *Shared environmental influences* are those that would make children in a family more similar, whether the influence occurs within the family (e.g., family discord and poverty) or in the environment (e.g., two high-quality schools, with one twin going to each). *Nonshared environmental influences* are those in which the children in a family differ. These would include unique experiences at school and also some unique features of upbringing in the home, such as a parent treating one child in a qualitatively different way from another. An example of nonshared influences occurs when parents who are quarreling and showing hostility to one another draw some children into the conflict while others are able to remain outside it (Plomin et al., 2008; Rutter, 2006a; Rutter et al., 1993). For many important psychological characteristics and forms of psychopathology, nonshared influences have appeared to be more important—that is, experiences that are specific to a child may do more to influence his or her behavior and adjustment than experiences shared by all children in the family (Plomin et al., 2008; Rutter, 1991, 2006).

LINKAGE ANALYSIS AND ASSOCIATION STUDIES

More recent molecular genetic methods used to study genetic influences on mental disorders include *linkage analysis* and *association studies*. Whereas the methods previously described attempt to obtain quantitative estimates of the degree of genetic influence for different disorders, linkage analysis and association studies attempt to determine the actual location of genes responsible for mental disorders. Considerable excitement surrounds such work because identifying the location of genes for certain disorders could provide promising leads for new forms of treatment and even prevention of those disorders.

Linkage analysis studies of mental disorders capitalize on several currently known locations on chromosomes of genes for other inherited physical characteristics or biological processes (such as eye color, blood group, etc.). For example, researchers might conduct a large family pedigree study on schizophrenia, looking at all known relatives of a person with schizophrenia going back several generations. At the same time, however, they might also keep track of something like the eye color of each individual (as well as which *DSM* diagnoses they have). Eye color might be chosen because it has a known genetic marker located on a particular chromosome. If the researchers found that the familial patterns for schizophrenia in one family pedigree (a sample of all relatives) were closely linked to the familial patterns for eye color in the same pedigree, they could infer that a gene affecting schizophrenia must be located very nearby on the chromosome that contains the known genetic marker for eye color. In other words, in this case one would expect all members of a particular

family pedigree with schizophrenia to have the same eye color (e.g., blue), even though all members of a different family pedigree with schizophrenia might have brown eyes.

A number of published studies over the past 20 years using linkage analysis have provided evidence supporting, for example, the location of a gene for bipolar disorder on chromosome 11 (e.g., Egeland et al., 1987) and the location of genes for schizophrenia on particular parts of chromosomes 22, 6, 8, and 1 (e.g., Heinrichs, 2001). However, numerous other studies have failed to replicate these results. Therefore, most results are considered inconclusive at the present time (eg., Carey, 2003; Rutter, 2006). Part of the problem in coming up with replicable results in such studies is that most of these disorders are influenced by many different genes spread over multiple chromosomes. To date, these linkage analysis techniques have been most successful in locating the genes for single-gene brain disorders such as Huntington’s disease (Plomin et al., 2008; Rutter, 2006).

Association studies start with two large groups of individuals, one group with and one group without a given disorder. Researchers then compare the frequencies in these two groups of certain genetic markers that are known to be located on particular chromosomes (such as eye color, blood group, etc.). If one or more of the known genetic markers occur with much higher frequency in the individuals with the disorder than in the people without the disorder, the researchers infer that one or more genes associated with the disorder are located on the same chromosome. Ideally, the search for gene candidates for a given disorder starts with known genes for some biological process that is disrupted in the disorder (see Moffitt et al., 2005). For example, one study found that the genetic markers for certain aspects of dopamine functioning were present significantly more frequently in the children with hyperactivity than in the children without hyperactivity. This led researchers to infer that some of the genes involved with hyperactivity are located near the known genetic markers for dopamine functioning (Thapar et al., 2006; see also Plomin et al., 2008). For most mental disorders that are known to be influenced polygenically, association studies are more promising than linkage studies for identifying small effects of any particular gene.

In summary, these molecular genetic studies using linkage and association methodologies may hold tremendous promise for identifying new prevention or treatment approaches. However, at present that promise has not been fulfilled because of difficulties in producing replicable results.

Temperament

Temperament refers to a child’s reactivity and characteristic ways of self-regulation. When we say that babies differ in temperament, we mean that they show differences in their characteristic emotional and arousal responses to various stimuli and in their tendency to approach, withdraw, or attend to various situations (Rothbart, Derryberry, & Hershey, 2000). Some babies are startled by slight sounds or cry when sunlight hits

their faces; others are seemingly insensitive to such stimulation. These behaviors are strongly influenced by genetic factors, but prenatal and postnatal environmental factors also play a role in their development (Goldsmith, 2003; Rothbart et al., 2000).

Our early temperament is thought to be the basis from which our personality develops. Starting at about 2 to 3 months of age, approximately five dimensions of temperament can be identified: fearfulness, irritability and frustration, positive affect, activity level, and attentional persistence and effortful control, although some of these emerge later than others. These seem to be related to the three important dimensions of adult personality: (1) neuroticism or negative emotionality, (2) extraversion or positive emotionality, and (3) constraint (conscientiousness and agreeableness; Rothbart & Ahadi, 1994; Rothbart & Bates, 2006; Watson, Clark, & Harkness, 1994). The infant dimensions of fearfulness and irritability, which show few gender differences (Else-Quest et al., 2006), correspond to the adult dimension of neuroticism—the disposition to experience negative affect. The infant dimensions of positive affect and possibly activity level seem related to the adult dimension of extraversion, and the infant dimension of attentional persistence and effortful control seem related to the adult dimension of constraint or control. One quantitative review concluded that, on average, boys show slightly higher levels of activity and intense pleasure than do girls, whereas girls, on average, seem to have greater control of their impulses and greater ability to regulate their attention (e.g., Else-Quest et al., 2006). At least some aspects of temperament show a moderate degree of stability from late in the first year of life through at least middle childhood, although temperament can change (e.g., Fox et al., 2005; Kagan, 2003; Rothbart et al., 2000).

Just as we saw in the discussion of genotype–environment correlations, the temperament of an infant or young child has profound effects on a variety of important developmental processes (Fox et al., 2010; Rothbart et al., 2000). For example, a child with a fearful temperament has many opportunities for the classical conditioning of fear to situations in which fear is provoked; later the child may learn to avoid entering those feared situations, and evidence suggests that he or she may be especially likely to learn to fear social situations (Fox et al., 2010; Kagan, 2003). In addition, children with high levels of positive affect and activity are more likely to show high



A child with a fearful and anxious temperament can become very distressed with changes in the environment, such as his mother leaving for work.

levels of mastery motivation, whereas children with high levels of fear and sadness are less likely to show mastery motivation (Posner & Rothbart, 2007).

Finally, children with high levels of negative emotionality are more difficult for parents to be supportive of, and different parents have different styles of parenting such children. This seems to be true especially in families with lower socioeconomic status, which are, on average, less supportive of difficult children than families of mid to high socioeconomic status. The latter families seem to be more resourceful in adapting their parenting styles when faced with such high negative emotionality in a child (Paulussen-Hoogbeem et al., 2007).

Not surprisingly, temperament may also set the stage for the development of various forms of psychopathology later in life. For example, children who are fearful and hypervigilant in many novel or unfamiliar situations have been labeled *behaviorally inhibited* by Kagan, Fox, and their colleagues.

This trait has a significant heritable component (Kagan, 2003) and, when it is stable, is a risk factor for the development of anxiety disorders later in childhood and probably in adulthood (e.g., Fox et al., 2005, 2010; Kagan, 2003). Conversely, 2-year-old children who are highly *uninhibited*, showing little fear of anything, may have difficulty learning moral standards for their behavior from parents or society (Frick, Cornell, Bodin, et al., 2003; Rothbart, Ahadi, & Evans, 2000), and they have been shown at age 13 to exhibit more aggressive and delinquent behavior (Schwartz, Snidman, & Kagan, 1996). If these personality ingredients are combined with high levels of hostility, the stage also might be set for the development of conduct disorder and antisocial personality disorder (Harpur et al., 1993).

Brain Dysfunction and Neural Plasticity

As noted earlier, specific brain lesions with observable defects in brain tissue are rarely a primary cause of psychiatric disorders. However, advances in understanding how more subtle deficiencies of brain structure or function are implicated in many mental disorders have been increasing at a rapid pace in the past few decades. Some of these advances come from the increased availability of sophisticated new neuroimaging techniques to study the function and structure of the

brain (see Chapter 4 for more details). These and other kinds of techniques have shown that genetic programs for brain development are not so rigid and deterministic as was once believed (e.g., Gottesman & Hanson, 2005; Nelson & Bloom, 1997; Thompson & Nelson, 2001). Instead, there is considerable *neural plasticity*—flexibility of the brain in making changes in organization and function in response to pre- and postnatal experiences, stress, diet, disease, drugs, maturation, and so forth. Existing neural circuits can be modified, or new neural circuits can be generated (e.g., Fox et al., 2010; Kolb et al., 2003). The effects can be either beneficial or detrimental to the individual, depending on the circumstances.

One example of the positive effects of *prenatal experiences* comes from an experiment in which pregnant rats housed in complex, enriched environments had offspring that were less negatively affected by brain injury that occurred early in development than those without the same positive prenatal experiences (Kolb et al., 2003). One example of negative effects of prenatal experiences comes from an experiment in which pregnant monkeys exposed to unpredictable loud sounds had infants that were jittery and showed neurochemical abnormalities (specifically, elevated levels of circulating catecholamines; Schneider, 1992). Many *postnatal environmental events* also affect the brain development of the infant and child (Nelson & Bloom, 1997; Thompson & Nelson, 2001). For example, the formation of new neural connections (or synapses) after birth is dramatically affected by the experiences a young organism has (e.g., Greenough & Black, 1992; Rosenzweig et al., 2002). Rats reared in enriched environments (as opposed to in isolation) show heavier and thicker cell development in certain portions of the cortex (as well as more synapses per neuron). Similar but less extensive changes can occur in older animals exposed to enriched environments; hence neural plasticity continues to some extent throughout the life span (see Fox et al., 2010; Lambert & Kinsley, 2005).

The early implications of this kind of work were taken to suggest that human infants should be exposed to highly enriched environments. However, subsequent work has shown that normal rearing conditions with caring parents are perfectly adequate. What later work really showed is that *unstimulating, deprived environments can cause retarded development* (Thompson, 2000; Thompson & Nelson, 2001).

This research on neural and behavioral plasticity, in combination with the work described earlier on genotype-environment correlations, makes it clear why developmental psychopathologists have been devoting increasing attention to a **developmental systems approach** (e.g., Masten, 2006; Spencer et al., 2009). This approach acknowledges not only that genetic activity influences neural activity, which in turn influences behavior, which in turn influences the environment, but also that these influences are bidirectional. Thus Figure 3.6 illustrates this first direction of influence but also shows how various aspects of our environment (physical,

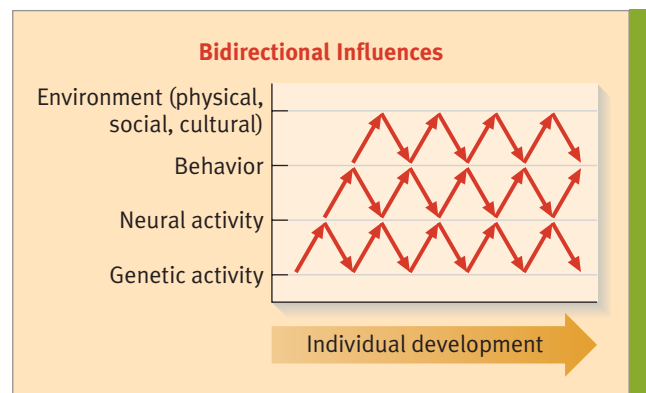


FIGURE 3.6

Bidirectional Influences

A systems view of psychobiological development.

Source: From Gilbert Gottlieb, 1992. *Individual Development and Evolution: The Genesis of Novel Behavior*. New York: Oxford University Press. Reprinted by permission of Lawrence Erlbaum Associates.

social, and cultural) also influence our behavior, which in turn affects our neural activity, and this in turn can even influence genetic activity (Gottlieb, 1992; Gottlieb & Halpern, 2002; see also Gottesman & Hanson, 2005; Masten, 2006).

The Impact of the Biological Viewpoint

Biological discoveries have profoundly affected the way we think about human behavior. We now recognize the important role of biochemical factors and innate characteristics, many of which are genetically determined, in both normal and abnormal behavior. In addition, since the 1950s we have witnessed many new developments in the use of drugs that can dramatically alter the severity and course of certain mental disorders—particularly the more severe ones such as schizophrenia and manic depressive illness (bipolar disorder). The host of new drugs has attracted a great deal of attention to the biological viewpoint not only in scientific circles but also in the popular media. Biological treatments seem to have more immediate results than other available therapies, and the hope is that they may in most cases lead to a “cure-all”—immediate results with seemingly little effort.

However, as Gorenstein (1992) and others argued two decades ago, there are several common errors in the way many people interpret the meaning of recent biological advances. Gorenstein points out that it is illusory to think—as some prominent biological researchers have—that establishing prominent differences between, for example, individuals with schizophrenia and those without schizophrenia in and of itself substantiates that schizophrenia is an illness (e.g., Andreasen, 1984; Kety, 1974). All behavioral traits (introversion and extraversion, for example, or high and

low sensation seeking) are characterized by distinctive biological characteristics, yet we do not label these traits as illnesses. Thus the decision about what constitutes a mental illness or disorder ultimately still rests on clinical judgment regarding the functional effects of the disordered behavior—specifically whether it leads to clinically significant distress or impairment in functioning. Establishing the biological substrate does not bear on this issue because all behavior—normal and abnormal—has a biological substrate.

As Gorenstein (1992) also pointed out, the effects of psychological events are always *mediated* through the activities of the central nervous system because all our behaviors, beliefs, emotions, and cognitions are ultimately reducible to a set of biological events in the brain. In actuality, then, if we find some dysfunction of the nervous system, this dysfunction could have arisen from psychological causes as well as from biological causes. In addition, psychological treatments are often as effective as drugs in producing changes in brain structure and function (e.g., Baxter et al., 2000; Linden, 2006).

At a more general level, we must remind ourselves again that few, if any, mental disorders are independent of people's personalities or of the problems they face in trying to live their lives. We will examine viewpoints that emphasize these psychological and sociocultural considerations in the pages that follow, keeping in mind that the ultimate challenge will be to integrate these varying perspectives into a theoretically consistent biopsychosocial perspective on psychopathology.

RESEARCH CLOSE-UP

Mediate

A mediator (or mediating variable) lies between two other variables and helps explain the relationship between them. You can think of it as being like an intermediate variable, hence the name.

The Psychological Viewpoints

There are many more psychological than biological interpretations of abnormal behavior, reflecting a wider range of opinions on how best to understand humans as people with motives, desires, perceptions, thoughts, and so on rather than just as biological organisms. We will examine in some depth three perspectives on human nature and behavior that have been particularly

influential: psychodynamic, behavioral, and cognitive-behavioral. (See Figure 3.7.) These three viewpoints represent distinct and sometimes conflicting orientations, but they are in many ways complementary. They all emphasize the importance of early experience and an awareness of psychological processes within an individual, as well as how these are influenced by social factors. Developments in Thinking 3.3 on page 78 will later present a few of the major themes of two additional psychological perspectives: the humanistic and existential perspectives.

The Psychodynamic Perspectives

As we noted in Chapter 2, Sigmund Freud founded the *psychoanalytic school*, which emphasized the role of unconscious motives and thoughts and their dynamic interrelationships in the determination of both normal and abnormal behavior. A key concept here is the *unconscious*. According to Freud, the conscious part of the mind represents a relatively small area, whereas the unconscious part, like the submerged

In Review

- Describe the sequence of events involved in the transmission of nerve impulses.
- Explain how neurotransmitter and hormonal abnormalities might produce abnormal behavior.
- What is the relationship between an individual's genotype and phenotype, and how can genotypes shape and interact with the environment?
- Describe at least two methods for studying genetic influences on abnormal behavior.
- What is temperament, and why is it important for the origins of abnormal behavior?
- What do we mean by "neural plasticity"?

- ▶ The psychosocial perspectives attempt to understand humans not just as biological organisms but also as people with motives, desires, and perceptions.
- ▶ There are three major psychosocial perspectives on human nature and behavior:
 1. Psychodynamic
 2. Behavioral
 3. Cognitive-behavioral
- ▶ Also includes two other perspectives:
 1. The humanistic perspective
 2. The existential perspective

FIGURE 3.7

Psychosocial Perspectives

part of an iceberg, is the much larger portion. In the depths of the unconscious are the hurtful memories, forbidden desires, and other experiences that have been repressed—that is, pushed out of consciousness. However, Freud believed that unconscious material continues to seek expression and emerges in fantasies, dreams, slips of the tongue, and so forth. Until such unconscious material is brought to awareness and integrated into the conscious part of the mind—for example, through psychoanalysis (a form of psychotherapy Freud developed—see Chapter 16)—it may lead to irrational and maladaptive behavior. For our purposes, a general overview of the principles of classical psychoanalytic theory will suffice (see Alexander, 1948; Arlow, 2000; Luborsky & Barrett, 2006; or any of Freud's original works for more information). We will then discuss several of the newer *psychodynamic perspectives*, which were the second generation of theories that stemmed in some important ways out of Freud's original psychoanalytic theory and yet also departed from it in significant ways.

FUNDAMENTALS OF FREUD'S PSYCHOANALYTIC THEORY

The Structure of Personality: Id, Ego, and Superego

Freud theorized that a person's behavior results from the interaction of three key components of the personality or psyche: the id, ego, and superego (e.g., see Arlow, 2000; Engler, 2006). The **id** is the source of instinctual drives and is the first structure to appear in infancy. These drives are inherited and are considered to be of two opposing types: (1) *life instincts*, which are constructive drives primarily of a sexual nature and which constitute the **libido**, the basic emotional and psychic energy of life; and (2) *death instincts*, which are destructive drives that tend toward aggression, destruction, and eventual death. Freud used the term *sexual* in a broad sense to refer to almost anything pleasurable, from eating to painting. The id operates on the **pleasure principle**, engaging in completely selfish and pleasure-oriented behavior, concerned only with the immediate gratification of instinctual needs without reference to reality or moral considerations. Although the id can generate mental images and wish-fulfilling fantasies, referred to as **primary process thinking**, it cannot undertake the realistic actions needed to meet instinctual demands.

