CHAPTER 8

Drives, Needs, and Awareness

By annihilating desires you annihilate the mind. Every man without passions has within him no principle of action, nor motive to act.

—Claude Adrien Helvetius, 1715–1771

We must judge a man’s motives from his overt acts.

—Lord Kenyon, 1800

In the bow-and-arrow analogy of motivation presented in Chapter 1, a drawn bow is analogous to a motive and the target to an incentive. The focus of this chapter is on motives—that is, the internal source of motivation. Keep that idea in mind as you consider the following questions, which introduce the contents of this chapter:

1. What are the differences among physiological needs, drives, and psychological needs?
2. What is the relationship between psychological needs and incentives?
3. Can needs be categorized and ranked for their potential to motivate behavior?
4. What are some of the major psychological needs that motivate behavior?
5. Is awareness of a need or incentive necessary before it can motivate behavior?

Drives and Needs as Internal Sources of Motivation

As a kid, I always thought I was behind and I needed that extra hour to catch up. Jim Jones [coach] once told me, “No matter how many shots you take, somewhere there’s a kid out there taking one more. If you dribble a million times a day, someone is dribbling a million and one.” Whenever I’d get ready to call it a day, I’d think, “No. Somebody else is still practicing. Somebody—somewhere—is playing that extra ten or fifteen minutes and he’s going to beat me someday.” I’d practice some more and then I’d think, “Maybe that guy is practicing his free throws now.” So I’d go to the line and practice my free throws and that would take another hour. I don’t know if I practiced more than anybody, but I sure practiced enough. I still wonder if somebody—somewhere—was practicing more than me. (Bird, 1990, pp. 283–284)
This is how Larry Bird (1990) in his book *Drive* describes his practice habits that led him to become a great all-around basketball player. *Drive* is an apt title, because it refers to that internal push, urge, or force that moves a person into action.

The purpose of this section is to contrast internal with external sources of motivation, with a major emphasis on internal sources such as drives and physiological and psychological needs. The section will conclude with a description of Maslow’s hierarchy of needs and an evaluation of that hierarchy.

**Interaction between Internal and External Sources of Motivation**

As emphasized in the bow-and-arrow analogy, motivation comes from sources that exist internal and external to the person. Internal motivation refers to drives and physiological and psychological needs, while external motivation concerns incentives and goals. The combined effects of internal and external sources must exceed some threshold for behavior to occur, as described in Table 8.1. When above the threshold, behavior occurs; when below, it does not (Kimble, 1990). Behavior can result from little external motivation, provided that there is a lot of internal motivation. For example, the food may not be very tasty but a hungry person will eat it. Or behavior can occur with little internal motivation, provided there is a lot of external motivation. For example, even though a person may not be very hungry, he will still eat a bowl of delicious ice cream. Internal motivation is the disposition to perform a particular action. It can be created through depriving an organism of an incentive such as food, water, or visual stimulation. In other instances, the disposition to respond is dormant, and a situational stimulus will arouse it. For instance, a psychological need such as the need for power could be activated by being a member of the police force, which allows for the legitimate exercise of power.

**Physiological Needs and Psychological Drives**

Physiological need and the psychological drive it provides are two types of internal motivation that dispose an individual to action.

**TABLE 8.1** Internal and External Motivation and Likelihood of Behavior

<table>
<thead>
<tr>
<th>Strength of External Incentive</th>
<th>Strength of Internal Motive</th>
<th>Likelihood of Behavior</th>
</tr>
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<tbody>
<tr>
<td>Weak</td>
<td>Weak</td>
<td>Behavior not likely</td>
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<tr>
<td>Strong</td>
<td>Strong</td>
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<tr>
<td>Strong</td>
<td>Strong</td>
<td>Behavior very likely</td>
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*Note:* The combined effects of internal and external sources of motivation must be strong enough to exceed the threshold in order for behavior to occur. For example, eating depends on the palatability of food (external) and the degree of hunger (internal).
Need as the Physiological Basis for Motivation. Homeostasis (see Chapter 5) describes the maintenance of constant conditions within the body. Motivation theorists who emphasize internal events, such as Clark Hull (1943, 1951, 1952) and Judson Brown (1961), accepted the idea that a set of ideal internal conditions was necessary for survival. Deviation from these conditions defines physiological need and is responsible for pushing an organism into action. The need for food can correspond to a low amount of glucose in the blood. The need for putting on a sweater corresponds to a drop in body temperature below 98.6°F. The need for iron exists when the amount in the body is so low so that the blood’s capacity to carry oxygen is reduced. This condition results in feeling tired and weak and being unable to perform manual work without extensive feelings of fatigue (Sizer & Whitney, 1977). Thus, a physiological need implies that it is possible to specify a deficit in a physiological state that is detrimental to a person’s physical well-being. Another category of need refers to sensory stimulation that exceeds a certain intensity thereby causing pain or harm. Excessive sensory stimulation occurs when french fries are too hot, the volume on the stereo is too loud, or the light in one’s eyes is too bright. Sensations of pain or discomfort are warnings of possible tissue damage and prompt the need to escape and avoid such stimulation.