Consequently, after the first few months of life, a second part of the

personality, as viewed by Freud, develops—the **ego**. The ego mediates between the demands of the id and the realities of the external world. For example, during toilet training the child learns to control a bodily function to meet parental and societal expectations, and it is the developing ego that assumes the role of mediating between the physical needs of the body/id and the need to find an appropriate place and time. One of the basic functions of the ego is to meet id demands, but in such a way as to ensure the well-being and survival of the individual. This role requires the use of reason and other intellectual resources in dealing with the external world, as well as the exercise of control over id demands. The ego's adaptive measures are referred to as **secondary process thinking**, and the ego operates on the **reality principle**.

Freud viewed id demands, especially sexual and aggressive strivings, as inherently in conflict with the rules and prohibitions imposed by society. He postulated that as a child grows and gradually learns the rules of parents and society regarding right and wrong, a third part of the personality gradually emerges from the ego—the **superego**. The superego is the outgrowth of internalizing the taboos and moral values of society concerning what is right and wrong. It is essentially what we refer to as the *conscience*. As the superego develops, it becomes an inner control system that deals with the uninhibited desires of the id. Because the ego mediates among the desires of the id, the demands of reality, and the moral constraints of the superego, it is often called the *executive branch of the personality*.

Freud believed that the interplay of id, ego, and superego is of crucial significance in determining behavior. Often inner mental conflicts arise because the three subsystems are striving for different goals. If unresolved, these **intrapsychic conflicts** lead to mental disorder.

Anxiety, Defense Mechanisms, and the Unconscious

The concept of *anxiety*—generalized feelings of fear and apprehension—is prominent in the psychoanalytic viewpoint because it is an almost universal symptom of neurotic disorders. Indeed, Freud believed that anxiety plays a key causal role in most of the forms of psychopathology that will be discussed in this book. He believed that the anxiety is sometimes overtly experienced, and at other times it is repressed and then transformed into and manifested in other overt symptoms such as conversion blindness or paralysis (see Chapter 8).



Anxiety is almost universally experienced at some point. This woman shows her anxiety while awaiting news about the outcome of surgery on her sick child.

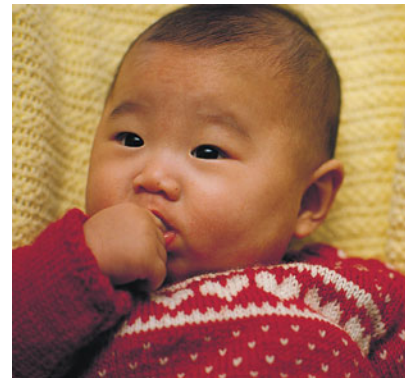
Anxiety is a warning of impending real or imagined dangers as well as a painful experience, and it forces an individual to take corrective action. Often, the ego can cope with objective anxiety through rational measures. However, neurotic and moral anxiety, because they are unconscious, usually cannot be dealt with through rational measures. In these cases the ego resorts to irrational protective measures that are referred to as **ego-defense mechanisms**, some of which are described in Table 3.1. These defense mechanisms discharge or soothe anxiety, but they do so by helping a person push painful ideas out of consciousness (such as when we “forget” a dental appointment) rather than by dealing directly with the problem. These mechanisms result in a distorted view of reality, although some are clearly more adaptive than others.

Psychosexual Stages of Development In addition to his concept of the structure of personality, Freud also conceptualized five **psychosexual stages of development** that we all pass through from infancy through puberty. Each stage is characterized by a dominant mode of achieving libidinal (sexual) pleasure:

1. **Oral stage:** During the first 2 years of life, the mouth is the principal erogenous zone: An infant’s greatest source of gratification is sucking, a process that is necessary for feeding.
2. **Anal stage:** From ages 2 to 3, the anus provides the major source of pleasurable stimulation during the time when toilet training is often going on and there are urges both for retention and for elimination.

3. **Phallic stage:** From ages 3 to 5 or 6, self-manipulation of the genitals provides the major source of pleasurable sensation.
4. **Latency period:** From ages 6 to 12, sexual motivations recede in importance as a child becomes preoccupied with developing skills and other activities.
5. **Genital stage:** After puberty, the deepest feelings of pleasure come from sexual relations.

Freud believed that appropriate gratification during each stage is important if a person is to avoid being stuck, or *fixated*, at that level. For example, he maintained that an infant who does not receive adequate oral gratification may, in adult life, be prone to excessive eating or other forms of oral stimulation, such as biting fingernails, smoking, or drinking.



The demands of the id are evident in early childhood. According to Freud, babies pass through an oral stage, in which sucking is a dominant pleasure.

table 3.1 Ego-Defense Mechanisms

Mechanism	Example
Displacement. Discharging pent-up feelings, often of hostility, on objects less dangerous than those arousing the feelings.	A woman harassed by her boss at work initiates an argument with her husband.
Fixation. Attaching oneself in an unreasonable or exaggerated way to some person, or arresting emotional development on a childhood or adolescent level.	An unmarried, middle-aged man still depends on his mother to provide his basic needs.
Projection. Attributing one’s unacceptable motives or characteristics to others.	An expansionist-minded dictator of a totalitarian state is convinced that neighboring countries are planning to invade.
Rationalization. Using contrived explanations to conceal or disguise unworthy motives for one’s behavior.	A fanatical racist uses ambiguous passages from the Scriptures to justify his hostile actions toward minorities.
Reaction formation. Preventing the awareness or expression of unacceptable desires by an exaggerated adoption of seemingly opposite behavior.	A man troubled by homosexual urges initiates a zealous community campaign to stamp out gay bars.
Regression. Retreating to an earlier developmental level involving less mature behavior and responsibility.	A man with shattered self-esteem reverts to childlike “showing off” and exhibits his genitals to young girls.
Repression. Preventing painful or dangerous thoughts from entering consciousness.	A mother’s occasional murderous impulses toward her hyperactive 2-year-old are denied access to awareness.
Sublimation. Channeling frustrated sexual energy into substitutive activities.	A sexually frustrated artist paints wildly erotic pictures.

Source: Based on A. Freud (1946) and *DSM-IV-TR* (2000).

The Oedipus Complex and the Electra Complex

In general, each psychosexual stage of development places demands on a child and arouses conflicts that Freud believed must be resolved in order to avoid later fixations. One of the most important conflicts occurs during the phallic stage, when the pleasures of self-stimulation and accompanying fantasies pave the way for the **Oedipus complex**. According to Greek mythology, Oedipus unknowingly killed his father and married his mother. Each young boy, Freud thought, symbolically re-lives the Oedipus drama. He longs for his mother sexually and views his father as a hated rival; however, each young boy also fears that his father will punish his son's lust by cutting off his penis. This **castration anxiety** forces the boy to repress his sexual desire for his mother and his hostility toward his father. Eventually, if all goes well, the boy identifies with his father and comes to have only harmless affection for his mother, channeling his sexual impulses toward another woman.

The **Electra complex** is the female counterpart of the Oedipus complex and is also drawn from a Greek tragedy. It is based on the view that each girl desires to possess her father and to replace her mother. Freud also believed that each girl at this stage experiences *penis envy*, wishing she could be more like her father and brothers. She emerges from the complex when she comes to identify with her mother and settles for a promissory note: One day she will have a man of her own who can give her a baby—which unconsciously serves as a type of penis substitute.

Resolution of this conflict is considered essential if a young adult of either sex is to develop satisfactory heterosexual relationships. The psychoanalytic perspective holds that the best we can hope for is to effect a compromise among our warring inclinations—and to realize as much instinctual gratification as possible with minimal punishment and guilt. This perspective thus presents a deterministic view of human behavior that minimizes rationality and freedom of self-determination. On a group level, it interprets violence, war, and related phenomena as the inevitable products of the aggressive and destructive instincts present in human nature.

NEWER PSYCHODYNAMIC PERSPECTIVES

In seeking to understand his patients and develop his theories, Freud was chiefly concerned with the workings of the id, its nature as a source of energy, and the manner in which this id energy could be channeled or transformed. He also focused on the superego and the role of conscience but paid relatively little attention to the importance of the ego.



Anna Freud (1895–1982) studied the important role of the ego in normal and abnormal development and elaborated the theory of ego-defense reactions.

Later theorists developed some of Freud's basic ideas in three somewhat different directions.

Ego Psychology One new direction was that taken by his daughter Anna Freud (1895–1982), who was much more concerned with how the *ego* performs its central functions as the “executive” of personality. She and some of the other influential second-generation psychodynamic theorists refined and elaborated on the ego-defense mechanisms and put the ego in the foreground, giving it an important organizing role in personality development (e.g., A. Freud, 1946). According to this view, psychopathology develops when the ego does not function adequately to control or delay impulse gratification or does not make adequate use of defense mechanisms when faced with internal conflicts. This school became

known as **ego psychology**.

Object-Relations Theory A second new psychodynamic perspective was object-relations theory, developed by a number of prominent theorists including Melanie Klein, Margaret Mahler, W. R. D. Fairburn, and D. W. Winnicott, starting in the 1930s and 1940s. Although there are many variations on **object-relations theory**, they share a focus on individuals' interactions with real and imagined other people (external and internal objects) and on the relationships that people experience between their external and internal objects (Engler, 2006; Greenberg & Mitchell, 1983). *Object* in this context refers to the symbolic representation of another person in the infant's or child's environment, most often a parent. Through a process of *introjection*, a child symbolically incorporates into his or her personality (through images and memories) important people in his or her life. For example, a child might internalize images of a punishing father; that image then becomes a harsh self-critic, influencing how the child behaves. The general notion is that internalized objects could have various conflicting properties—such as exciting or attractive versus hostile, frustrating, or rejecting—and also that these objects could split off from the central ego and maintain independent existences, thus giving rise to inner conflicts. An individual experiencing such splitting among internalized objects is, so to speak, “the servant of many masters” and cannot therefore lead an integrated, orderly life.

Otto Kernberg, for example, is an influential American analyst who has a theory that people with a *borderline personality*, whose chief characteristic is instability (especially in personal relationships), are individuals who are unable to achieve a full and stable personal identity (self) because of an inability to integrate and reconcile pathological internalized objects (Kernberg 1985, 1996;



Margaret Mahler (1897–1985) elaborated the object-relations approach, which many see as the main focus of contemporary psychoanalysis.

Kernberg & Caligor, 2005; Kernberg & Michels, 2009). Because of their inability to structure their internal world in such a way that the people they know (including themselves) can have a mixture of both good and bad traits, they also perceive the external world in abrupt extremes. For example, a person may be “all good” one moment and “all bad” the next (Koenigsberg et al., 2000).

The Interpersonal Perspective A third set of second-generation psychodynamic theorists focused on social determinants of behavior. We are social beings, and much of what we are is a product of our relationships with others. It is logical to expect that much of psychopathology reflects this fact—that psychopathology is rooted in the unfortunate tendencies we have developed while dealing with our interpersonal environments. This is the focus of the **interpersonal perspective**, which began with the defection in 1911 of Alfred Adler (1870–1937) from the psychoanalytic viewpoint of his teacher, Sigmund Freud, and emphasizes social and cultural forces rather than inner instincts as determinants of behavior. In Adler’s view, people are inherently social beings motivated primarily by the desire to belong to and participate in a group (see Engler, 2006; Mosak, 2000, for recent reviews).

Over time, a number of other psychodynamic theorists also took issue with psychoanalytic theory for its neglect of crucial social factors. Among the best known of these theorists are Erich Fromm (1900–1980) and Karen Horney (1885–1952). Fromm focused on the orientations, or dispositions (exploitive, for example), that people adopted in their interactions with others. He believed that when these orientations to the social environment were maladaptive, they served as the bases of much psychopathology. Horney independently developed a similar view and, in particular, vigorously rejected Freud’s demeaning psychoanalytic view of women (for instance, the idea that women experience penis envy).

Erik Erikson (1902–1994) also extended the interpersonal aspects of psychoanalytic theory. He elaborated and broadened Freud’s psychosexual stages into more socially oriented concepts, describing crises or conflicts that occurred at eight stages, each of which could be resolved in a healthy or unhealthy way. For example, Erikson believed that during what Freud called the “oral stage,” when a child is preoccupied with oral gratification, a child’s real development centers on learning either “basic trust” or “basic mistrust” of her or his social world. Achieving a certain level of trust, for instance, is necessary for later competence in many areas of life.

Attachment Theory Finally, John Bowlby’s **attachment theory**, which can in many ways be seen as having its roots in the interpersonal and object-relations perspectives, has become an enormously influential theory in child psychology and child psychiatry as well as in adult psychopathology. Drawing on Freud and others from these

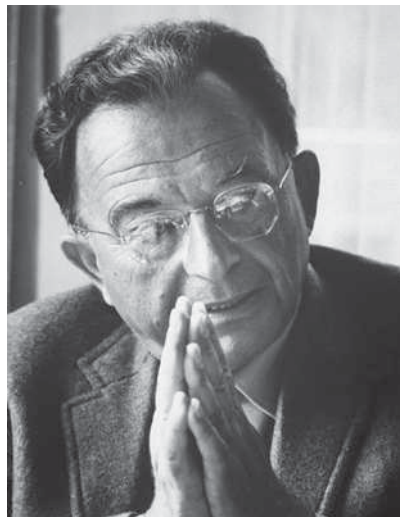
perspectives, Bowlby’s theory (1969, 1973, 1980) emphasizes the importance of early experience, especially early experience with attachment relationships, as laying the foundation for later functioning throughout childhood, adolescence, and adulthood. He stresses the importance of the quality of parental care to the development of secure attachments, but he also sees the infant as playing a more active role in shaping the course of his or her own development than had most of the earlier theorists (Carlson & Sroufe, 1995; Rutter et al., 2009; Sroufe et al., 2003).

IMPACT OF THE PSYCHOANALYTIC PERSPECTIVE

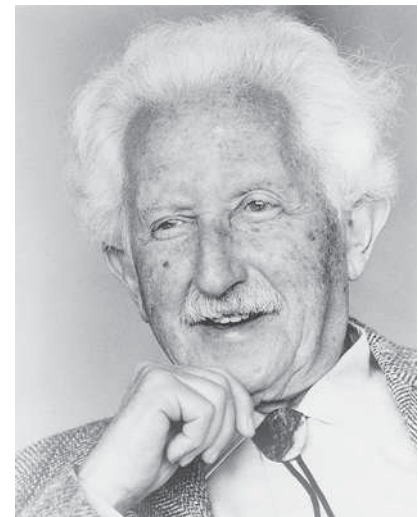
Freud’s psychoanalytic theory can be seen as the first systematic approach to showing how human psychological processes can result in mental disorders. Much as the biological perspective had replaced superstition with organic pathology as the suspected cause of mental disorders for many psychiatrists and psychologists, the psychoanalytic perspective replaced brain pathology with intrapsychic conflict and exaggerated ego defenses as the suspected cause of at least some mental disorders.

Freud greatly advanced our understanding of both normal and abnormal behavior. Many of his original concepts have become fundamental to our thinking about human nature and behavior and have even had an important influence on the intellectual history of Western civilization. Two of Freud’s contributions stand out as particularly noteworthy:

1. He developed therapeutic techniques such as free association and dream analysis for becoming acquainted with both the conscious and the unconscious aspects of mental life (see Chapter 16). The results obtained led Freud to emphasize several points that have been incorporated (in modified forms) into current thinking: (a) the extent to which unconscious motives and defense mechanisms affect behavior, meaning that



Erich Fromm (1900–1980) focused on the orientations that people adopt in their interactions with others. He believed that these basic orientations to the social environment were the bases of much psychopathology.



Erik Erikson (1902–1994) elaborated and broadened Freud’s psychosexual stages into more socially oriented concepts. Erikson described conflicts that occurred at eight stages, each of which could be resolved in a healthy or unhealthy way.

the causes of human behavior are generally not obvious or available to conscious awareness; (b) the importance of early childhood experiences in the development of both normal and abnormal personality; and (c) the importance of sexual factors in human behavior and mental disorders. Although, as we have said, Freud used the term *sexual* in a much broader sense than usual, the idea struck a common chord, and the role of sexual factors in human behavior was finally brought out into the open as an appropriate topic for scientific investigation (see Chapter 12).

2. He demonstrated that certain abnormal mental phenomena occur in the attempt to cope with difficult problems and are simply exaggerations of normal ego-defense mechanisms. This realization that the same psychological principles apply to both normal and abnormal behavior dissipated much of the mystery and fear surrounding mental disorders.

The psychoanalytic perspective came under attack, however, from many directions. Two important criticisms of traditional psychoanalytic theory center on its failure as a scientific theory to explain abnormal behavior. First, many believe that it fails to recognize sufficiently the scientific limits of personal reports of experience as the primary mode of obtaining information. Second, there is a lack of scientific evidence to support many of its explanatory assumptions or the effectiveness of traditional psychoanalysis (Erdelyi, 1992; but see also Westen, 1998). In addition, Freudian theory in particular has been criticized for an overemphasis on the sex drive, for its demeaning view of women, for pessimism about basic human nature, for exaggerating the role of unconscious processes, and for failing to consider motives toward personal growth and fulfillment.

IMPACT OF NEWER PSYCHODYNAMIC PERSPECTIVES The second generation of psychodynamic theorists has done much to improve scientific efforts to measure concepts such as a person's core (but unconscious) conflictual relationships (e.g., Henry et al., 1994; Horowitz et al., 1991; Luborsky & Barrett, 2006). Some progress has also been made in understanding how psychodynamic therapy works and in documenting its effectiveness for certain problems (e.g., Crits-Christoph & Barber, 2000; Crits-Christoph et al., 2004; Shedler, 2010). In addition, Bowlby's attachment theory has generated an enormous amount of research supporting many of its basic tenets about normal and abnormal child development and adult psychopathology (e.g., Carlson & Sroufe, 1995; Grossman et al., 2005; Rutter, 2006; Rutter et al., 2009).

The interpersonal perspective has also done a good deal to establish its scientific validity. In the area of diagnosis, many supporters of the interpersonal perspective believe that the reliability and validity of psychological diagnoses could be improved if a new system based on interpersonal functioning were developed, and some progress has been made toward developing such a system (e.g., Benjamin, 1993, 2005; Benjamin et al., 2006). The focus of interpersonal therapy is

on alleviating problem-causing relationships and on helping people achieve more satisfactory relationships. In recent years, major progress has been made in documenting that interpersonal psychotherapy for certain disorders such as depression, bulimia, and some personality disorders can be as effective, or nearly as effective, as cognitive-behavioral treatment—considered by many to be the treatment of choice for these disorders (Benjamin, 2004; Benjamin & Pugh, 2001; Hollon et al., 2002; Wilson & Fairburn, 2007).

Developments in Thinking 3.3 on page 78 presents two further psychological perspectives that developed in the middle of the twentieth century in part because their founders did not believe that psychodynamic theories acknowledged a person's freedom of choice or the concept of free will.

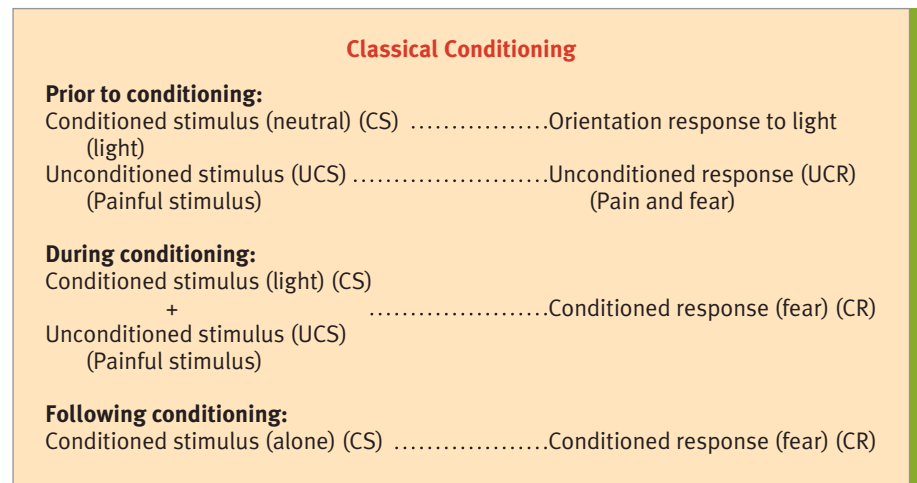
The Behavioral Perspective

The behavioral perspective arose in the early twentieth century in part as a reaction against the unscientific methods of psychoanalysis. Behavioral psychologists believed that the study of subjective experience (e.g., free association and dream analysis) did not provide acceptable scientific data because such observations were not open to verification by other investigators. In their view, only the study of directly observable behavior and of the stimuli and reinforcing conditions that control it could serve as a basis for understanding human behavior, normal and abnormal.

Although this perspective was initially developed through laboratory research rather than clinical practice with disturbed patients, its implications for explaining and treating maladaptive behavior soon became evident. As we noted in Chapter 2, the roots of the behavioral perspective are in Pavlov's study of classical conditioning and in Thorndike's study of instrumental conditioning (later renamed operant conditioning by Skinner; today both terms are used). In the United States, where the behavioral perspective flourished, Watson did much to promote the behavioral approach to psychology with his book *Behaviorism* (1924).

Learning—the modification of behavior as a consequence of experience—is the central theme of the behavioral approach. Because most human behavior is learned, the behaviorists addressed the question of how learning occurs. Behaviorists focus on the effects of environmental conditions (stimuli) on the acquisition, modification, and possible elimination of various types of response patterns, both adaptive and maladaptive.

CLASSICAL CONDITIONING A specific stimulus may come to elicit a specific response through the process of **classical conditioning**. For example, although food naturally elicits salivation, a stimulus that reliably precedes and signals the presentation of food will also come to elicit salivation (Pavlov, 1927). In this case, food is the *unconditioned stimulus* (UCS) and salivation the *unconditioned response* (UCR). A stimulus that signals food delivery and eventually elicits salivation is

**FIGURE 3.8****Classical Conditioning**

Before conditioning, the CS is neutral and has no capacity to elicit fear. However, after being repeatedly followed by a painful or frightening UCS that elicits pain, fear, or distress, the CS gradually acquires the capacity to elicit a fear CR. If there are also interspersed trials in which the UCS occurs without being preceded by the CS, conditioning does not occur because in this case the CS is not a reliable predictor of the occurrence of the UCS.

called a *conditioned stimulus* (CS). Conditioning has occurred when presentation of the conditioned stimulus alone elicits salivation—the *conditioned response* (CR). The same general process occurs when a neutral CS is paired with a painful or frightening stimulus such as a mild electric shock or loud noise, as illustrated in Figure 3.8, although in this case fear rather than salivation is conditioned.

The hallmark of classical conditioning is that a formerly neutral stimulus—the CS—acquires the capacity to elicit biologically adaptive responses through repeated pairings with the UCS (e.g., Bouton, 2007; Domjan, 2009). However, we also now know that this process of classical conditioning is not as blind or automatic as was once thought. Rather, it seems that animals (and people) actively acquire information about what CSs allow them to predict, expect, or prepare for an upcoming biologically significant event (the UCS). That is, they learn what is often called a *stimulus-stimulus expectancy*. Indeed, only CSs that provide reliable and nonredundant information about the occurrence of a UCS acquire the capacity to elicit CRs (Hall, 1994; Rescorla, 1988). For example, if UCSs occur as often without being preceded by a CS as they do with the CS, conditioning will not occur because the CS in this case does not provide reliable information about the occurrence of the UCS.

Classically conditioned responses are well maintained over time; that is, they are not simply forgotten (even over many years). However, if a CS is repeatedly presented without the UCS, the conditioned response gradually extinguishes. This gradual process, known as **extinction**, should not be confused with the idea of unlearning because we know that the response may return at some future point in time (a phenomenon Pavlov

called **spontaneous recovery**). Moreover, a somewhat weaker CR may also still be elicited in different environmental contexts than in the one where the extinction process took place (Bouton, 1994, 2002; Bouton et al., 2006). Thus any extinction of fear that has taken place in a therapist's office may not necessarily generalize completely and automatically to other contexts outside the therapist's office (see Craske & Mystkowski, 2006; Mystkowski & Mineka, 2007). As we shall see later, these principles of extinction and spontaneous recovery have important implications for many forms of behavioral treatment.

Classical conditioning is important in abnormal psychology because many physiological and emotional responses can be conditioned, including those related to fear, anxiety, or sexual arousal and those stimulated by drugs of abuse. Thus, for example, one can learn a fear of the dark if fear-producing stimuli (such as frightening dreams or fantasies) occur regularly in the dark, or one can acquire a fear of snakes if bitten by a snake (e.g., Mineka & Sutton, 2006; Mineka & Zinbarg, 2006). In addition, a young man who has his first few powerful sexual experiences (UCR) with a very attractive woman (UCS) wearing some form of distinctive clothing (CS—such as black fishnet stockings) may find in the future that he becomes very sexually aroused (CR) simply upon seeing fishnet stockings.

INSTRUMENTAL CONDITIONING In **instrumental** (or **operant**) **conditioning**, an individual learns how to achieve a desired goal. The goal in question may be to obtain something that is rewarding or to escape from something that is unpleasant. Essential here is the concept of **reinforcement**, which refers either to the delivery of a reward or pleasant stimulus, or to the removal of or escape from an aversive

3.3

DEVELOPMENTS IN THINKING

The Humanistic and Existential Perspectives

The Humanistic Perspective

The *humanistic perspective* views human nature as basically “good.” Paying less attention to unconscious processes and past causes, it emphasizes present conscious processes and places strong emphasis on people’s inherent capacity for responsible self-direction. Humanistic psychologists think that much of the empirical research designed to investigate causal factors is too simplistic to uncover the complexities of human behavior. Instead, this perspective is concerned with processes such as love, hope, creativity, values, meaning, personal growth, and self-fulfillment. Although these abstract processes are not readily subject to empirical investigation, certain underlying themes and principles of humanistic psychology can be identified, including the self as a unifying theme and a focus on values and personal growth.

In using the concept of *self* as a unifying theme, humanistic psychologists emphasize the importance of individuality. Among humanistic psychologists, Carl Rogers (1902–1987) developed the most systematic formulation of the *self-concept*, based largely on his pioneering research into the nature of the psychotherapeutic process. Rogers (1951, 1959) stated his views in a series of propositions that may be summarized as follows:

- Each individual exists in a private world of experience of which the *I, me, or myself* is the center.
- The most basic striving of an individual is toward the maintenance, enhancement, and actualization of the self, and his or her inner tendencies are toward health and wholeness under normal conditions.
- A perceived threat to the self is followed by a defense, including a tightening of perception and behavior and the introduction of self-defense mechanisms.

Humanistic psychologists emphasize that values and the process of choice are key in guiding our behavior and achieving meaningful and fulfilling lives. Each of us must develop values and a sense of our own identity based on our own experiences rather than blindly accepting the values of others; otherwise, we deny our own experiences and lose touch with our own feelings. Only in this way can we become *self-actualizing*, meaning

that we are achieving our full potential. According to this view, psychopathology is essentially the blocking or distortion of personal growth and the natural tendency toward physical and mental health. Chapter 16 presents the humanistic approach to psychotherapy.

The Existential Perspective

The *existential perspective* resembles the humanistic view in its emphasis on the uniqueness of each individual, the quest for values and meaning, and the existence of freedom for self-direction and self-fulfillment. However, it takes a less optimistic view of human beings and places more emphasis on their irrational tendencies and the difficulties inherent in self-fulfillment—particularly in a modern, bureaucratic, and dehumanizing mass society. In short, living is much more of a “confrontation” for the existentialists than for the humanists. Existential thinkers are especially concerned with the inner experiences of an individual in his or her attempts to understand and deal with the deepest human problems. There are several basic themes of existentialism:

- *Existence and essence.* Our existence is a given, but what we make of it—our essence—is up to us. Our essence is created by our choices because our choices reflect the values on which we base and order our lives.
- *Meaning and value.* The will-to-meaning is a basic human tendency to find satisfying values and guide one’s life by them.
- *Existential anxiety and the encounter with nothingness.* Nonbeing, or nothingness, which in its final form is death, is the inescapable fate of all human beings. The awareness of our inevitable death and its implications for our living can lead to existential anxiety, a deep concern over whether we are living meaningful and fulfilling lives.

Thus existential psychologists focus on the importance of establishing values and acquiring a level of spiritual maturity worthy of the freedom and dignity bestowed by one’s humanness. Avoiding such central issues creates corrupted, meaningless, and wasted lives. Much abnormal behavior, therefore, is seen as the product of a failure to deal constructively with existential despair and frustration.

stimulus. New responses are learned and tend to recur if they are reinforced. Although it was originally thought that instrumental conditioning consisted of simple strengthening of a stimulus–response connection every time that reinforcement occurred, it is now believed that the animal or person learns a *response–outcome expectancy* (e.g., Domjan, 2005)—that is, learns that a response will lead to a reward outcome. If sufficiently motivated for that outcome (e.g., being hungry), the person will make the response that he or she has learned produces the outcome (e.g., opening the refrigerator).

Initially a high rate of reinforcement may be necessary to establish an instrumental response, but lesser rates are usually sufficient to maintain it. In fact, an instrumental response appears to be especially persistent when reinforcement is intermittent—when the reinforcing stimulus does not invariably follow the response—as demonstrated in gambling, when occasional wins seem to maintain high rates of responding. However, when reinforcement is consistently withheld over time, the conditioned response—whether classical or instrumental—gradually extinguishes. In short, the subject eventually stops making the response.



Continuing to play blackjack after an occasional unpredictable win is an example of intermittent reinforcement. Behavior that is reinforced in this unpredictable manner occurs at high rates and is highly resistant to extinction.

A special problem arises conditioning a response in situations in which a subject has been conditioned to anticipate an aversive event and to make an instrumental response to avoid it. For example, a boy who has nearly drowned in a swimming pool may develop a fear of water and a *conditioned avoidance response* in which he consistently avoids all large bodies of water. According to one influential theory, when he sees a pond, lake, or swimming pool, he feels anxious; running away and avoiding contact lessens his anxiety and thus is reinforcing. As a result, his avoidance response is highly resistant to extinction. It also prevents him from having experiences with water that could bring about extinction of his fear. In later discussions, we will see that conditioned avoidance responses play a role in many patterns of abnormal behavior.

As we grow up, instrumental learning becomes an important mechanism for discriminating between what will prove rewarding and what will prove unrewarding—and thus for acquiring the behaviors essential for coping with our world. Unfortunately, what we learn is not always useful in the long run. We may learn to value things (such as cigarettes or alcohol) that seem attractive in the short run but that can actually hurt us in the long run, or we may learn coping patterns (such as helplessness, bullying, or other irresponsible behaviors) that are maladaptive rather than adaptive in the long run.

GENERALIZATION AND DISCRIMINATION In both classical and instrumental conditioning, when a response is conditioned to one stimulus or set of stimuli, it can be evoked by other, similar stimuli; this process is called **generalization**. A person who fears bees, for example, may generalize that fear to all flying insects. A process complementary to generalization is **discrimination**, which occurs when a person learns to distinguish between similar stimuli and to respond differently to them based on which ones are followed by reinforcement. For example, because red strawberries taste good and green ones do not, a conditioned discrimination will occur if a person has experience with both.

The concepts of generalization and discrimination have many implications for the development of maladaptive behavior. Although generalization enables us to use past experiences in sizing up new situations, the possibility of making inappropriate generalizations always exists, as when a troubled adolescent fails to discriminate between friendly and hostile teasing from peers. In some instances, an important discrimination seems to be beyond an individual's capability (as when a bigoted person deals with others on the basis of stereotypes rather than as individuals) and may lead to inappropriate and maladaptive behavior.

OBSERVATIONAL LEARNING Human and nonhuman primates are also capable of **observational learning**—that is, learning through observation alone, without directly experiencing an unconditioned stimulus (for classical conditioning) or a reinforcement (for instrumental conditioning). For instance, children can acquire new fears simply observing a parent or peer behaving fearfully with some object or situation that the child did not initially fear. In this case, they experience the fear of the parent or peer vicariously, and that fear becomes attached to the formerly neutral object (Mineka & Oehlberg, 2008; Mineka & Cook, 1993; Mineka & Sutton, 2006). For observational instrumental learning, Bandura did a classic series of experiments in the 1960s on how children observationally learned various novel, aggressive responses toward a large Bobo doll after they had observed models being reinforced for these responses (see Bandura, 1969). Although the children themselves were never directly reinforced for showing these novel aggressive responses, they nonetheless showed them when given the opportunity to interact with the Bobo doll themselves. The possibilities for observational conditioning of both classical and instrumental responses greatly expand our opportunities for learning both adaptive and maladaptive behavior.

IMPACT OF THE BEHAVIORAL PERSPECTIVE Because there was so much resistance from well-entrenched supporters of psychoanalysis, behavior therapy did not become well established as a powerful way of viewing and treating abnormal behavior until the 1960s and 1970s. By then, the behavioral assault on the prevailing psychodynamic doctrine of the time (Salter, 1949; Wolpe, 1958) was well underway and important evidence had been gathered on the power of behavior therapy techniques.

By means of relatively few basic concepts, the behavioral perspective attempts to explain the acquisition, modification, and extinction of nearly all types of behavior. Maladaptive behavior is viewed as essentially the result of (1) a failure to learn necessary adaptive behaviors or competencies, such as how to establish satisfying personal relationships, and/or (2) the learning of ineffective or maladaptive responses. Maladaptive behavior is thus the result of learning that has gone awry and is defined in terms of specific, observable, undesirable responses.

For the behavior therapist, the focus of therapy is on changing specific behaviors and emotional responses—eliminating undesirable reactions and learning desirable ones. For example,

fears and phobias can be successfully treated by prolonged exposure to the feared objects or situations—an extinction procedure derived from principles of extinction of classical conditioning. Or an inappropriate sexual attraction to a deviant stimulus (such as prepubertal children) can be altered by pairing pictures of the deviant stimuli with a foul odor or another unpleasant stimulus. Classic work using the principles of instrumental conditioning also showed that chronically mentally ill people in institutions can be retaught basic living skills such as clothing and feeding themselves through the use of tokens that are earned for appropriate behavior and that can be turned in for desirable rewards (candy, time watching television, passes to go outside, etc.).

The behavioral approach is well known for its precision and objectivity, for its wealth of research, and for its demonstrated effectiveness in changing specific behaviors. A behavior therapist specifies what behavior is to be changed and how it is to be changed. Later, the effectiveness of the therapy can be evaluated objectively by the degree to which the stated goals have been achieved. Nevertheless, the behavioral perspective has been criticized for several reasons. One early criticism was that behavior therapy was concerned only with symptoms, not underlying causes. However, this criticism has been considered unfair by many contemporary behavior therapists, given that successful symptom-focused treatment often has very positive effects on other aspects of a person's life (e.g., Borkovec et al., 1995; Lenz & Demal, 2000). Still others have argued that the behavioral approach oversimplifies human behavior and is unable to explain all of its complexities. This latter criticism stems at least in part from misunderstandings about current developments in behavioral approaches (e.g., Bouton, 2007; Bouton et al., 2001; Mineka & Zinbarg, 2006; Mineka & Oehlberg, 2008). Whatever its limitations, the behavioral perspective has had a tremendous impact on contemporary views of human nature, behavior, and psychopathology.

The Cognitive-Behavioral Perspective

Since the 1950s many psychologists, including some learning theorists, have focused on cognitive processes and their impact on behavior. Cognitive psychology involves the study of basic information-processing mechanisms such as attention and memory, as well as higher mental processes such as thinking, planning, and decision making. The current emphasis within psychology as a whole on understanding all of these facets of normal human cognition originally began as a reaction against



Albert Bandura (b. 1925) stressed that people learn more by internal than external reinforcement. They can visualize the consequences of their actions rather than rely exclusively on environmental reinforcements.

the relatively mechanistic nature of the traditional, radical behavioral viewpoint (espoused by Watson and Skinner), including its failure to attend to the importance of mental processes—both in their own right and for their influence on emotions and behavior.