Hull’s Drive Theory. Related to physiological need is psychological drive, which is a motivational construct that results when an animal is deprived of a needed substance (Hull, 1943, 1951, 1952). Drive is the persistent internal stimulus or pushing action of a physiological need. Drive has several properties or characteristics (Hull, 1943, 1951, 1952). First, it energizes behavior by intensifying all responses in a particular situation. The more intense the drive, the more intense the behavior (Hull, 1943, 1952). This point is illustrated in an experiment by Hillman and associates (1953), who deprived two groups of rats of water for either 2 or 22 hours and then measured how long it took them to run a 10-unit T maze. After 10 trials, one-half of each group remained at the original deprivation level, while the other half switched to the other deprivation level. For example, group 2-2 and group 22-22 remained at 2 and 22 hours of water deprivation, respectively, throughout the experiment. Group 2-22 switched from 2 to 22 hours of water deprivation after the first 10 trials, while group 22-2 switched from 22 to 2 hours of water deprivation. According to Hull’s theory, 22 hours of water deprivation corresponds to high thirst drive, while 2 hours of water deprivation corresponds to low drive. High drive should multiply or intensify instrumental behavior much more than low drive. As shown in Figure 8.1, the rats took less time to run the maze under high drive than under low drive. The interpretation based on drive theory is that high drive is a more intense source of internal motivation than low drive.

A second characteristic is that each drive has its own unique internal sensations that serve as internal stimuli for guiding behavior. For example, hunger and thirst feel different and provide the basis for knowing when to eat and when to drink. Leeper (1935) used thirst and hunger drives as cues for rats to choose the correct goal box when water or food deprived. In his experimental apparatus, rats had to make a choice between an alley leading to food and another alley leading to water. The rats learned to choose the alley leading to food on food-deprived days and to choose the alley leading to water on water-deprived days. Thus, hunger drive stimuli became associated with the location of food, and thirst
drive stimuli became associated with the location of water. A third characteristic of drive is that it motivates the individual to behave in order to reduce its intensity. Hull considered drive to be unpleasant. In fact, he felt that “Bentham’s concept of pain is equated substantially to our own [Hull’s] concept of need” (Hull, 1952, p. 341). Recall from Chapter 2 that Bentham (1789) is the utilitarian philosopher who claimed that people are under the governance of two masters: pain and pleasure. Humans are motivated to reduce drive—that is, to get rid of any painful or unpleasant feeling. Since drive is characterized as being painful, then the behavior that reduces it will be more likely to occur. Eating reduces an unpleasant hunger drive, and drinking reduces an unpleasant thirst drive. The importance of Hull’s drive concept is that drive motivates the voluntary behavior that restores homeostasis. Drive motivates an individual to reduce feelings of hunger, thirst, or internal temperature deviation, thus maximizing the conditions necessary for well-being and life.

**Drives Unrelated to Needs.** The drive concept was so appealing that it was also employed in behavioral areas where underlying physiological need was not apparent. Although drive corresponds with physiological need, there are stimuli that seemingly satisfy drives but are unrelated to needs (Bolles, 1975). An example is the motivating effects of saccharin, a nonnutritive substance that is very sweet tasting to both rats and humans. Nonnutritive means that saccharin contains no nutrients necessary for the maintenance of the body and has no calories. Sheffield and Roby (1950) used saccharin as a reinforcer for rats learning a T maze. Later, Sheffield and associates (1954) found that the speed at which rats ran down a runway increased with the sweetness of the saccharin solution that was used as an incentive. The

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**FIGURE 8.1 Intensity of Drive and Running Behavior.** Effects of deprivation time on mean log time to run a 10-unit T maze for water-deprived rats. Note the increase in running time immediately after the 22-2 hour shift and the decrease in running time after the 2-22 hour shift.

results suggest that there may be physiological needs of which psychologists are unaware or that incentives can motivate behavior independent of any physiological need.