Albert Bandura (b. 1925), a learning theorist who developed an early cognitive-behavioral perspective, placed considerable emphasis on the cognitive aspects of learning. Bandura stressed that human beings regulate behavior by internal symbolic processes—thoughts. That is, we learn by *internal reinforcement*. According to Bandura, we prepare ourselves for difficult tasks, for example, by visualizing what the consequences would be if we did not perform them. Thus we take our automobiles to the garage in the fall and have the antifreeze checked because we can “see” ourselves stranded on a road in winter. We do not always require external reinforcement to alter our behavior patterns; our

cognitive abilities allow us to solve many problems internally. Bandura (1974) went so far as to say that human beings have “a capacity for self-direction” (p. 861). Bandura later developed a theory of *self-efficacy*, the belief that one can achieve desired goals (1986, 1997). He posited that cognitive-behavioral treatments work in large part by improving self-efficacy.

Other cognitive-behavioral theorists abandoned the learning theory framework more vigorously than did Bandura and focused almost exclusively on cognitive processes and their impact on behavior. Today the cognitive or **cognitive-behavioral perspective** on abnormal behavior generally focuses on how thoughts and information processing can become distorted and lead to maladaptive emotions and behavior. One central construct for this perspective is the concept of a schema, which was adapted from cognitive psychology by Aaron Beck (b. 1921), another pioneering cognitive theorist (e.g., Beck, 1967; Neisser, 1967, 1982). A **schema** is an underlying representation of knowledge that guides the current processing of information and often leads to distortions in attention, memory, and comprehension. People develop different schemas based on their temperament, abilities, and experiences.

SCHEMAS AND COGNITIVE DISTORTIONS Our schemas about the world around us and about ourselves (self-schemas) are our guides, one might say, through the complexities of living in the world as we understand it. For example, we all have schemas about other people (for example, expectations that they are lazy or very career oriented). We also have schemas about social roles (for example, expectations about what the appropriate behaviors for a widow are) and about events (for example, what sequences of events are appropriate for a

particular situation such as someone coping with a loss; Bodenhausen & Morales, in press; Clark, Beck, & Alford, 1999; Fiske & Taylor, 1991). Our **self-schemas** include our views on who we are, what we might become, and what is important to us. Other aspects of our self-schemas concern our notions of the various roles we occupy or might occupy in our social environment such as “woman,” “man,” “student,” “parent,” “physician,” “American,” and so on. Most people have clear ideas about at least some of their own personal attributes and less clear ideas about other attributes (Fiske & Taylor, 1991; Kunda, 1999).

Schemas about the world and self-schemas are vital to our ability to engage in effective and organized behavior because they enable us to focus on the most relevant and important bits of information among the amazingly complex array of information that is available to our senses. However, schemas are also sources of psychological vulnerabilities because some of our schemas or certain aspects of our self-schemas may be distorted and inaccurate. In addition, we often hold some schemas—even distorted ones—with conviction, making them resistant to change.

This is in part because we are usually not completely conscious of our schemas. In other words, although our daily decisions and behavior are largely shaped by these **frames of reference**, we may be unaware of the assumptions on which they are based—or even of making assumptions at all. We think that we are simply seeing things the way they are and often do not consider the fact that other views of the “real” world might be possible or that other rules for what is “right” might exist.

We tend to work new experiences into our existing cognitive frameworks, even if the new information has to be reinterpreted or distorted to make it fit—a process known as **assimilation**. In other words, we are likely to cling to existing assumptions and to reject or distort new information that contradicts them. **Accommodation**—changing our existing frameworks to make it possible **to incorporate new information** that doesn't fit—is more difficult and threatening, especially when important assumptions are challenged. Accommodation is, of course, **a basic goal of psychological therapies**—explicitly in the case of the cognitive and cognitive-behavioral therapies, but deeply embedded in virtually all other approaches as well.

According to **Beck** (1967; Beck & Weishaar, 2000; Beck et al., 2004; Beck et al., 2005), different forms of psychopathology are characterized by different maladaptive schemas that have developed as a function of adverse early learning experiences. These maladaptive schemas lead to the distortions in thinking that are



Our self-schemas—our frames of reference for what we are, what we might become, and what is important to us—influence our choice of goals and our confidence in attaining them. A probable element of this older woman's self-schema was that she could accomplish her lifelong goal of obtaining a college education once her children were grown in spite of the fact she was nearly 40 years older than the average college student.

characteristic of certain disorders such as **anxiety, depression, and personality disorders**. In addition to studying the nature of dysfunctional schemas associated with different forms of psychopathology, researchers have also **studied several different patterns of distorted information processing** exhibited by people with various forms of psychopathology. This research has illuminated the cognitive mechanisms that may be involved in causing or maintaining certain disorders. For example, depressed individuals show memory biases favoring negative information over positive or neutral information. Such biases are likely to help reinforce or maintain one's current depressed state (e.g., Mathews & MacLeod, 1994, 2005; Joormann, 2009).

Another important feature of information processing is that a **great deal of information is processed nonconsciously, or outside of our awareness**. Note that the term *nonconscious* does not refer to Freud's concept of the *unconscious*, in which primitive emotional conflicts are thought to simmer. Instead, the term *nonconscious mental activity* as studied by cognitive psychologists is simply a descriptive term for **mental processes that are occurring without our being aware of them**. One example

relevant to psychopathology is that anxious people seem to have their attention drawn to threatening information even when that information is presented subliminally (that is, without the person's awareness; e.g., Mathews & MacLeod, 1994, 2005). Another relevant example occurs in the well-known phenomenon of **implicit memory**, which is demonstrated when a person's behavior reveals that she or he remembers a previously learned word or activity even though she or he cannot consciously remember it. For example, if someone asks you for your old home phone number from about 10 years ago, you may not be able to recall it (no explicit memory for it), but if you picked up a phone you might dial it correctly (intact implicit memory for it).

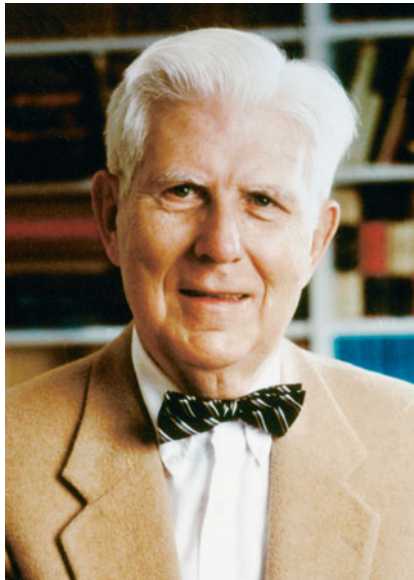
ATTRIBUTIONS, ATTRIBUTIONAL STYLE, AND PSYCHOPATHOLOGY

Attribution theory has also contributed significantly to the cognitive-behavioral approach (Anderson, Krull, & Weiner, 1996; Fiske & Taylor, 1991; Gotlib & Abramson, 1999). An **attribution** is simply the process of assigning causes to things that happen. We may attribute behavior to external events such as rewards or punishments (“He did it for the money”), or we may assume that the causes are internal and derive from traits within ourselves or others (“He did it because he is so generous”). Causal attributions help us explain our own or other people's behaviors and make it possible to predict what we or others are

likely to do in the future. A student who fails a test may attribute the failure to a lack of intelligence (a personal trait) or to ambiguous test questions or unclear directions (environmental causes).

Attribution theorists have been interested in whether **different forms of psychopathology are associated with distinctive and dysfunctional attributional styles.** *Attributional style* is a characteristic way in which an individual tends to assign causes to bad events or good events. For example, depressed people tend to attribute bad events to internal, stable, and global causes (“I failed the test because I’m stupid” as opposed to “I failed the test because the teacher was in a bad mood and graded it unfairly”). However inaccurate our attributions may be, they become important parts of our view of the world and can have significant effects on our emotional well-being (Abramson et al., 1978; Buchanan & Seligman, 1995; Mineka et al., 2003). Interestingly, nondepressed people tend to have what is called a *self-serving bias* in which they are more likely to make internal, stable, and global attributions for positive rather than negative events (e.g., Mezulis et al., 2004).

COGNITIVE THERAPY Beck, who is generally considered the founder of cognitive therapy, has been enormously influential in the development of cognitive-behavioral treatment approaches to various forms of psychopathology. Following Beck’s lead, cognitive-behavioral theorists and clinicians have simply shifted their focus from overt behavior itself to the underlying cognitions assumed to be producing the maladaptive emotions and behavior. Fundamental to Beck’s perspective is the idea that the way we interpret events and experiences determines our emotional reactions to them. Suppose, for example, that you are sitting in your living room and hear a crash in the adjacent dining room. You remember that you left the window open in the dining room and conclude that a gust of wind must have knocked over your favorite vase, which was sitting on the table. What would your emotional reaction be? Probably you would be annoyed or angry with yourself either for having left the window open or for having left the vase out (or both!). By contrast, suppose you conclude that a burglar must have climbed in the open window. What would your emotional reaction be then? In all likelihood, you would feel frightened. Thus your interpretation of the crash you heard in the next room fundamentally determines your emotional reaction to it. Moreover, certain individuals with prominent danger schemas may be especially prone to making the burglar assumption in this example, leaving them at risk for anxiety and worry.



Aaron Beck (b. 1921) pioneered the development of cognitive theories of depression, anxiety, and personality disorders. He also developed highly effective cognitive-behavioral treatments for these disorders.

One central issue for cognitive therapy, then, is how best to alter distorted and maladaptive cognitions, including the underlying maladaptive schemas that lead to different disorders and their associated emotions. For example, cognitive-behavioral clinicians are concerned with their clients’ self-statements—that is, with what their clients say to themselves by way of interpreting their experiences. People who interpret what happens in their lives as a negative reflection of their self-worth are likely to feel depressed; people who interpret the sensation that their heart is racing as meaning that they may have a heart attack and die are likely to have a panic attack. Cognitive-behavioral clinicians use a variety of techniques designed to alter whatever negative cognitive biases the client harbors (e.g., see Barlow, 2008; Beck et al., 2004; Hollon & Beck, 1994; Hollon et al., 2006). This is in contrast to, for example, psychodynamic practice, which assumes

that diverse problems are due to a limited array of intrapsychic conflicts (such as an unresolved Oedipus complex) and tends not to focus treatment directly on a person’s particular problems or complaints. Many widely used cognitive-behavioral therapies will be described in later chapters.

THE IMPACT OF THE COGNITIVE-BEHAVIORAL PERSPECTIVE The cognitive-behavioral viewpoint has had a powerful impact on contemporary clinical psychology. Many researchers and clinicians have found support for the



Some interpret terrifying scenes in a horror movie and the sensations of their heart pounding as a sign of excitement and having a good time; others interpret the same scenes and sensations as if something dangerous and scary is really happening. Cognitive-behavioral psychologists emphasize that the way we interpret an event can dramatically color our emotional reactions to it.

principle of altering human behavior through changing the way people think about themselves and others. Many traditional behaviorists, however, have remained skeptical of the cognitive-behavioral viewpoint. B. F. Skinner (1990), in his last major address, remained true to behaviorism. He questioned the move away from principles of operant (instrumental) conditioning. He reminded his audience that cognitions are not observable phenomena and, as such, cannot be relied on as solid empirical data. Although Skinner is gone, this debate will surely continue in some form. Indeed, Wolpe (1988, 1993), another founder of behavior therapy, also remained highly critical of the cognitive perspective until his death in 1997. However, these criticisms have seemed to be decreasing in recent years as more and more evidence accumulates for the efficacy of cognitive-behavioral treatments for various disorders ranging from schizophrenia to anxiety, depression, and personality disorders (e.g., Barlow, 2008; Butler et al., 2006; Tolin, 2010). This approach has also been greatly advanced by the accumulation of sophisticated information-processing studies of the effects of emotion on cognition and behavior (e.g., Joormann, 2009; Mathews & MacLeod, 2005). This is because such studies do not rely on the self-report techniques that were originally central to this approach, and which are especially open to the kinds of criticisms raised by Skinner and Wolpe.

What the Adoption of a Perspective Does and Does Not Do

Each of the psychological perspectives on human behavior—psychodynamic, behavioral, and cognitive-behavioral—contributes to our understanding of psychopathology, but none alone can account for the complex variety of human maladaptive behaviors. Because different causal perspectives influence which components of maladaptive behavior the observer focuses on, each perspective depends on generalizations from limited observations and research. For example, in attempting to explain a complex disorder such as alcohol dependence, the more traditional psychodynamic viewpoint focuses on intrapsychic conflict and anxiety that the person attempts to reduce through the intake of alcohol; the more recent interpersonal variant on the psychodynamic perspective focuses on difficulties in a person's past and present relationships that contribute to drinking; the behavioral viewpoint focuses on faulty learning of habits to reduce stress (drinking alcohol) and environmental conditions that may be exacerbating or maintaining the condition; and the cognitive-behavioral viewpoint focuses on maladaptive thinking including deficits in problem solving and information processing, such as irrational beliefs about the need for alcohol to reduce stress.

Thus which perspective we adopt has important consequences: It influences our *perception of maladaptive behavior*, the *types of evidence we look for*, and the *way in which we are*

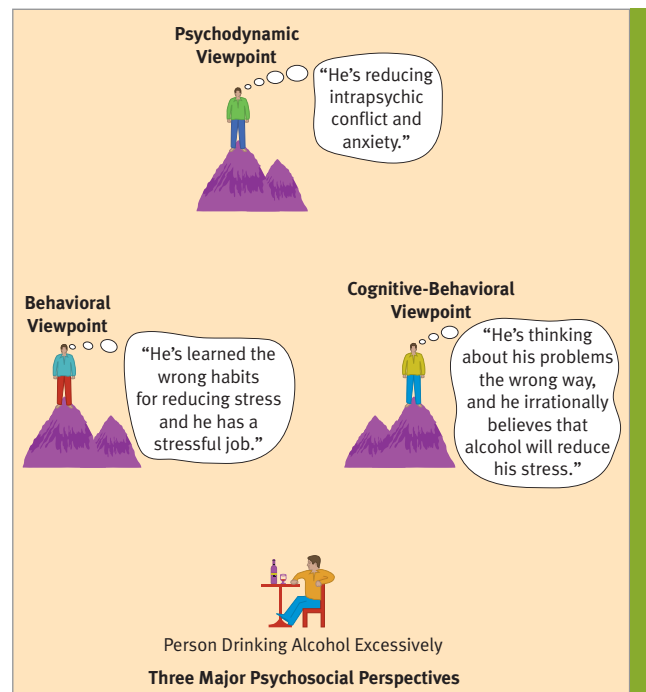


FIGURE 3.9

Three Major Psychological Perspectives on Alcohol Dependence

likely to interpret data. A wide range of psychological causal factors have been implicated in the origins of maladaptive behavior, and some of these different viewpoints provide contrasting (or sometimes complementary) explanations for how the causal factors exert their effects. (See Figure 3.9.)

In Review

- Contrast the newer psychodynamic perspectives—ego psychology, object-relations theory, and the interpersonal and attachment theory perspectives—with the earlier, Freudian perspective.
- What is the central theme of the behavioral perspective, and what has been its impact?
- How do classical and instrumental (operant) conditioning, generalization, discrimination, and observational learning contribute to the origins of abnormal behavior?
- What is the focus of the cognitive-behavioral perspective, and what has been its impact?
- Why are schemas and self-schemas so important for understanding abnormal behavior and its treatment?
- What role do cognitive distortions and attributions have in psychopathology, according to the cognitive-behavioral perspective?

Psychological Causal Factors

We begin life with few built-in patterns and a great capacity to learn from experience. What we do learn from our experiences may help us face challenges resourcefully and may lead to resilience in the face of future stressors. Unfortunately, some of our experiences may be much less helpful in our later lives, and we may be deeply influenced by factors in early childhood over which we have no control. One good example of ways in which the events in one child's life may be vastly different from those in another child's life is whether they are *predictable* or *controllable*. At one extreme are children who grow up in stable and lovingly indulgent environments, buffered to a large extent from the harsher realities of the world; at the other extreme are children whose experiences consist of constant exposure to unpredictable and uncontrollable frightening events or unspeakable cruelties. Such different experiences have corresponding effects on the adults' schemas about the world and about the self: Some suggest a world that is uniformly loving, unthreatening, and benign, which of course it is not; others suggest a jungle in which safety and perhaps even life itself are constantly in the balance. Given a preference in terms of likely outcomes, most of us would opt for the former of these sets of experiences. However, these actually may not be the best blueprint for engaging the real world, because it may be important to encounter some stressors and learn ways to deal with them in order to gain a sense of control (e.g., Barlow, 2002; Seligman, 1975) or self-efficacy (Bandura, 1986, 1997).

Exposure to multiple uncontrollable and unpredictable frightening events is likely to leave a person vulnerable to anxiety and negative affect, a central problem in a number of mental disorders such as anxiety and depression. For example, Barlow's (1988, 2002) and Mineka's (1985b; Mineka & Zinbarg, 1996, 2006) models emphasize the important role that experience with unpredictable and uncontrollable negative outcomes has in creating stress, anxiety, and depression (see also Abramson et al., 1978; Chorpita, 2001; Chorpita & Barlow, 1998; Seligman, 1975). It is important to note that a person exposed to the same frequency and intensity of negative outcomes that are predictable and/or controllable will experience less stress and be less likely to develop anxiety or depression.

In this section we will examine the types of psychological factors that make people vulnerable to disorder or that may precipitate disorder. Psychological factors are those developmental influences—often unpredictable and uncontrollable negative events—that may handicap a person psychologically, making him or her less resourceful in coping with events. (However, it is important to remember that psychological causal factors are always ultimately mediated by changes that take place in our nervous systems when emotions are activated and when new learning takes place.) We will focus on four categories of psychological causal factors that can each have important detrimental effects on a child's socioemotional development: (1) early deprivation or trauma, (2) inadequate parenting styles, (3) marital discord and

- ▶ Early deprivation or trauma
- ▶ Inadequate parenting styles
- ▶ Marital discord and divorce
- ▶ Maladaptive peer relationships

FIGURE 3.10

Psychological Causal Factors

divorce, and (4) maladaptive peer relationships, also shown in Figure 3.10. Such factors typically do not operate alone. Rather, they interact with each other and with other psychological factors, as well as with particular genetic and temperamental factors and with particular sociocultural settings or environments. In other words, although psychological factors are often studied independently of genetic, temperamental, and sociocultural factors, a more comprehensive biopsychosocial understanding should be the ultimate goal.

We now turn to the four different categories of psychological causal factors.

Early Deprivation or Trauma

Children who do not have the resources that are typically supplied by parents or parental surrogates may be left with deep and sometimes irreversible psychological scars. The needed resources range from food and shelter to love and attention. Deprivation of such resources can occur in several forms. The most severe manifestations of deprivation are usually seen among abandoned or orphaned children, who may be either institutionalized or placed in a succession of unwholesome and inadequate foster homes. However, it can also occur in intact families where, for one reason or another, parents are unable (for instance, because of mental disorder) or unwilling to provide close and frequent human attention and nurturing.



These Romanian orphans spend most of their days in playpens. The lack of physical contact and social stimulation and support causes many children who are often institutionalized starting in infancy and early childhood to show severe emotional, behavioral, and learning problems. They are also at elevated risk for psychopathology.

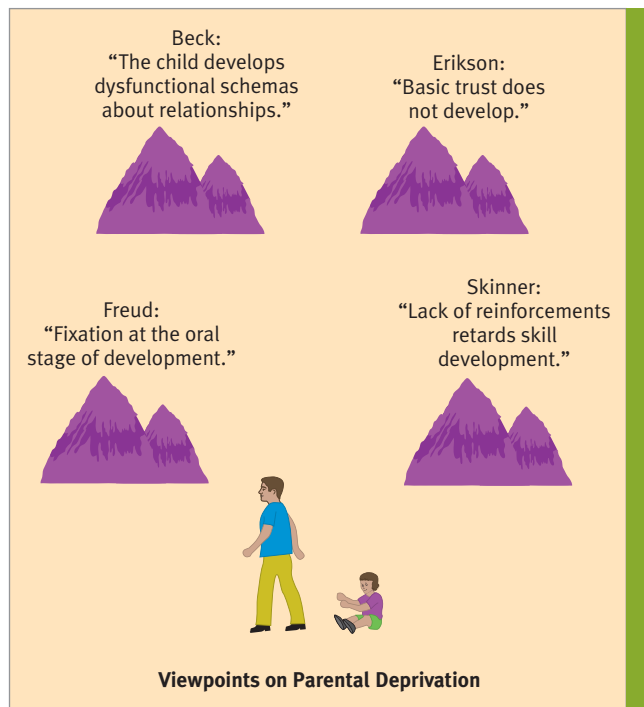


FIGURE 3.11

Viewpoints on Parental Deprivation

We can interpret the consequences of parental deprivation from several psychological viewpoints. Such deprivation might result in fixation at the oral stage of psychosexual development (Freud); it might interfere with the development of basic trust (Erikson); it might retard the attainment of needed skills because of a lack of available reinforcements (Skinner); or it might result in the child's acquiring dysfunctional schemas and self-schemas in which relationships are represented as unstable, untrustworthy, and without affection (Beck). Any of these viewpoints might be the best way of conceptualizing the problems that arise in a particular case, or some combination of them might be superior to any single one because, as we have noted, the causal pathways are usually multidimensional. (See Figure 3.11.)

INSTITUTIONALIZATION In some cases children are raised in an institution where, compared with an ordinary home, there is likely to be less warmth and physical contact; less intellectual, emotional, and social stimulation; and a lack of encouragement and help in positive learning. Current estimates are that worldwide up to 8 million children live in orphanages (Bos et al., 2011). Research done when institutionalization was more common in the United States and the United Kingdom makes it clear that the long-range prognosis for most children who suffer early and prolonged environmental and social deprivation through institutionalization is unfavorable, especially if the institutionalization lasts longer than 6 months (Beckett et al., 2006; Kreppner et al., 2007; Wiik et al., 2011). Many children institutionalized in infancy and early childhood show severe emotional, behavioral, and learning problems and are at risk for disturbed attachment

relationships and psychopathology (e.g., Bos et al., 2011; Ellis et al., 2004; Smyke et al., 2007). At least some of these problems may be the result of delayed maturation in brain electrical activity (McLaughlin et al., 2010).

Institutionalization later in childhood of a child who has already had good attachment experiences was not found to be so damaging (Rutter, 1987). However, even some of the children institutionalized at an early age show resilience and do well in adolescence and adulthood (Kreppner et al., 2007; Rutter et al., 2001). In some cases this is because of influential protective factors, which include having some positive experiences at school, whether in the form of social relationships or athletic or academic success, and having a supportive marital partner in adulthood; these successes probably contribute to a better sense of self-esteem or self-efficacy (Quinton & Rutter, 1988; Rutter, 1985; Rutter et al., 2001).

Fortunately, the results of this line of research have had a major impact on public policy in this and some other societies, which have recognized the need to place such children in foster or adoptive families rather than in institutions (see Johnson, 2000; Rutter, 2006). Accordingly, conducting research on the effects of institutionalization in Western societies is less urgent today—and less feasible—than it once was. Unfortunately, however, enlightened policies have not been implemented in some Eastern European countries and in some other parts of the world, where the plight of children in orphanages has often been deplorable (e.g., Johnson, 2000). We focus here on research conducted on children adopted from these Eastern European orphanages because they have been most widely studied (e.g., McLaughlin et al., 2010). Many children whose infancy was spent in these Eastern European orphanages were later adopted into homes in North America and the United Kingdom. For children who spent a significant period of time in one of these deplorable institutions in their first year or two of life, there were very significant intellectual, language, and growth deficits, and even more time spent in the institution was related to more severe deficits. Serious physiological, behavioral, psychological, and social problems also arose (e.g., Bos et al., 2011; Gunnar et al., 2001; Rutter, 2006). At least in one study the physiological changes extended to brain development, with children with severe institutional deprivation showing reduced overall brain volume, although the volumes of their amygdala which is involved in emotion regulation were enhanced (Mehta et al., 2009). When retested several years after being placed in good adoptive homes, most such children showed significant improvement in most of these areas, although they still showed deficits compared to adoptive infants who had not been institutionalized. For one of these studies, a more recent follow-up of Romanian adoptees in the United Kingdom when the children were 11 years of age has shown a wide variety of outcomes. About half of the children continued to show multiple impairments, and only about one-quarter showed fairly normal functioning across many domains (Kreppner et al., 2007; see also Wiik et al., 2011). Generally, the earlier the children were adopted (and therefore the less time they spent in the deplorable orphanages), the better they did (see Johnson, 2000, for a review; Rutter et al., 1999).

NEGLECT AND ABUSE IN THE HOME Most infants subjected to parental deprivation are not separated from their parents but, rather, suffer from maltreatment at home. In the United States, approximately 2.6 to 3.4 million reports of abuse and neglect are made annually, and about 33 to 40 percent are found to be accurate (Cicchetti & Toth, 2005; Watts-English et al., 2006). This means that about 12 out of every 1,000 children are known to be victims of abuse or neglect, with countless numbers of other unreported cases. Parents can neglect a child in various ways—by physical neglect, denial of love and affection, lack of interest in the child’s activities and achievements, or failure to spend time with the child or to supervise his or her activities. Cases of parental abuse (which are less common than neglect; De Bellis, 2005) involve cruel treatment in the form of emotional, physical, or sexual abuse. Parental neglect and abuse may be partial or complete, passive or active, or subtly or overtly cruel.

Outright parental abuse (physical or sexual or both) of children has been associated with many negative effects on their emotional, intellectual, and physical development, although some studies have suggested that, at least among infants, gross neglect may be worse than having an abusive relationship. Abused children often have a tendency to be overly aggressive (both verbally and physically), even to the extent of bullying. Some even respond with anger and aggression to friendly overtures from peers (e.g., Cicchetti & Toth, 2005; Emery & Laumann-Billings, 1998). Researchers have also found that maltreated children often have difficulties in linguistic development and significant problems in behavioral, emotional, and social functioning, including conduct disorder, depression and anxiety, and impaired relationships with peers, who tend to avoid or reject them (Collishaw, Pickles, et al., 2007; Shonk & Cicchetti, 2001). Such adverse consequences are perhaps not surprising given the multitude of very long-lasting negative neurobiological effects that maltreatment has on the developing nervous system (Gunnar & Quevedo, 2007;



In February 1994, during a drug raid, Chicago police discovered 19 children living in this freezing, squalid, cockroach-infested apartment. The stove in the kitchen did not work. The children had to eat off the floor, sharing their food with dogs. The six adults in the apartment were charged with child neglect, and child abuse charges were also considered. Growing up in such a setting may predispose children to later psychological problems.

Watts-English et al., 2006). For example, an important 30-year follow-up study of individuals born on the Isle of Wight in the 1960s who reported having been physically or sexually abused as children found that about two-thirds of them had elevated rates of both adolescent and adult psychopathology compared to individuals who did not report such abuse. A recent quantitative review also reported adverse effects of childhood abuse on numerous adult physical health outcomes (Wegman & Stetler, 2009).

Abused and maltreated infants and toddlers are also quite likely to develop atypical patterns of attachment—most often a *disorganized* and *disoriented style of attachment* (Barnett, Ganiban, & Cicchetti, 1999; Crittenden & Ainsworth, 1989), characterized by insecure, disorganized, and inconsistent behavior with the primary caregiver. For example, such a child might at one point act dazed and show frozen behavior when reunited with his or her caregiver. However, at another point he or she might actually approach the caregiver but then immediately reject and avoid her. A significant portion of these children continue to show these confused patterns of relating to their caregiver up to at least age 13. Moreover, because such children’s internal models of themselves in relationships to important others often generalize to new relationships, they are likely to expect others to treat them in a similar negative manner and to not expect that they will fare well in such relationships. Consequently, they may selectively avoid new experiences that could correct their expectations (Cicchetti & Toth, 1995a; Shields et al., 2001).

These effects of early abuse may endure into adolescence and adulthood. For example, previously abused or neglected children have, on average, lower levels of education, employment, and earnings (Currie & Widom, 2010). Several reviews have concluded that childhood physical abuse predicts both familial and nonfamilial violence in adolescence and adulthood, especially in abused men (Cicchetti & Toth, 1995a; Serbin & Karp, 2004). Thus, a significant proportion of parents who reject or abuse their children have themselves been the victims of parental rejection. Their early history of rejection or abuse would clearly have had damaging effects on their schemas and self-schemas, and they were probably unable to internalize good models of parenting (e.g., Serbin & Karp, 2004; Shields et al., 2001). Kaufman and Zigler (1989) estimated that there is about a 30 percent chance of this pattern of intergenerational transmission of abuse (see also Cicchetti & Toth, 1995a).

Nevertheless, it is important to remember that maltreated children—whether the maltreatment comes from abuse or from deprivation—can improve to at least some extent when the caregiving environment improves (Cicchetti & Toth, 1995a; Emery & Laumann-Billings, 1998). Moreover, there are always a range of effects, and those children who are least likely to show these negative outcomes tend to have one or more protective factors such as a good relationship with some adult during childhood, a higher IQ, positive school experiences, or physical attractiveness.

SEPARATION Bowlby (1960, 1973) first summarized the traumatic effects, for children from 2 to 5 years old, of being separated from their parents during prolonged periods of hospitalization. First, there are the short-term or acute effects of the separation,

which can include significant despair during the separation as well as detachment from the parents upon reunion; Bowlby considered this to be a normal response to prolonged separation, even in infants with a *secure attachment*. However, he also found evidence that children who undergo a number of such separations may develop an *insecure attachment*. In addition, there can be longer-term effects of early separation from one or both parents. For example, such separations can cause an increased vulnerability to stressors in adulthood, making it more likely that the person will become depressed (Bowlby, 1980) or show other psychiatric symptoms (Canetti et al., 2000; Carlson et al., 2003). As with other early traumatic experiences, the long-term effects of separation depend heavily on whether support and reassurance are given a child by parents or other significant people, which is most likely if the child has a secure relationship with at least one parent (Canetti et al., 2000; Carlson & Sroufe, 1995). Interestingly, many children who experience even a parent's death do not exhibit discernible long-term effects (Brown et al., 1985; Canetti et al., 2000).



Even children who have been maltreated can improve their damaged self-schemas if one or more protective factors—for example, a positive experience at school—is present.

Inadequate Parenting Styles

Even in the absence of severe deprivation, neglect, or trauma, many kinds of deviations in parenting can have profound effects on a child's subsequent ability to cope with life's challenges and thus can create a child's vulnerability to various forms of psychopathology. Therefore, although their explanations vary considerably, the psychological viewpoints on causes of psychopathology all focus on the behavioral tendencies a child acquires in the course of early social interaction with others—chiefly parents or parental surrogates (e.g., Parke, 2004; Sroufe et al., 2000).

You should keep in mind that a parent-child relationship is always bidirectional: As in any continuing relationship, the behavior of each person affects the behavior of the other. Some children are easier to love than others; some parents are more sensitive than others to an infant's needs (e.g., Parke, 2004). For example, parents who have babies with difficult temperaments (who are very prone to negative moods) find it difficult and stressful to deal with their babies (e.g., Putnam et al., 2002; Rutter, 2006). For a second example, in an early study, Rutter and Quinton (1984) found that parents tended to react with irritability, hostility, and criticism to children who were high in negative mood and low on adaptability (see also Crouter & Booth, 2003). This in turn may set such children at risk for psychopathology because they become a "focus for discord" in the family (Rutter, 1990, p. 191).

PARENTAL PSYCHOPATHOLOGY

In general, it has been found that parents who have various forms of psychopathology (including schizophrenia, depression, antisocial personality disorder, and alcohol abuse or dependence) tend to have one or more children who are at heightened risk for a wide range of developmental difficulties (unless protective factors are also present; Brennan et al., 2003; Masten, 2007). The focus of most research in this area has been on mothers, but there is good evidence that fathers with mental disorders or others who are minimally involved in caretaking in infancy can also make significant contributions to child and adolescent psychopathology, especially to problems such as depression, conduct disorder, delinquency, and attention-deficit disorder (e.g., Boyce et al., 2006; Hammen, 2009; Phares et al., 2002). Although some of these effects undoubtedly have a genetic component, many researchers believe that genetic influences cannot account for all of the adverse effects that parental psychopathology can have on children (e.g., Hammen, 2009; Sher et al., 2005; Speranza et al., 2006).

Consider some examples. Although many children of alcoholics do not have difficulties, others have elevated rates of truancy, substance abuse, and a greater likelihood of dropping out of school, as well as higher levels of anxiety and depression and lower levels of self-esteem (Leonard & Eiden, 2007; Marmorstein et al., 2009; Sher et al., 2005). In addition, the children of seriously depressed parents are at enhanced risk for depression and other disorders themselves (Burt et al., 2005; Cicchetti & Toth, 1998; Hammen, 2009), at least partly because depression makes



Inadequate parenting styles can have profound effects on a child's subsequent ability to cope with life's challenges and thus create vulnerability to various forms of psychopathology.

for unskillful parenting—notably including either intrusive or withdrawn behavior (Field et al., 2006), excessive criticism, and ineffectiveness in managing and disciplining the children (Cicchetti & Toth, 1998; Rogosch et al., 2004). Not surprisingly, children of depressed mothers are also more likely than children of nondepressed mothers to have insecure attachment relationships (Cicchetti & Toth, 1995b) and to live in environments with high levels of stress (e.g., Hammen, 2009).

PARENTING STYLES: WARMTH AND CONTROL Less extreme differences in parenting styles than those that may occur with various forms of parental psychopathology or parental abuse can also have a significant impact on children's development and increase their risk for psychopathology. In the past, discipline was conceived of as a method for both punishing undesirable behavior and preventing or deterring such behavior in the future. Discipline is now thought of more positively as providing needed structure and guidance for promoting a child's healthy growth. Such guidance provides a child with schemas similar to outcomes actually meted out by the world, which are contingent on a person's behavior. This allows the child a sense of control over these outcomes and her or his freedom to make deliberate choices. When punishment is deemed necessary, it is important that a parent make clear exactly what behavior is inappropriate and what behavior is expected, and that positive and consistent methods of discipline be worked out for dealing with infractions.

Researchers have been interested in how parenting styles—including their disciplinary styles—affect children's behavior over



Healthy parenting styles are those that reflect warmth and clear limits and restrictions regarding certain kinds of behaviors while allowing considerable freedom within certain boundaries. The children raised in these environments tend to be energetic and friendly and show general competencies for dealing with others.

the course of development. A parenting style reflects an attitude and values that are expressed toward a child across a wide range of settings (L. R. Williams et al., 2009). Four types of parenting styles have been identified that seem to be related to different developmental outcomes for the children: (1) authoritative, (2) authoritarian, (3) permissive/indulgent, and (4) neglectful/uninvolved. These styles vary in the degree of *parental warmth* (amount of support, encouragement, and affection versus shame, rejection, and hostility) and in the degree of *parental control* (extent of discipline and monitoring versus leaving the children largely unsupervised; Emery & Kitzmann, 1995; Manzeske & Stright, 2009; Morris, 2001). (See Figure 3.12.) Parental control includes both behavioral control (rewards and punishments) and psychological control (e.g., expression of approval vs disapproval, or guilt induction).