Other stimuli can also motivate behavior seemingly independent of physiological needs. For instance, Butler (1957) placed monkeys in a chamber and taught them to press a lever to uncover a window, which provided the opportunity to see other monkeys on the outside. Depriving the monkeys of this visual stimulation motivated them to press a lever so that the window would be uncovered. Longer periods of deprivation produced faster lever pressing. Thus, being deprived of visual stimulation acts like a drive, which the animal presumably attempts to reduce by responding for visual stimulation (Fox, 1962).

Instead of relying on physiological needs, psychologists have postulated different psychological drives without reference to the body in order to explain these behaviors. For instance, the curiosity drive develops when an organism is exposed to novel stimuli that arouse interest (Berlyne, 1950), especially after long periods of sensory deprivation. The boredom drive refers to the effects of unvarying stimulus conditions (Fowler, 1967). New stimuli are sought out to reduce the boredom drive, as when, for example, a deprived monkey presses the lever to receive visual stimulation. However, a question arose about calling these responses “drives,” since curiosity or boredom did not appear to be related to any obvious physiological needs and no corresponding brain deficit was specified. Further complicating the picture, deprivation was not always necessary to trigger these “drives.” Butler (1958) showed that even without visual deprivation, monkeys spent long periods pushing the lever just for the opportunity to look at other monkeys.

It is now apparent, however, that visual deprivation does produce a physiological need in the brain. Just as muscles must be used to prevent their weakening, it appears that the brain also must be used to maintain its functions. When a part of the brain is not used, as occurs in visual deprivation, its proper development is retarded. For example, rats reared in an impoverished environment were compared with those reared in an enriched environment. An impoverished environment meant being housed in isolation in bare cages, while an enriched environment meant living in group cages containing a variety of toys that could be manipulated and explored. Rats reared in the enriched environment developed larger brain cortexes with thicker blood supplies and more acetylcholine, which is a neurotransmitter that plays a role in learning (Rosenzweig, 1984). Rats in the enriched environments also had a greater number of synapses formed with other neurons in the cortex (Turner & Greenough, 1985). Visual deprivation, as studied in kittens and monkeys, results in poor development and function of corresponding brain areas (Kalil, 1989). Thus, a case can be made that when the brain does not receive a critical amount of stimulation, a physiological need develops, which corresponds to a curiosity or boredom drive.

**Characteristics of Psychological Needs**

Like psychological drives, psychological needs are also a source of internal motivation. Do they have an underlying physiology? Or are psychological needs a way of categorizing a preferred set of incentives?

**Activating Psychological Needs.** Physiological needs are created through deprivation of the appropriate incentive and have a known underlying physiology. Psychological
needs, on the other hand, are preexisting but remain dormant until aroused by the appropriate stimulus situation. When aroused, the psychological need serves as a motive that reminds a person of the discrepancy between his current situation and a final desired state (McClelland et al., 1953). Redintegration describes the process by which a need is activated or restored (Murray, 1938). For example, a safety need is aroused or redintegrated when an unlighted parking lot late at night is discrepant from a person’s ideal level of lighting. The aroused safety need produces a hurried pace to reach one’s car and drive away. The need to achieve is activated or redintegrated by the sight of a textbook, reminding a student of the discrepancy between his current knowledge and the amount necessary to succeed on an exam. The resulting need state or achievement motive leads to studying a textbook to reduce the discrepancy. Stimuli activate, redintegrate, or restore psychological needs because they have been associated with the arousal characteristics of needs in the past (McClelland et al., 1953). To illustrate, the presence of people arouses the need for affiliation, and textbooks arouse the need to achieve, because in the past these stimuli have been associated with feelings of affiliation and achievement.