Authoritative Parenting The *authoritative style* is one in which the parents are both very warm and very careful to set clear standards and limits on certain kinds of behaviors while allowing considerable freedom within these limits. They tend to be attentive and sensitive to their needs while still enforcing their limits. This style of parenting is associated with the most positive early social development; the children tend to be energetic and friendly and to show development of general competencies for dealing with others and with their environments (Baumrind, 1993; Siegler et al., 2003; Simons et al., 2005). They also usually have secure attachment relationships (Karavasilis et al., 2003) and show high levels of overall well-being, as well as good school performance when followed into late adolescence (Berk, 2003; Slicker & Thornberry, 2002). Not surprisingly they also are less likely to exhibit either emotional disorders (e.g., anxiety and depression) or behavioural problem such as conduct problems and delinquency (L.R. Williams et al., 2009). Recent work has also shown that authoritative parenting is often effective in promoting resilience in children living in highly stressful contexts induced by war, conflict, and displacement (Salem-Pickartz & Donnelly, 2007).

Authoritarian Parenting Parents with an *authoritarian style* are high on control but low on warmth. They often appear quite cold and demanding, favoring punitive methods if their children disobey. Their children tend to be conflicted, irritable, and moody (Baumrind, 1975, 1993; Berk, 2003; Siegler et al., 2003). When followed into adolescence, these children tend to be lower in social and academic competence than children of authoritative parents, with boys doing particularly poorly in social and cognitive skills. Boys with authoritarian fathers—especially those high on hostility—are also at heightened risk of engaging in substance abuse and other delinquent activity (Bronte-Tinkew et al., 2006; Hovee et al., 2009). If such authoritarian parents also use overly severe discipline in the form of physical punishment—as opposed to the withdrawal of approval and privileges—the result tends to be increased aggressive behavior on the part of the child (Berk, 2003; Emery & Kitzmann, 1995).

Permissive/Indulgent Parenting Parents with a *permissive/indulgent style* are high on warmth but low on discipline and control. This lenient style of parenting is associated

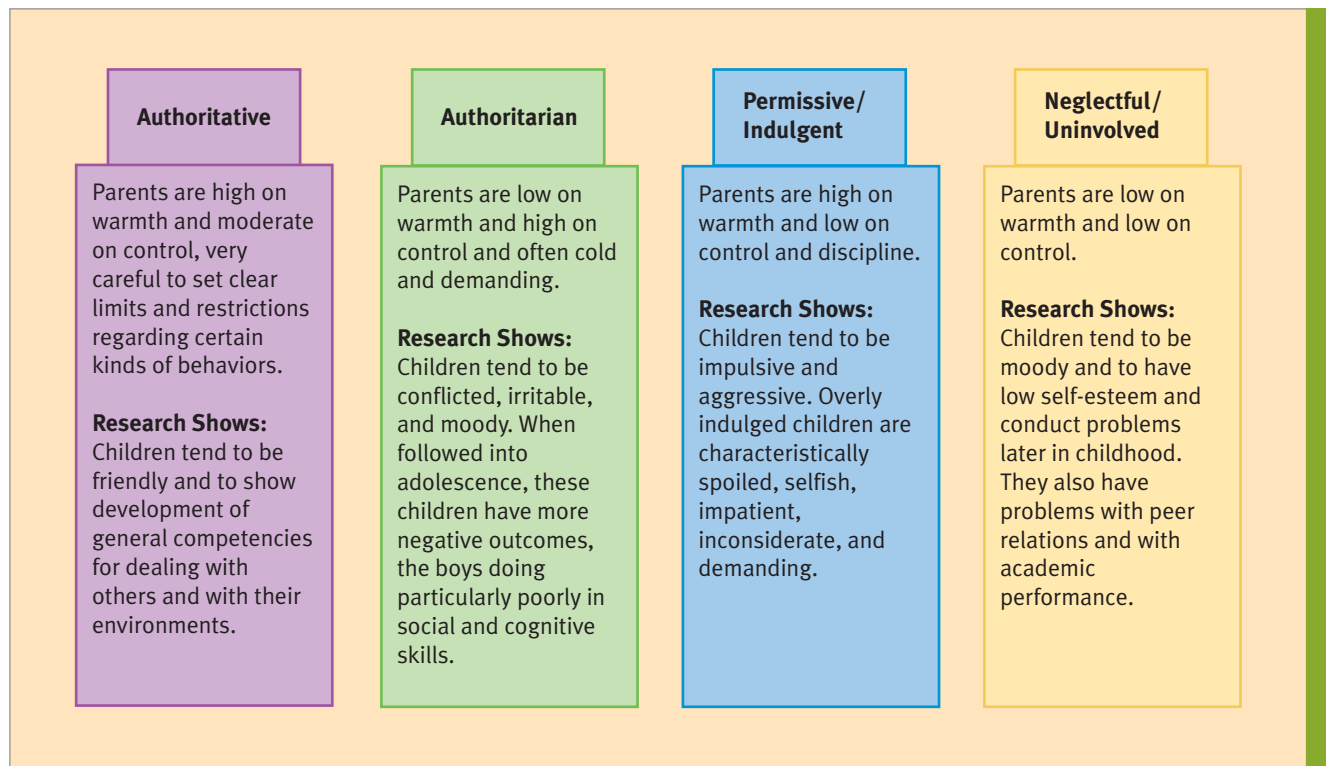


FIGURE 3.12

Parenting Styles

with impulsive and aggressive behavior in childhood and adolescence (Baumrind, 1967; Hetherington & Parke, 1993; Siegler et al., 2003). Overly indulged children are characteristically spoiled, selfish, impatient, inconsiderate, and demanding (Baumrind, 1971, 1975). In adolescence, they tend to do less well academically and to show more antisocial behaviors (e.g., Steinberg et al., 2006). Confusion and difficulties in adjustment may occur when “reality” forces them to reassess their assumptions about themselves and the world.

Neglectful/Uninvolved Parenting Finally, parents who are low both on warmth and on control exhibit the *neglectful/uninvolved style*. They tend to be disengaged and not supportive of their children. This style of parental uninvolvedness is associated with disruptions in attachment during early childhood (Egeland & Sroufe, 1981; Karavasilis et al., 2003) and with moodiness, low self-esteem, and conduct problems later in childhood (Baumrind, 1991; Hetherington & Parke, 1993). These children of uninvolved parents also have problems with peer relations and with academic performance (Hetherington & Parke, 1993; see also Berk, 2003).

Marital Discord and Divorce

Disturbed parent–child patterns such as parental rejection are rarely found in severe form unless the total familial context is also abnormal. Thus disturbed family structure is an overarching risk factor that increases an individual’s vulnerability to

particular stressors. We will distinguish between intact families where there is significant marital discord and families that have been disrupted by divorce or separation.

MARITAL DISCORD Whatever the reasons for marital discord, when it is long-standing it is likely to be frustrating, hurtful, and generally damaging in its effects on both adults and their children (e.g., Amato, 2006; Amato & Booth, 2001; Parke, 2004). More severe cases of marital discord may expose children to one or more of the stressors we have already discussed: child abuse or neglect, the effects of living with a parent with a serious mental disorder, authoritarian or neglectful/uninvolved parenting, and spouse abuse. But even less severe cases of marital discord also have negative effects on many children. For example, one study showed that children of parents with high levels of overt conflict showed a greater disposition to behave aggressively toward both their peers and their parents than children from less conflictual marriages (Cummings et al., 2004; Du Rocher et al., 2004; see also Amato, 2006). Another study found that college students who reported high levels of marital conflict in their parents also showed elevated conflict in their own romantic relationships, which in turn was linked to poorer quality of their own romantic relationships (Cui & Fincham, 2010). Interestingly, one study found that children could be buffered against many of the damaging effects of marital conflict if one or both parents had the following characteristics: warmth, proneness to giving praise and approval, and ability to inhibit rejecting behavior toward their children (Katz & Gottman, 1997).

Several recent longitudinal studies have clearly documented that the damaging effects of serious marital discord on children continue into adulthood: The offspring's own marriages are more likely to be marked by discord (whether or not the parents divorced). Some of this intergenerational transmission of marital discord may be the result of the offspring having learned negative interaction styles by observing their own parents' marital interactions (Amato, 2006; Amato & Booth, 2001).

DIVORCED FAMILIES Partly as a consequence of a growing cultural acceptance of divorce, approximately a million divorces now occur yearly in the United States, according to the National Center for Health Statistics (as cited in Divorce Statistics Collection, 2005). Estimates are that about 20 percent of children under the age of 18 are living in a single-parent household—some with unwed parents and some with divorced parents. Nearly half of all marriages end in divorce, and it has been estimated that 50 to 60 percent of children born in the 1990s would live at some point in single-parent families (Amato, 2010; Hetherington et al., 1998).

Effects of Divorce on Parents Unhappy marriages are difficult, but ending a marital relationship can also be enormously stressful for the adults, both mentally and physically. The negative effects are often temporary, with most people being able to adapt constructively within 2 to 3 years, but some adults never fully recover (Amato, 2000; Hetherington, 2003a). Divorced and separated persons are overrepresented among psychiatric patients, although the *direction of the causal relationship* is not always clear. In their original comprehensive reviews of the effects of divorce on adults, Amato and Keith (1991a) concluded that it is a major source of psychopathology as well as of physical illness, death, suicide, and homicide. It should also be recognized, however, that divorce actually benefits some individuals (Amato, 2000, 2010)—with some evidence that women are more likely to benefit than men (Hetherington, 2003a). There is also some evidence that individuals who were in high-distress marriages before divorce are more likely to show an increase in happiness than are individuals who were in low-distress marriages before divorce (Amato & Hohmann-Marriott, 2007). In addition, favorable adjustment after divorce is positively associated with higher income, dating someone steadily, remarriage, having had relatively favorable attitudes toward divorce before it happened, and being the partner who initiated the divorce (Amato, 2000).

Effects of Divorce on Children Divorce can have traumatic effects on children, too. Feelings of insecurity and rejection may be aggravated by conflicting loyalties and,

RESEARCH CLOSE-UP

Direction of the Causal Relationship

Recall that, in a correlational or observational study, an association between two variables does not allow us to make inferences about causal direction. For example, divorce could precipitate psychological problems. Alternatively, people with psychological disorders might be more likely to have problematic marriages and end up divorced.

sometimes, by the spoiling the children may receive while staying with one of the parents. Not surprisingly, some children do develop serious maladaptive responses. Temperamentally difficult children are likely to have a more difficult time adjusting than are temperamentally easy children (Hetherington et al., 1989). Somewhat ironically, difficult children may be the ones whose parents are more likely to divorce, perhaps because having difficult children is likely to exacerbate marital problems (Block et al., 1986; Hetherington, 1999).

Delinquency and a wide range of other psychological problems such as anxiety and depression are much more frequent among children and adolescents from divorced

families than among those from intact families, although it is likely that a contributing factor here is prior or continuing parental strife (Chase-Lansdale et al., 1995; Strohschein, 2005). However, findings also show that, on average, such children had shown these problems to some degree even before their parents divorced (Amato, 2010; Strohschein, 2005). In addition, a number of studies have demonstrated that the adverse effects of divorce on adaptive functioning may persist into adulthood. On average, compared to young adults from families without divorce, young adults from divorced families have somewhat lower educational attainment, lower incomes, lower life satisfaction, and an increased probability of being on welfare and having children out of wedlock (Chase-Lansdale et al., 1995; Hetherington et al., 1998). Children from divorced families are also more likely to have their own marriages end in divorce (Amato & DeBoer, 2001; Hetherington, 2003b). One particularly interesting study found that these long-lasting effects even occurred in a subsequent third generation. Specifically, in a study of nearly 700 grandparents and their grandchildren, Amato and Cheadle (2005) found that divorce in the grandparents was associated with lower education, more marital discord, and weaker parental ties in the grandchildren.

Nevertheless, many children adjust quite well to the divorce of their parents. Indeed, a quantitative review of 92 studies on parental divorce and the well-being of children, conducted on 13,000 children from 1950 to 1990, concluded that the average negative effects of divorce on children are actually quite modest (Amato, 2010; Amato & Keith, 1991b; see also Emery, 1999; Hetherington, 2003b), as are the negative effects persisting into adulthood (Amato & Keith, 1991b). Amato and Keith (1991a, 1991b) also found that the negative effects of divorce seemed to decrease from the 1950s through the 1980s (particularly since 1970), perhaps because the stigma of divorce was decreasing. However, a follow-up review of 67 such studies published in the 1990s showed no further decreases in these negative effects since 1990 (Amato, 2001).

The effects of divorce on children are often more favorable than the effects of remaining in a home torn by marital conflict and dissension (Amato, 2010; Amato & Keith, 1991b; Hetherington et al., 1998). At one time it was thought that the detrimental effects of divorce might be minimized if a successful remarriage provided an adequate environment for childrearing. Unfortunately, however, the Amato and Keith (1991b) review revealed that children living with a stepparent were often no better off than children living with a single parent, although this was more true for girls than for boys. Other studies have shown that children—especially very young children—living with a stepparent are at increased risk for physical abuse (injury and even death) by the stepparent relative to children living with two biological parents (Daly & Wilson, 1988, 1996).

Maladaptive Peer Relationships

Important peer relationships usually begin in the preschool years. Children at this stage are hardly masters of the fine points of human relationships or diplomacy. Empathy—the appreciation of another’s situation, perspective, and feelings—is at best only primitively developed. We can see this in a child who rejects a current playmate when a more favored playmate arrives. The child’s own immediate satisfaction tends to be the primary goal of any interaction, and there is only an uncertain recognition that cooperation and collaboration may bring even greater benefits. A substantial minority of children seem somehow ill equipped for the rigors and competition of the school years, often because of temperamental factors in the child or dysfunctional family situations. A significant number of them withdraw from their peers and become loners. A significant number of others (especially males) adopt physically intimidating and aggressive lifestyles, often becoming schoolyard or neighborhood bullies. Being either a loner or a bully does not bode well for good mental health outcomes (e.g., Dodge et al., 1997; Heilbron & Prinstein, 2010; Reijntjes et al., 2011). This is in part because both often lead to peer exclusion and peer abuse. Chronic peer



Juvenile socializing is a risky business in which a child’s hard-won prestige in a group is probably perceived as being constantly in jeopardy. Actually, reputation and status in a group tend to be stable, and a child who has been rejected by peers is likely to continue to have problems in peer relationships.

exclusion is particularly likely to lead to decreased classroom participation and declining school performance, whereas peer abuse is particularly likely to lead to actual avoidance of school (Buhs et al., 2006).

Several studies have found bullies to show high levels of both proactive aggression (where they initiate the aggressive behavior) and reactive aggression (where they overreact when confronted; e.g., Salmivalli & Nieminen, 2002; Salmivalli, 2010). Although some bullies probably behave this way because of deficits in social skills, others (often the ringleader in a group of bullies) have a more sophisticated understanding of social behavior, which enables them to manipulate and organize their peers (often driven by status goals) so that they can avoid being caught while making others suffer (Salmivalli, 2010; Sutton et al., 1999). Although most children profess attitudes against bullying, when bullying actually occurs, most students do nothing to intervene or support the victim (and as many as 20 to 30 percent actually encourage the bully; Salmivalli & Voeten, 2004; Salmivalli, 2010). A small percentage (approximately 20 percent), however, do take the side of the victim and may even help defend him or her. Victims who have one or more classmates defend them show less distress and higher self-esteem.

In recent years a new form of particularly insidious bullying has emerged as an enormous problem in many North American schools. *Cyberbullying*, as it is called, includes sending offensive, harassing, or intimidating messages over the Internet, spreading ugly rumors on certain Internet sites, and spreading someone’s very personal information (Willard, 2007). Some estimate that as many as one-third of teenagers who use the Internet engage in cyberbullying (Li, 2007; Scharnberg, 2007). The psychological consequences of cyberbullying on the victims can be very serious—including anxiety, school phobia, lower self-esteem, suicidal ideation, and occasional cases of suicide (Thomas, 2006).

Fortunately, there is another side to this coin. Peer relations can be difficult, but they can also be sources of key learning experiences that stand an individual in good stead for many years. For a resourceful child, the winning and losing and the successes and failures of the school years provide excellent training in coming to grips with the real world and with her or his developing self—its capabilities and limitations, its attractive and unattractive qualities. The experience of intimacy with a friend has its beginning in this period of intense social involvement. If all goes well, a child emerges into adolescence with a considerable repertoire of social knowledge and skills that add up to social competence. Such resources can be strong protective factors against parental rejection, frustration, demoralization, despair, and mental disorder (Masten, 2007; Sente et al., 2010).

SOURCES OF POPULARITY VERSUS REJECTION What determines which children will be popular and which will be rejected? There seem to be two types of popular children—the prosocial and the antisocial types. *Prosocial* popular children communicate with their peers in friendly and assertive

yet cooperative ways. They tend to be good students relative to their less popular peers (Zettergreen, 2003). *Antisocial* popular children—usually boys—tend to be “tough boys” who may be athletically skilled but who do poorly academically. They tend to be highly aggressive and defiant of authority (see Berk, 2003).

Far more attention has been devoted to determining why some children are persistently rejected by their peers and what the consequences are of such rejection. There also appear to be two types of rejected children—those who are too aggressive and those who are very withdrawn (Ladd, 2006). The rejected children who are aggressive take an excessively demanding or aggressive approach when interacting with their peers. They often take offense too readily and attribute hostile intent to the teasing of their peers, thus escalating confrontations to unintended levels (Dodge, 2006; Reijntjes et al., 2011). Indeed, the tendency to attribute hostile intent to others in grade 8 has been shown to predict levels of antisocial behavior in grade 11 (Lansford et al., 2006). Such children also tend to take a more punitive and less forgiving attitude toward such situations (Coie et al., 1991; Crick & Dodge, 1994; Reijntjes et al., 2011). This may be especially likely in children who have been maltreated by their parents and have therefore developed maladaptive mental representations of caregivers and expect maltreatment. Expecting maltreatment, they may approach social situations with hyperarousal, anxiety, and angry reactivity, which may be consistent with what they have experienced at home but is out of synch with the context they share with peers (Cicchetti & Toth, 2005; Shields et al., 2001). In addition, having a poor ability to understand a peer’s emotions (such as fear and sadness) in kindergarten also predicts aggressive behavior toward peers in the third grade (Dodge et al., 2002).

Being rejected and being aggressive at one point in childhood greatly increases the probability of aggressive and delinquent behavior later on, especially in boys (Coie, 2004; Ladd, 2006; Reijntjes et al., 2011). For example, one study followed 585 children from kindergarten through the eighth grade. Results showed that those who had hostile knowledge structures (schemas) early in childhood were more likely to develop consistent aggressive behaviors over an 8-year follow-up period (Burks et al., 1999; see also Laird et al., 2001).

The second subset of children who may become chronic victims of rejection are not aggressive but, rather, are highly unassertive and quite submissive toward their peers, often because of social anxiety and fear of being scorned or attacked (Schwartz et al., 1993). Such isolation is likely to have serious consequences because it often leads to peer rejection, which in turn deprives a child of further opportunities to learn the rules of social behavior and interchange, rules that become more sophisticated and subtle with increasing age (Coie, 1990; Ladd, 2006). Repeated social failure or becoming the victim of bullies is the usual result, which has further damaging effects on self-confidence and self-esteem

and sometimes leads to loneliness, depression, and anxiety, especially during the elementary school years (Burks et al., 1995; Ladd, 2006).

In summary, both logic and research findings suggest the same conclusion: A child who fails to establish satisfactory relationships with peers during the developmental years is deprived of a crucial set of background experiences and is at higher-than-average risk for a variety of negative outcomes in adolescence and adulthood including depression, school dropout, suicidal ideation, and delinquency (Coie, 2004; Heilbron & Prinstein, 2010; Ladd, 2006). However, one should also remember that the peer social problems may also be early markers of disorders that have a heritable component but do not become full blown until later in adolescence or adulthood. What is often going on in such cases is that the peer social problems indeed reflect some heritable diathesis, but they also serve as stressors that make it more likely that the underlying vulnerability will lead to full-blown disorder later (Parker et al., 1995; see also Coie, 2004; Rutter, 2006).

In Review

- What are the most important effects of a child’s being exposed to early deprivation or abuse?
- What kinds of effects does parental psychopathology have on children?
- What kinds of influences do different parenting styles tend to have on children’s development? (Consider especially the variables of parental warmth and parental control.)
- What is the typical range of effects that divorce and marital discord can have on children? What about effects on adults?
- What are two different types of popular children and two different types of rejected children?

The Sociocultural Viewpoint

By the beginning of the twentieth century, sociology and anthropology had emerged as independent scientific disciplines and were making rapid strides toward understanding the role of sociocultural factors in human development and behavior. Early sociocultural theorists included such notables as Ruth Benedict, Abram Kardiner, Margaret Mead, and Franz Boas. Their investigations and writings showed that individual personality development reflects the larger society—its institutions, norms, values, and ideas—as well as the immediate family and other groups. Studies also made

clear the relationship between various sociocultural conditions and mental disorders (for example, the relationship between the particular stressors in a given society and the types of mental disorders that typically occur in it). Further studies showed that the patterns of both physical and mental disorders within a given society could change over time as sociocultural conditions change. These discoveries have added important new dimensions to modern perspectives on abnormal behavior (Fabrega, 2001; Tsai et al., 2001; Westermeyer & Janca, 1997).

Uncovering Sociocultural Factors Through Cross-Cultural Studies

The sociocultural viewpoint is concerned with the impact of culture and other features of the social environment on mental disorders. The relationships are complex. It is one thing to observe that a person with a psychological disorder has come from a harsh environment. It is quite another to show empirically that these circumstances were contributory causes of the disorder as opposed to being mere correlates of the disorder. Yet people raised in different societies and exposed to very different environments have provided natural “laboratories” of sorts, and cross-cultural research can enhance our knowledge about the range of variation that is possible in human behavioral and emotional development. It can also generate ideas about what causes normal and abnormal behavior—ideas that can later be tested more rigorously in the laboratory (e.g., Rothbaum, Weisz, et al., 2000, 2001; Weisz et al., 1997).

UNIVERSAL AND CULTURE-SPECIFIC SYMPTOMS OF DISORDERS Research supports the view that many psychological disturbances—in both adults and children—are universal, appearing in most cultures studied (Butcher, 1996b, Butcher et al., 2005; Kleinman, 1988; Verhulst & Achenbach, 1995). Studying such issues is, of course, never easy because of the need to adapt psychological tests across barriers of language and culture and to validate their use in other cultures. One example of such research has shown that when some tests are translated into the language of different cultures, they need to be adapted so that they are appropriate for the new cultural context. In addition, care must be taken not to miss what may be culture-specific elements of various disorders such as anxiety and depression (e.g., Sue & Chang, 2003; Weisz et al., 2006).

The Minnesota Multiphasic Personality Inventory (MMPI-2; see Chapter 4) is the best validated and most widely used test that has been adapted for use in many cultures (e.g., Butcher, 2011). For example, the basic pattern of disturbed thoughts and behaviors that we

call schizophrenia can be found among nearly all peoples, although the prevalence and symptoms vary to some degree (Woo & Oei, 2007). Moreover, certain psychological symptoms, as measured, are consistently found among similarly diagnosed clinical groups in many other countries. For example, Butcher (1996a) found that psychiatric patients from Italy, Switzerland, Chile, India, Greece, and the United States who were diagnosed with paranoid schizophrenia produced similar general personality and symptom patterns on the MMPI. The same MMPI-2 pattern was also found to occur among schizophrenic patients in Japan (Hayama et al., 1999).

Nevertheless, although some universal symptoms and patterns of symptoms appear, sociocultural factors often influence which disorders develop, the forms they take, how prevalent they are, and their courses. For example, the prevalence of major depressive disorder varies widely across the cultures of the world. In one study conducted in 10 countries around the world, the prevalence ranged from 3 percent in Japan to nearly 17 percent in the United States (Andrade et al., 2004). Differences can also emerge in the prognosis or outcomes of several severe mental disorders in different countries. Several international studies have found a more favorable course of schizophrenia in developing countries than in developed countries (Kulhara & Chakrabarti, 2001).

In another example, Kleinman (1986, 1988) compared the ways in which Chinese people (in Taiwan and the People’s Republic of China) and Westerners deal with stress. He found that in Western societies, depression was a frequent reaction to individual stress. In China, on the other hand, he noted a relatively low rate of reported depression (Kleinman, 2004; see also Kirmayer & Groleau, 2001). In-

stead, the effects of stress were more typically manifested in physical problems such as fatigue, weakness, and other complaints. Moreover, Kleinman and Good (1985) surveyed the experience of depression across cultures. Their data show that important elements of depression in Western societies—for example, the acute sense of guilt typically experienced—do not appear in many other cultures. They also point out that the symptoms of depression, such as sadness, hopelessness, unhappiness, and a lack of pleasure in the things of the world and in social relationships, have dramatically different meanings in different societies. For Buddhists, seeking pleasure from things of the world and social relationships is the basis of all suffering; a willful disengagement is thus the first step toward achieving enlightenment. For Shi’ite Muslims in Iran,



Sociocultural factors influence the form and course of certain disorders. For example, in Western societies people suffering from stress frequently will become depressed. In China, stress is not manifested as depression but in physical problems such as fatigue and weakness.

grief is a religious experience associated with recognition of the tragic consequences of living justly in an unjust world; the ability to experience grief fully is thus a marker of depth of personality and understanding. Several examples of disorders that appear only in certain cultures are given in Box 3.4 on culture-bound syndromes.

CULTURE AND OVER- AND UNDERCONTROLLED BEHAVIOR Studies of the prevalence of different kinds of childhood psychopathology in different cultures raise some fascinating issues. In cultures such as that of Thailand, adults

are highly intolerant of *undercontrolled behavior* such as aggression, disobedience, and disrespectful acts in their children (e.g., Weisz et al., 2003). Children are explicitly taught to be polite and deferential and to inhibit any expression of anger. This raises interesting questions about whether childhood problems stemming from undercontrolled behavior are lower in Thailand than in the United States, where such behavior seems to be tolerated to a greater extent. It also raises the question of whether problems related to *overcontrolled behavior* such as shyness, anxiety, and depression would be overrepresented in Thailand relative to the United States.

3.4

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Culture-Bound Syndromes

Name of Disorder	Culture	Description
Amok	Malaysia (also observed in Laos, the Philippines, Polynesia, Papua New Guinea, and Puerto Rico)	A disorder characterized by sudden, wild outbursts of violent aggression or homicidal behavior in which an afflicted person may kill or injure others. This rage disorder is usually found in males who are rather withdrawn, quiet, brooding, and inoffensive prior to the onset of the disorder. Episodes are often precipitated by a perceived slight or insult. Several stages have been observed, the final phase being <i>Amok</i> , in which the person jumps up, yells, grabs a knife, and stabs people or objects within reach. Exhaustion and depression usually follow, with amnesia for the rage period.
Hikikomori	Japan	A disorder of acute social withdrawal in which young people just remain in their room in their parents' house and refuse social interaction for years.
Koro	Southeast Asia and China (particularly Malaysia)	A fear reaction or anxiety state in which a man fears that his penis will withdraw into his abdomen and he may die. This reaction may appear after sexual overindulgence or excessive masturbation. The anxiety is typically very intense and of sudden onset. The condition is "treated" by having the penis held firmly by the patient or by family members or friends. Often the penis is clamped to a wooden box.
Latah	Malaysia and Indonesia (also Japan, Siberia, and the Philippines)	Hypersensitivity to sudden fright often occurring in middle-aged women of low intelligence who are subservient and self-effacing. The disorder is precipitated by the word <i>snake</i> or by tickling. It is characterized by <i>echolalia</i> (repetition of the words and sentences of others) and <i>echopraxia</i> (repetition of the acts of others). A disturbed individual may also show dissociative or trance-like behavior.
Taijin kyofusho (TKS)	Japan	A relatively common psychiatric disorder in Japan in which an individual develops a fear of offending or hurting other people through being awkward in social situations or because of an imagined physical defect or problem. The excessive concern over how a person presents himself or herself in social situations is the salient problem.
Windigo	Algonquin Indian hunters	A fear reaction in which a hunter becomes anxious and agitated, convinced that he is bewitched. Fears center on his being turned into a cannibal by the power of a monster with an insatiable craving for human flesh.
Zar	North Africa and Middle East	A person who believes he or she is possessed by a spirit may experience a dissociative episode during which shouting, laughing, singing, or weeping may occur. The person may also show apathy and withdrawal, not eating or working.

Sources: Based on American Psychiatric Association (DSM-IV-TR, 2000); Bartholomew (1997); Chowdhury (1996); Hatta (1996); Kiev (1972); Kirmayer (1991); Kirmayer et al. (1995); Lebra (1976); Lewis & Ednie (1997); Sakamoto et al. (2005); Sheung-Tak (1996); Simons & Hughes (1985).

Two cross-national studies (Weisz et al., 1987, 1993) confirmed that Thai children and adolescents do indeed have a greater prevalence of overcontrolled problems than do American children. Although there were no differences in the rate of undercontrolled behavior problems between the two countries, there were differences in the kinds of undercontrolled behavior problems reported. For example, Thai adolescents had higher scores than American adolescents on indirect and subtle forms of undercontrol not involving interpersonal aggression such as having difficulty concentrating or being cruel to animals; American adolescents, on the other hand, had higher scores than Thai adolescents on behaviors like fighting, bullying, and disobeying at school (Weisz et al., 1993). In addition, these investigators found that Thai and American parents differ a good deal in which problems they will bring for treatment. In general, Thai parents seem less likely than American parents to refer their children for psychological treatment (Weisz & Weiss, 1991; Weisz et al., 1997). This may be in part because of their Buddhist belief in the transience of problems and their optimism that their child's behavior will improve. Alternatively, Thai parents may not refer their children with undercontrolled problems for treatment simply because these problems are so unacceptable that the parents are embarrassed to go public with them (Weisz et al., 1997).

Cultural differences in psychopathology may also result from differences in what cultures consider to



In Thailand, children tend to exhibit *overcontrolled behavior* and are explicitly taught by their parents to be polite and deferential and to inhibit any expression of anger. This is in contrast to American children, whose parents tend to tolerate undercontrolled behavior to a greater extent.

be the ideal kinds of parent-child attachment relationships. Box 3.5 on page 96 discusses research on cultural differences in what Japanese and Western cultures believe to be the nature of ideal versus disordered attachment relationships.

In Review

- Give some examples of universal and culture-specific symptoms of disorders.
- What cultural factors help account for differences in problems involving overcontrolled and undercontrolled behavior in Thai versus American children?
- Briefly describe three examples of culture-bound syndromes.

Sociocultural Causal Factors

We all receive a sociocultural inheritance that is the end product of thousands of years of social evolution, just as we receive a genetic inheritance that is the end product of millions of years of biological evolution. Because each sociocultural group fosters its own cultural patterns by systematically teaching its offspring, all its members tend to be somewhat alike. Children reared among headhunters tend to become headhunters; children reared in societies that do not sanction violence usually learn to settle their differences in non-violent ways. The more uniform and thorough the education of the younger members of a group, the more alike they will become. Thus, in a society characterized by a limited and consistent point of view, there are not the wide individual differences that are typical in a society like ours, where children have contact with diverse, often conflicting beliefs. Even in our society, however, there are certain core values that most of us consider essential.

There are many sources of pathogenic social influences. Some of these stem from socioeconomic factors. Others stem from sociocultural factors regarding role expectations and from the destructive forces of prejudice and discrimination. We will briefly look at some of the more important ones here; see also Figure 3.13 on page 96.

Low Socioeconomic Status and Unemployment

In our society the lower the socioeconomic class, the higher the incidence of mental and physical disorders (e.g., Caracci & Mezzich, 2001; Conger & Donnellan, 2007). The strength of

3.5

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Culture and Attachment Relationships

Recently, research has shown that there are significant cross-cultural differences in views of ideal parent–child attachment relationships. Accordingly, there are different views of what constitutes disordered attachment relationships that can increase risk for psychopathology. Views on the function of good attachment relationships (and the nature of disordered attachment) in Western cultures have been found to differ rather dramatically from those seen in Japan (Rothbaum, Weisz, et al., 2000, 2001). In Western societies, secure attachment relationships are thought to occur when a mother responds in a sensitive fashion to a child’s signals (e.g., signs of hunger or discomfort) yet gradually allows the child to explore the environment and develop some autonomy. In the United States one study found that teachers similarly prefer to respond to explicit expression of needs and to foster children’s independence and self-expression, which would also foster secure attachments (Rothbaum et al., 2006). Importantly, securely attached children (relative to insecurely attached children) are thought to be less anxious and depressed, better able to cope with negative emotional states, and better able to form close relationships with peers.

However, in Japan, parents’ goals are to anticipate all the child’s needs and thereby avoid any exposure to stress such as hunger or discomfort and to foster dependency (Rothbaum, Weisz, et al., 2000,

2001). Recent findings suggest that Japanese teachers also prefer to anticipate their students’ needs and to foster dependency on other tasks (Rothbaum et al., 2006). Accordingly, children who are considered securely attached in Japan are very dependent on their mothers (and teachers), and independent children are thought to have disturbed attachments. Moreover, because the Japanese value social harmony, children who are dependent and emotionally restrained and who express their feelings only indirectly are the ones viewed as competent; they also tend to be self-critical and self-effacing. This is very different from Western cultures, where children who show exploration and autonomy and are willing to express strong feelings and even disagreement openly are considered to be socially competent. Such children in Western cultures also tend to have positive self-views (Rothbaum, Weisz, et al., 2000).

Given such differences, it is not surprising that different clinical interventions are viewed as appropriate for children with behavior problems in these two cultures. For example, American therapists often help their clients to develop their own separate identities and assume that expression of negative feelings toward others (including parents) may be necessary. By contrast, Japanese therapists are more likely to encourage clients to be grateful to others (especially their parents) and encourage devotion (see Rothbaum, Weisz, et al., 2000, 2001).

- ▶ Low socioeconomic status and unemployment
- ▶ Prejudice and discrimination in race, gender, and ethnicity
- ▶ Social change and uncertainty
- ▶ Urban stressors: Violence and homelessness

FIGURE 3.13

Sociocultural Causal Factors

this inverse correlation varies with different types of mental disorder, however. For example, antisocial personality disorder is strongly related to socioeconomic status (SES), occurring about three times as often in the lowest income category as in the highest income category, whereas depressive disorders occur only about 1.5 times as often in the lowest income category as in the highest income category (Kessler et al., 1994; Kessler & Zhao, 1999; see also Monroe et al., 2009).

There are many reasons for this general inverse relationship (Conger & Donnellan, 2007). There is evidence that some people with mental disorders slide down to the lower rungs of the economic ladder and remain there, sometimes because they do not have the economic or personal resources to climb back up (e.g., Gottesman, 1991) and sometimes because of prejudice and stigma against those with mental illness (e.g., Caracci & Mezzich, 2001). At the same time, more affluent people are better able to get prompt help or to conceal their problems. However, it is also true that, on average, people who live in poverty encounter more—and more severe—stressors in their lives, including lower self-esteem, than do more affluent people, and they usually have fewer resources for dealing with them (e.g., Twenge & Campbell, 2002). Thus lower socioeconomic groups may show increased prevalence of mental and physical disorders due at least partly to increased stress on the people at risk (Conger & Donnellan, 2007; Eaton & Muntaner, 1999; Monroe et al., 2009).

Children and adolescents from lower-SES families also tend to have more problems (see Conger & Donnellan, 2007, for a review). A number of studies have documented a strong relationship between the parents’ poverty and lower IQs in their children at least up to age 5. Persistent poverty has the

most adverse effects (Duncan et al., 1994; McLoyd, 1998), including greater mental distress as well as greater risk taking and affiliating with deviant peers (Sampson et al., 2002). Children from low-SES families who were assessed when they were in preschool showed more acting-out and aggressive behaviors over the next 4 years (Dodge et al., 1994), perhaps in part because their parents are more likely to have an authoritarian parenting style and to experience marital conflict (Conger & Donnellan, 2007). Nevertheless, many inner-city children from high-risk socioeconomic backgrounds do very well, especially those with higher IQs and those with adequate relationships at home, in school, and with peers (Felsman & Valliant, 1987; Long & Valliant, 1984; Masten & Coatsworth, 1995).