**Psychological Needs as Incentive Categories.** Although psychological needs are assumed to derive from physiological needs (Murray, 1938), demonstrating the underlying physiology has not been very successful. If it is not possible to identify a corresponding physiological event, then it may be better to conceptualize a psychological need as an incentive category. As Atkinson (1957/1983) suggests, needs or motives “are really names of classes of incentives which produce essentially the same kind of experience of satisfaction” (p. 103). **Need as incentive category** means that a person values certain incentives, and need is a way of categorizing or labeling that group of incentives. A psychological need is the internal motive that moves a person toward one category of incentive and away from another category. For instance, the need for affiliation involves valuing incentives that include loyal friends, belonging to organizations, and entering a helping profession. The need for safety means valuing incentives that include traffic laws and patrolled neighborhoods. The distinction between psychological needs as internal sources of motivation versus external incentives is not always clear. Physiological needs definitely exist, and people are motivated to satisfy them. In the realm of psychological needs, however, the existence of a physiological counterpart is much more speculative. Thus, considering needs as a class of incentives is an alternative viewpoint.

**Using Needs to Explain Behavior.** A final consideration involves demonstrating the relationship between need intensity and need-satisfying behavior.

Do people differ in their intensities of psychological needs? How is a person’s level of need intensity measured? These questions cannot be answered by measuring behavior that is instrumental in satisfying the need, since this behavior could have resulted from other factors. For example, if a person’s residence hall room is neat and tidy, does that mean she has a high need for order (Murray, 1938)? Or could it be she is just expecting company or likes being able to find things easily? If the concept of need is used to explain behavior, then two steps are necessary: measuring need intensity and showing its relationship with behavior satisfying the need. First, psychologists measure need level with a valid scale or questionnaire. Just as the number on the bathroom scale reflects the amount a person
weighs, the score on a need scale reflects the intensity of a need. Second, need scale scores must correlate with behavior instrumental in satisfying the need. Thus, when need is high, there must be a greater amount of need-satisfying behavior than when need is low. For example, the greater a person’s measured need for affiliation, the more friends he visits and telephones (Lansing & Heyns, 1959). In the next few sections, we will examine how various psychological needs are measured and the relationship between specific needs and behavior.

**Maslow’s Theory of Needs**

Are all needs equally important or are some more potent than others? One view is that there are categories of needs that differ in their potency to motivate behavior.

*Need Hierarchy.* Abraham Maslow (1970) constructed a **hierarchy of needs**: physiological, safety, belongingness, esteem, and self-actualization. These needs are organized into five tiers whereby the lower tier of needs is more likely to be acted on first, followed by needs at higher tiers (see Figure 8.2). Notice that in ascending the hierarchy, needs have been satisfied less and less. Physiological needs are based on homeostasis and include food, water, and a generally balanced internal state. Maslow also includes sexual, sleep, and activity needs in this category. Once physiological needs are addressed, then safety needs begin to emerge. Safety needs refer to the absence of fear, anxiety, and chaos and the presence of security, stability, dependency, and law and order. With the satisfaction of safety needs, next on the hierarchy are the belonging

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![Figure 8.2 Maslow’s Hierarchy of Needs](image-url)

**FIGURE 8.2** **Maslow’s Hierarchy of Needs.** Physiological needs are most readily satisfied, and self-actualization needs are least easily satisfied. A person works to satisfy these needs in a hierarchical fashion, with the most time spent on the most potent need, which is lowest on the hierarchy, then working up the hierarchy to the least potent need.
needs. In order to satisfy these needs, humans seek to establish social relationships with friends, lovers, and family members. Without these relationships the individual feels rejected and lonely. Next on the hierarchy are esteem needs, which concern the respect of self and the respect of others. These needs involve achievement, adequacy, mastery, and competence plus the prestige, fame, and glory derived from the recognition of others. Finally, at the top of the hierarchy is the most elusive of all needs, the need for self-actualization. This refers to the need to fulfill and utilize one’s abilities and talents to the fullest in whatever area one chooses.

The Need Satisfaction Inventory (Lester, 1990) in Table 8.2 provides a possible means for testing whether needs are indeed arranged in this hierarchy. The inventory measures the degree to which a person has satisfied each need category. The inventory has face validity, which means that its items appear to measure what they are supposed to (i.e., “on the face of it”). Thus, question 36, regarding the amount of exercise, would help determine the satisfaction of your physiological needs, while question 10, regarding whether life has meaning, is valid for determining satisfaction of your self-actualization needs. If Maslow’s (1970) theory is correct, then Lester’s inventory should show a decreasing amount of need satisfaction going up the hierarchy. In other words, a person’s physiological and safety needs should be satisfied more than her esteem and self-actualization needs.

### TABLE 8.2 Need Satisfaction Inventory

For the 50 statements listed below, use the scale to indicate the extent you agree with each statement. Read each statement carefully and answer with your first impulse.

-3 = Strongly disagree  
-2 = Disagree  
-1 = Slightly disagree  
0 = Neither disagree or agree  
+1 = Slightly agree  
+2 = Agree  
+3 = Strongly agree

#### Physiological Needs
1. I never have trouble getting to sleep at night.
6. I have an income that is adequate to satisfy my needs.
11. I get an adequate amount of rest.
16. I have a satisfactory sex life.
21. In general, my health is good.
26. In winter, I always feel too cold. (R)
31. I eat enough to satisfy my physiological needs.
36. I get an adequate amount of exercise.
41. There’s usually some part of my body that is giving me trouble. (R)
46. The summers are too hot for me ever to feel comfortable. (R)

#### Safety and Security
2. I think the world is a pretty safe place these days.
7. I would not walk alone in my neighborhood at night. (R)
12. My anxiety level is high. (R)
17. I feel secure about the amount of money I have and earn.
22. I feel safe and secure.
27. I am afraid to stay in my house/apartment alone at night. (R)
32. My life is orderly and well-defined.
37. I can depend on others to help me when I am in need.
42. I am often worried about my physical health. (R)
47. My life has a nice routine to it.

**Belonging**
3. I know my family will support me and be on my side no matter what.
8. I am involved in a significant love relationship with another.
13. I feel rootless. (R)
18. I have a group of friends with whom I do things.
23. I feel somewhat socially isolated. (R)
28. I have a few intimate friends on whom I can rely.
33. I feel close to my relatives.
38. I am interested in my ethnic roots and feel a kinship with others in my ethnic group.
43. I am religious and consider myself to be a member of a religious group.
48. I am able to confide my innermost thoughts and feelings to at least one close and intimate friend.

**Esteem**
4. I feel dissatisfied with myself much of the time. (R)
9. I feel respected by my peers.
14. I seldom have fears that my actions will cause my friends to have a low opinion of me.
19. I can stand on my own two feet.
24. I feel confident in my present field of endeavor.
29. I would describe myself as a self-confident person.
34. I have earned the respect of others.
39. I do not spend much time worrying about what people think of me.
44. I feel that I am a worthy person.
49. In groups, I usually feel that my opinions are inferior to those of other people. (R)

**Self-Actualization**
5. I have a good idea of what I want to do with my life.
10. My life has meaning.
15. I am uncertain about my goals in life. (R)
20. I feel I am living up to my potential.
25. I am seeking maturity.
30. I find my work challenging.
35. I know what my capabilities are and what I cannot do.
40. I feel that I am doing the best I am capable of.
45. I feel that I am growing as a person.
50. My educational achievements are appropriate given my ability.

*Note:* To score, first reverse your answer for the items followed by an R. For example, change a $-2$ to a $+2$ and change a $+1$ to a $-1$. Sum your score in each category. A higher score means a greater amount of need satisfaction for that category.

Research on Need Hierarchy. Maslow’s need theory has not prompted a great deal of research. Any findings have been mixed regarding support for the theory. Trexler and Schuh (1971) reasoned that if an individual’s living conditions became such that higher-order needs could not be fulfilled, then the individual would gravitate toward fulfilling lower-order needs. This change, they predicted, would happen in individuals undergoing rigorous military training, which involves a deprivation of basic physical comforts. They measured the five need categories of U.S. Naval and Marine Corps flight students who underwent nine weeks of rigorous stressful training in a strict military environment. As a nondeprived control group, the need levels of university students were measured over the same period of time. Initially, there was no difference between the military men and the students in terms of level of need satisfaction. However, as military training progressed over the nine weeks, more and more recruits gravitated toward trying to satisfy lower-order needs, while students’ level of need satisfaction remained unchanged. These results support Maslow’s theory that deprivation of lower-order needs makes these needs more important.