Other studies have examined the effects of unemployment per se on adults and children. Since the 1970s, there have been a number of severe economic recessions experienced worldwide, and significant rates of unemployment have accompanied each. Studies have repeatedly found unemployment—with its financial hardships, self-devaluation, and emotional distress—to be associated with emotional distress and enhanced vulnerability to psychopathology (e.g., Dooley et al., 2000; Grzywacz & Dooley, 2003). Recent evidence suggests that it is the financial difficulties often resulting from unemployment that lead to the elevated levels of distress and mental disorders (Thomas et al., 2007).

In particular, rates of depression, marital problems, and somatic (bodily) complaints increase during periods of unemployment but usually normalize when employment rates recover (Dew et al., 1991; Jones, 1992; Murphy & Athanasou, 1999). It is not simply that people who are mentally unstable tend to lose their jobs. These effects occur even when mental health status before unemployment is taken into account. Not surprisingly, the wives of unemployed men are also adversely affected, exhibiting higher levels of anxiety, depression, and hostility, which seem to be at least partially caused by the distress of the unemployed husband (Dew et al., 1987). Children too can be seriously affected. In the worst cases, unemployed fathers are much more likely to engage in child abuse (Cicchetti & Lynch, 1995; Dew et al., 1991).

Finally, economic crises since 1990 have centered not only on unemployment but also on the effects that corporate restructuring and downsizing have had on upper-middle-class people, many of whom find themselves having to look for jobs requiring lower skills and paying much lower incomes than they earned in the past. In other cases people are forced to work only part time and often do not make enough to live on. In such cases of underemployment (or inadequate employment), several large studies of people who were underemployed found that rates of depression were comparable or nearly comparable to those seen in unemployed individuals (Dooley & Prause, 2004; Dooley et al., 2000; Grzywacz & Dooley, 2003).

Prejudice and Discrimination in Race, Gender, and Ethnicity

Vast numbers of people in our society have been subjected to demoralizing stereotypes as well as to both overt and covert discrimination in areas such as employment, education, and housing. We have made progress in race relations since the 1960s, but the lingering effects of mistrust and discomfort among various ethnic and racial groups can be clearly observed in many places (e.g., Eagly, 2004; Mays, Cochran, & Barnes, 2007). For example, on most college campuses, many students socialize informally only with members of their own subcultures, despite the attempts of many well-meaning college administrators to break down the barriers. These tendencies needlessly limit students' educational experiences and probably contribute to continued misinformation about, and prejudice toward, others. There are also very large health disparities between African Americans and Caucasian Americans that may at least in part be a result of various forms of discrimination (Mays et al., 2007). Perceived discrimination seems to predict lower levels of well-being for women on dimensions relating to a sense of growth, autonomy, and self-acceptance (Ryff et al., 2003). Prejudice against minority groups may also explain why these groups sometimes show increased prevalence of certain mental disorders such as depression (Cohler et al., 1995; Kessler et al., 1994). One possible reason for this is that perceived discrimination may serve as a stressor that threatens self-esteem, which in turn increases psychological distress (e.g., Cassidy et al., 2004). A recent study of Arab and Muslim Americans two years after the bombing of the World Trade Center in New York found increased psychological distress, lower levels of happiness, and increased health problems in those who had experienced personal or familial prejudice, discrimination, or violence since the World Trade Center disaster (Padela & Heisler, 2010). Finally, another study showed that African American men who experience and perceive high levels of racial discrimination are more likely to report involvement in both street violence and intimate partner violence (Reed et al., 2010).

We have made progress in recognizing the demeaning and often disabling social roles our society has historically assigned to women. Again, though, much remains to be done. Many more women than men suffer from certain emotional disorders, most notably depression and anxiety disorders, which are two of the three most common categories of disorders (Blehar, 2006). This may be at least partly a consequence of the vulnerabilities (such as passivity and dependence) intrinsic to the traditional roles assigned to women and of the sexual discrimination that still occurs in the workplace (Eagly & Carli, 2007). There are two primary types of discrimination that occur in the workplace: *access discrimination*, wherein women are not hired because they are women, and *treatment discrimination*, wherein women who have a job are paid less and receive fewer opportunities

for promotion (Eagly & Carli, 2007; Eagly & Karau, 2002). Sexual harassment in the workplace is another type of stress that women may experience. In addition, the special stressors with which many modern women must cope (being full-time mothers, full-time homemakers, and full-time employees) as their traditional roles rapidly change have also been implicated in higher rates of depression, anxiety, and marital dissatisfaction in women than in the past. This is especially true if a woman works long hours (over 40 hours a week), has a higher income than her husband, and has children at home. However, it should also be noted that under at least some circumstances, working outside the home has also been shown to be a protective factor against depression and marital dissatisfaction (e.g., Brown & Harris, 1978; Helgeson, 2002).

Social Change and Uncertainty

The rate and pervasiveness of change today are different from anything our ancestors ever experienced. All aspects of our lives are affected—our education, our jobs, our families, our health, our leisure pursuits, our finances, and our beliefs and values. Constantly trying to keep up with the numerous adjustments demanded by these changes is a source of considerable stress. Simultaneously, we confront inevitable crises as the earth's consumable natural resources dwindle, as our environment becomes increasingly noxious with pollutants, and as global warming occurs. No longer are Americans confident that the future will be better than the past or that technology will solve all our problems. On the contrary, our attempts to cope with existing problems seem increasingly to create new problems that are as bad or worse. The resulting despair, demoralization, and sense of helplessness are well-established predisposing conditions for abnormal reactions to stressful events (Dohrenwend et al., 2000; Seligman, 1990, 1998). This sense of helplessness was also exacerbated for Americans by the September 11, 2001, terrorist attacks on the World Trade Center in New York and the Pentagon, with many people now living under increased worry and uncertainty over the possibility of terrorist attacks. Yet in other parts of the world, such as Israel and Palestine, people have lived with this uncertainty and worry over terrorist attacks for decades.



Today many major metropolitan areas in the United States have problems with gangs and urban violence.

Urban Stressors: Violence and Homelessness

Rapid urban growth is occurring worldwide—especially in less developed countries. Unfortunately, it is frequently unregulated and chaotic, and growing numbers of people are unemployed, homeless, or involved with illicit activities (Caracci, 2006). Perhaps not surprisingly, these areas are also plagued by a high prevalence of mental disorders. Moreover, vast numbers of people in the big cities of both developed and developing countries are direct or second-hand victims of *urban violence* (Caracci, 2006; Caracci & Mezzich, 2001). More than a decade ago it was estimated that at least 3.5 million people worldwide lose their lives to violence each year (World Health Organization, 1999), and there is no reason to think this number has declined. Domestic violence against women and children is especially widespread (e.g., Caracci, 2003). Such violence takes its toll on the victims not only in the areas of medical care and lost productivity but also in increased rates of anxiety, post-traumatic stress disorder, depression, and suicidality (e.g., Caracci, 2006; Caracci & Mezzich, 2001). One recent study of young African American mothers exposed to violence found not only increased levels of depression but also elevated levels of aggressive behavior and harsh discipline of their children (Lewin et al., 2010).

Another severe stress in urban areas worldwide is *homelessness*, which has been rapidly growing for the past few decades. Estimates are that approximately one-third of homeless people are affected by severe mental illness, but many people who are not mentally ill also become homeless because they are victims of violence or poverty (e.g., Caracci & Mezzich, 2001). Needless to say, the major stressors experienced by being homeless create mental distress including anxiety, depression, suicidality, and physical illness, even in those who started out healthy.

The Impact of the Sociocultural Viewpoint

With our increased understanding of sociocultural influences on mental health, what was previously an almost exclusive concern with individuals has broadened to include a concern with societal, communal, familial, and other group settings as factors in

mental disorders. Sociocultural research has led to programs designed to improve the social conditions that foster maladaptive behavior and mental disorder, and to community facilities for the early detection, treatment, and long-range prevention of mental disorder. In Chapter 17 we will examine some clinical facilities and other programs—both governmental and private—that have been established as a result of community efforts.

There is strong evidence of cultural influences on abnormal behavior, and this area of research may yet answer many questions about the origins and courses of behavior problems as well as their treatment (Cohler et al., 1995; Miranda et al., 2005; Sue, 1999). Nevertheless, in spite of increasing research showing that patients may do better when treated by therapists from their own ethnic group (or at least by someone familiar with the patient's culture), many professionals may fail to adopt an appropriate cultural perspective when dealing with mental illness. Instead, many simply assume that the treatments that have been shown to be useful with one culture will fare as well with other cultures, when in fact this is always an empirical question (e.g., Lam & Sue, 2001; Miranda et al., 2005; Sue, 1998). In a world of instant communication with people from any country, it is crucial for our sciences and professions to take a worldview. In fact, Kleinman and Good (1985) consider cultural factors so important to our understanding of depressive disorders that they urged the psychiatric community to incorporate another axis in the *DSM* diagnostic system to reflect cultural factors in psychopathology.

Although this has not yet happened, advocates are keeping up the pressure to do so (e.g., Mezzich et al., 1999), and the authors of *DSM-IV* (APA, 1994) and *DSM-IV-TR* (APA, 2000) did take two big steps toward acknowledging the importance of cultural factors in diagnosing patients. First, they included an appendix in which they suggested ways in which cultural factors should be considered when making psychiatric diagnoses and encouraged clinicians to include cultural considerations when evaluating patients. They recommended that the clinician attend to an individual's cultural identity, to possible cultural explanations for an individual's disorder, and to cultural factors that might affect that clinician's relationship with the individual. Second, they also provided a glossary of culture-bound syndromes that usually occur only in specific societies or cultural areas and are described as "localized, folk, diagnostic categories" (APA, 2000, p. 897). Some of these are described in Box 3.4 on page 94.

In Review

- What effects do low SES and unemployment have on adults and children?
- Describe how prejudice and discrimination, social change and uncertainty, and urban stress can have adverse effects on the development of abnormal behavior.
- In what ways did *DSM-IV* and *DSM-IV-TR* begin to acknowledge the importance of sociocultural factors in mental disorders?

Unresolved Issues

► Theoretical Viewpoints and the Causes of Abnormal Behavior

The viewpoints described in this chapter are theoretical constructions devised to orient psychologists in the study of abnormal behavior. As a set of hypothetical guidelines, each viewpoint emphasizes the importance and integrity of its own position to the exclusion of other explanations. Most psychodynamically oriented clinicians, for example, value those traditional writings and beliefs consistent with Freudian or later psychodynamic theories, and they minimize or ignore the teachings of opposing viewpoints. They usually adhere to prescribed practices of psychodynamic therapy and do not use other methods such as exposure therapy.

ADVANTAGES OF HAVING A THEORETICAL VIEWPOINT

Theoretical integrity and adherence to a systematic viewpoint have a key advantage: They ensure a consistent approach to one's practice or research efforts. Once mastered, the methodology can guide a practitioner or

researcher through the complex web of human problems. But such adherence to a theory has its disadvantages. By excluding other possible explanations, it can blind researchers to other factors that may be equally important. The fact is that none of the theories devised to date addresses the whole spectrum of abnormality—each is limited in some way in its focus.

Two general trends have occurred as a result. First, the original model or theory may be revised by expanding or modifying some elements of the system. The many examples of such modified interpretations include Adler's and Erikson's modifications of Freudian theory and the more recent cognitive-behavioral approach's modification of behavior therapy. But many of the early Freudian theorists did not accept the neo-Freudian additions, and some classical behavior therapists today still do not accept the revisions proposed by cognitive behaviorists. Therefore, the second trend has been for theoretical viewpoints to multiply and coexist—each with its own proponents—rather than being assimilated into previous views.

THE ECLECTIC APPROACH

Alternatively, aspects of two or more diverse approaches may be combined in a more general, eclectic approach. In practice, many psychologists have responded to the existence of many perspectives by adopting an eclectic stance; that is, they accept working ideas from several viewpoints and incorporate whichever they find useful. For example, a psychologist using an eclectic approach might accept causal explanations from psychodynamic theory while applying techniques of anxiety reduction from behavior therapy. Another psychologist might combine techniques from the cognitive-behavioral approach with those from the interpersonal approach. Purists in the field—those who advocate a single viewpoint—are skeptical about eclecticism, claiming that the eclectic approach tends to lack integrity and produces a “crazy quilt” of inconsistent practice with little rationale. This criticism may be true, but the approach certainly seems to work for many psychotherapists.

Typically, those who use an eclectic approach to treatment make no attempt to synthesize the theoretical perspectives. Although this approach can work in practical settings, it is not successful at a theoretical level because the underlying principles of many of the theoretical perspectives are incompatible as they now stand. Thus the eclectic approach

still falls short of the final goal, which is to tackle the theoretical clutter and develop a single, comprehensive, internally consistent viewpoint that accurately reflects what we know empirically about abnormal behavior.

THE BIOPSYCHOSOCIAL UNIFIED APPROACH

At present, the only attempt at such a unified perspective that has been developing is called the *biopsychosocial viewpoint*. This viewpoint reflects the conviction that most disorders are the result of many causal factors—biological, psychological, and sociocultural—interacting with one another. Moreover, for any given person, the particular combination of causal factors may be unique, or at least not widely shared by large numbers of people with the same disorder. For example, some children may become delinquents primarily because of having a heavy genetic loading for antisocial behavior, whereas others may become delinquent primarily because of environmental influences such as living in an area with a large number of gangs. Therefore, we can still hope to achieve a scientific understanding of many of the causes of abnormal behavior even if we cannot predict such behavior with exact certainty in each individual case and are often left with some “unexplained” influences.

Summary

- In considering the causes of abnormal behavior, it is important to distinguish among necessary, sufficient, and contributory causal factors, as well as between relatively distal causal factors and those that are more proximal.
- Usually the occurrence of abnormal or maladaptive behavior is considered to be the joint product of a person's predisposition or vulnerability (diathesis) to disorder and of certain stressors that challenge his or her coping resources.
- The concept of protective factors is important for understanding why some people with both a diathesis and a stressor may remain resilient and not develop a disorder.
- Both the distal (long-ago) and proximal (immediate) risk factors for mental disorder may involve biological, psychological, and sociocultural factors. These three classes of factors can interact with each other in complicated ways during the development of mental disorders.
- This chapter discusses biological, psychological, and sociocultural viewpoints, each of which tends to emphasize the importance of causal factors of a characteristic type. Ultimately we strive for an integrative biopsychosocial viewpoint.
- In examining biologically based vulnerabilities, we must consider abnormalities in neurochemical and hormonal systems, genetic vulnerabilities, temperament, and brain dysfunction and neural plasticity.
- Many different neurotransmitter and hormonal abnormalities contribute to the development of mental disorders because of the effects they exert on different relevant brain and body areas for different disorders.
- Genetic vulnerabilities can affect the development of mental disorders through multiple mechanisms, including ways in which the genotype may affect the phenotype (genotype–environment correlations) and in which they affect an individual's susceptibility to environmental influences (genotype–environment interactions).
- Methods for studying the extent of genetic versus environmental influences include the family history method, the twin method, and the adoption method. More recently, linkage analysis and association studies are beginning to contribute knowledge about the exact location of genes contributing to mental disorders.
- Temperament is strongly influenced by genetic factors and refers to a baby's characteristic ways of reacting to the environment and his or her ways of self-regulation. It forms the basis of our adult personality, which in turn influences our vulnerability to different disorders.

- Studies of neural plasticity have shown that genetic programs for brain development are not as fixed as once believed and that existing neural circuits can often be modified based on experience.
- In examining psychologically based vulnerabilities, there are three primary perspectives that have developed since the end of the nineteenth century: psychodynamic, behavioral, and cognitive-behavioral.
- The oldest psychological viewpoint on abnormal behavior is Freudian psychoanalytic theory. For many years this view was preoccupied with questions about libidinal (id) energies and their containment.
- More recently, four second-generation psychodynamic theories departed in significant ways from Freud's original ideas.
- Anna Freud's ego psychology focused on the important role of the ego in normal and abnormal behavior, with special attention focused on ego-defense reactions.
- Object-relations theorists focused on the role of the quality of very early (pre-Oedipal) mother–infant relationships for normal development.
- The originators of the interpersonal perspective took exception to the Freudian emphasis on the internal determinants of motivation and behavior and instead emphasized the social and cultural forces that shape behavior.
- Attachment theory, which has roots in both the interpersonal and object-relations perspectives, emphasizes the importance of early experiences with attachment relationships for laying the foundation for later child, adolescent, and adult development.
- Psychoanalysis and closely related therapeutic approaches are termed *psychodynamic* in recognition of their attention to inner, often unconscious forces.
- The behavioral perspective focuses on the role of learning in human behavior and attributes maladaptive behavior either to a failure to learn appropriate behaviors or to the learning of maladaptive behaviors.
- The primary forms of learning studied are classical conditioning and instrumental (operant) learning. The effects of each are modified by principles of generalization and discrimination. Observational learning is also important.
- Adherents of the behavioral viewpoint attempt to alter maladaptive behavior by extinguishing it or providing training in new, more adaptive behaviors.
- The cognitive-behavioral viewpoint attempts to incorporate the complexities of human cognition, and how it can become distorted, into an understanding of the causes of psychopathology.
- People's schemas and self-schemas play a central role in the way they process information, in how they attribute outcomes to causes, and in their values. The efficiency, accuracy, and coherence of a person's schemas and self-schemas and attributions appear to provide an important protection against breakdown.
- Treatments developed from the cognitive-behavioral perspective attempt to alter maladaptive thinking and improve a person's abilities to solve problems and to achieve goals.
- Sources of psychologically determined vulnerability include early social deprivation or severe emotional trauma, inadequate parenting styles, marital discord and divorce, and maladaptive peer relationships.
- The sociocultural viewpoint is concerned with the contribution of sociocultural variables to mental disorder.
- Although many serious mental disorders are fairly universal, the form that some disorders take and their prevalence vary widely among different cultures.
- Low socioeconomic status and unemployment; being subjected to prejudice and discrimination in race, gender, and ethnicity; experiencing social change and uncertainty; and urban violence and homelessness are all associated with greater risk for various disorders.
- The biopsychosocial approach is promising, but in many ways it is merely a descriptive acknowledgment of the complex interactions among biological, psychological, and sociocultural risk factors rather than a clearly articulated theory of how they interact.

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