Another testable hypothesis is that as lower-order needs become satisfied, their potency decreases, while that of the next need in the hierarchy increases. For example, as a person’s safety need becomes satisfied, its potency decreases while that of his belonging need increases. Or if a person’s esteem need becomes satisfied, then it should become less important while self-actualization needs should become more important. Hall and Nougaim (1968) measured the degree of need satisfaction over a period of five years in a group of management trainees from a large company. They found that as a particular need became satisfied one year, the next need in the hierarchy did not become more important as predicted. Instead, the strength of need satisfaction in one given year was positively related to its own level of satisfaction the previous year. Further, Maslow’s theory cannot account for the behavior of the IRA hunger strikers described in Chapter 1. They attempted to satisfy their goal of political prisoner status, which is perhaps an esteem need or self-actualization need, but forfeited any attempt to satisfy their most basic physiological need for food.

Based on a review of research, Soper and associates (1995) concluded that for the most part, there is little support for Maslow’s theory. Yet in spite of this, they note that Maslow’s hierarchy of needs is frequently employed in textbooks on marketing and is used to explain various phenomena in that area. Perhaps the need hierarchy is one of those theoretical ideas that is so appealing and obvious that people do not consider empirical support necessary. A contribution of Maslow’s theory, however, is that it provides a way to categorize needs and the incentives that would satisfy them.

Section Recap

The body requires an ideal set of internal conditions for its well-being, and any deviation from these conditions produces a physiological need. Whenever an organism is deprived of a needed substance, a psychological drive results. This hypothetical construct is felt as unpleasant and thus motivates and guides the organism to search for the appropriate incentive that reduces the drive. Some drives appear divorced from physiological needs. Curiosity drive sensitizes an organism to explore novel stimuli, especially after periods of
sensory deprivation. *Boredom drive* refers to the effect that constant stimulation has on the motive to seek out new stimuli. These drives were postulated without reference to any physiological needs. However, later research has shown that visual stimulation may be necessary for adequate brain functioning, thus lending some support to these drives. A *psychological need* is an internal motive to achieve a desired end state. It lies dormant until activated by the appropriate stimulus situation through a process known as *redintegration*. Another way of describing psychological need is to consider the need as *incentive category*. This proposal holds that a need is the label given to a class of incentives that all provide the same kind of satisfaction. There are two requirements for using psychological needs to explain behavior. One is to measure the intensity of a psychological need; the second is to show that this intensity correlates with the magnitude of need-satisfying behavior. A very influential need theory is Abraham Maslow’s *hierarchy of needs*, which includes physiological, safety, belongingness, self-esteem, and self-actualization needs. Needs must be satisfied from the lower tier on up. For example, physiological and safety needs must be satisfied to some extent before a person can begin satisfying needs higher up in the hierarchy.

Some Important Psychological Needs

As described in Chapter 2, from Georges Le Roy in 1764 to Henry Murray in 1938, students of human motivation have speculated on the existence of a wide variety of needs. Of these needs, seven have become important for the motivation of behavior: *achievement, power, cognition, esteem, relatedness, autonomy*, and *competence*. The purpose of this section is to describe these needs in more detail.

Achievement Motivation

The motive or need to achieve has been a theme in popular literature. In a long series of books described as “rags to riches stories,” the 19th-century author Horatio Alger, Jr., implied that the road to success is by way of persistence and hard work. As shown in this passage from his most famous juvenile book, *Ragged Dick*:

“In order to succeed well, you must manage to get as good an education as you can. Until you do, you cannot get a position in an office or counting-room [bank], even to run errands.”

“That’s so,” said Dick soberly. “I never thought how awful ignorant I was until now.”

“That can be remedied with perseverance,” said Frank. “A year will do a great deal for you.”

“I’ll go to work and see what I can do,” said Dick energetically. (Alger, 1868, p. 89)

The main theme of all of Alger’s stories is the motive to achieve or need to achieve (Tebel, 1963). Beginning with Murray (1938), the need to achieve has also been a popular theme with researchers and has probably received more attention from psychologists than any other psychological need.
The need to achieve or motive to achieve success (Ms) is a disposition to engage in task-oriented behavior or achievement behavior. It is characterized by doing things better than before or surpassing a high external or internal standard of excellence. The standards can be defined on the job, in sports, or in school and are based on the performance of others or on the person’s own standards. The achievement motive is assumed to be dormant until activated by an associated achievement cue (McClelland et al., 1953), such as the sight of textbooks, instruments, or tools.

Measuring Need to Achieve. If the need to achieve is dormant, then the test used to measure it must also activate it. This is one of the reasons different projective tests have been employed to measure the need to achieve (Fineman, 1977). In a projective test a person verbally responds to an unstructured stimulus, such as an inkblot, in a manner that is presumably consistent with her activated motives. McClelland and associates (1953) adapted a projective test procedure pioneered by Murray (1938) known as the Thematic Apperception Test (TAT). The TAT consists of a series of pictures of people in ambiguous but potential achievement settings. The respondent is instructed to tell a story, which the picture may hint at but does not contain. Figure 8.3 resembles the TAT picture of two women in lab coats (McClelland, 1975, p. 387). To a series of such pictures, participants are asked the following questions:

1. “What is happening? Who are the persons?”
2. “What has led up to this situation? That is, what has happened in the past?”
3. “What is being thought? What is wanted? By whom?”
4. “What will happen? What will be done?” (McClelland et al., 1953, p. 98)

What determines whether a person tells a story with an achievement theme? The analyses provided in Table 8.1 provides the basis for the answer. Whether a story is indicative of achievement motivation depends on the strength of a person’s dormant achievement motive and the instigating force of the TAT card (Tuerlinckx et al., 2002). If either motive strength or TAT card force increases, then the likelihood of an achievement story increases. An individual with a strong need to achieve, however, is more likely to respond with achievement imagery regardless of the force of the TAT card. Answers to the TAT-relevant questions are scored for achievement motivation based on references to competition with a standard of excellence, a unique accomplishment, or long-term involvement. For example, a protocol might state that the two women in lab coats have been working for many years (long-term involvement) developing a vaccine that has no negative side effects (high standard of excellence), which no one has ever accomplished before (unique accomplishment).

The TAT as a measure of the achievement motive has not escaped criticism. Entwisle (1972) challenged the reliability of the TAT pictures used to measure the need to achieve. The TAT has low reliability, which means that each picture is not measuring the need to achieve consistently. However, this is to be expected, since not every picture is equally forceful in evoking achievement imagery (Tuerlinckx et al., 2002). Also, test-retest reliability of the pictures is low, which means that from one week to the next, for example, individuals’ need-to-achieve scores seem to fluctuate. This is an important point
because the need to achieve is assumed to be a stable motive. Additional criticism comes from Klinger (1966), who questioned the validity of TAT measures. He found many studies showing no relationship between TAT measures and achievement-relevant behavior such as school grades. However, more recent analyses by Spangler (1992) indicate that a large number of studies found a positive correlation between TAT measures of achievement motivation and achievement behavior. Furthermore, many psychologists researching the area maintain that the TAT is a valid measure not only of the need to achieve but also of the need for affiliation and the need for power (Smith, 1992).

**Need to Achieve and Need to Avoid Failure.** Do all individuals concentrate on achievement, or do some simply want to avoid failure? In addition to the motive to achieve success (Ms), people also vary in their motivation to avoid failure. The **motive to avoid failure** is the opposite of the need to achieve and inhibits a person from attempting achievement tasks (Atkinson, 1957/1983). Motive to avoid failure (Maf) is characterized by anxiety and fear about failing a task. Maf is usually measured by the Test Anxiety Questionnaire (Mandler & Sarason, 1952) or the Fear of Failure Scale (Herman, 1990). The Test Anxiety Questionnaire is a self-report measure of the extent that a testing situation evokes anxiety in the individual. For example, it asks how much you perspire and worry prior to taking an exam. The Fear of Failure Scale measures to what extent you try...
to avoid a task because of a worry of failing or making mistakes. The strength of Ms and Maf combine to determine the tendency to attempt an achievement task (Atkinson, 1974). On the one hand, Ms motivates an individual to engage in the task, while on the other, Maf motivates the individual to avoid tackling the task. Individuals in whom Ms is greater than Maf (Ms > Maf) are more likely to pursue achievement tasks, while individuals in whom Maf is greater than Ms (Maf > Ms) are more likely to avoid them (Atkinson, 1958/1983). Thus, individuals are attracted to and repelled from achieving a task to a degree consistent with the strength of these two motives. For example, in selecting a major or a final career goal, students are driven toward their choices by their Ms but at the same time are inhibited from pursuing those choices by their Maf. For instance, if a student has a career goal to become a marriage and family counselor, then her Ms pushes her toward that goal while at the same time her Maf pushes her away from it.

**Achievement Motivation Theory.** The theory of achievement motivation involves more than the internal motives of Ms and Maf. In addition, whether a person pursues an achievement task also depends on estimates of the probability of successfully achieving the task and on the incentive value of that success. In other words: “What are the chances I can do it, and what is the value of doing it?” The probability and incentive value of success can be portrayed as opposite sides of the same coin. Atkinson (1957/1983, 1974) assumed that the incentive value of a task is inversely related to how difficult it is to achieve. The greater the difficulty of succeeding at a task, the higher its incentive value. The difficulty of a task is based on a person’s subjective estimate of the probability of successfully achieving it. To illustrate, imagine a course that has a reputation of being very easy; almost everyone earns an A. A student might rate the probability of earning an A to be very high, and so the incentive value of earning an A is quite low. Imagine a different course that has the reputation of being tough; very few students earn an A. A student might rate the subjective probability of earning an A to be very low, and so the incentive value of earning an A is quite high. Thus, in general as the subjective probability of success (Ps) decreases, the incentive value of success (Is) increases according to the formula:

\[
Is = 1 - Ps
\]

The incentive value of failure, however, is just the opposite. Imagine that you do not earn an A in a course where just about everyone else does. The negative incentive to avoid this outcome is quite high. On the other hand, it is not so bad if a student did not earn an A in the course where most other students also did not earn an A. The negative incentive to avoid this outcome is not so high. Thus, as the subjective probability of failure (Pf) increases, the negative incentive value failure (−If) decreases according to the formula:

\[
−If = Pf
\]

(The minus [−] sign means that failure [f] has negative incentive value.)

The overall tendency to attempt an achievement task depends on the tendency to succeed (Ts) plus the tendency to avoid failure (Taf). Atkinson (1957/1983, 1974) assumed that one set of factors determined Ts and another set determined Taf. The final
resultant tendency, however, was equal to $Ts + Taf$. All terms pertinent to pursuing success or avoiding failure were combined in a formula as follows:

$$\text{Overall tendency to approach an achievement task} = Ts + Taf = (Ms \times Ps \times Is) + (Maf \times Pf \times -If)$$

Where

- $Ts$ = Tendency to achieve success
- $Ms$ = Motive to achieve success
- $Ps$ = Subjective probability that attempting a task will lead to success
- $Is$ = Incentive value of success at the task, which equals $(1 - Ps)$
- $Taf$ = Tendency to avoid failing a task
- $Maf$ = Motive to avoid failure
- $Pf$ = Subjective probability that attempt will lead to failure
- $-If$ = Incentive value of failure, which equals $Pf$

By replacing the terms with hypothetical values, the effects of $Ts$ and $Taf$ can be shown graphically in Figure 8.4. The $Ts$ (tendency to achieve success) curve is an inverted-U function of task difficulty and the positive incentive value of achieving the task. The $Taf$ (tendency to avoid failure) curve is a U-shaped function of task difficulty and the negative incentive value of failing the task. In Figure 8.4, when $Ps = 0.50$, then $Is = 0.50$, and at this point the

FIGURE 8.4 Achievement Motivation Theory. The tendency to approach a task is an inverted-U function of the probability of success at an achievement task. The tendency to avoid an achievement task, on the other hand, is the U-function of the probability of success. Both tendencies sum within an individual to produce the final tendency for approaching an achievement task.

tendency to approach the task is strongest. The horizontal axis in Figure 8.4 can also represent Pf. When Pf = 0.50, then \(-If = 0.50\), and at this point the tendency to avoid the task is strongest (Atkinson, 1957/1983). Also, when Ps and Is are equal at 0.50, the tendency to approach is greatest for individuals who have a stronger motive for success (Ms > Maf). However, here the tendency to avoid the task is also greatest for individuals who have a stronger motive to avoid failure (Maf > Ms). The Ms > Maf individuals are more attracted toward achieving a task at intermediate probabilities of success, while Maf > Ms individuals are more attracted when the probabilities of success at a task are either low or high.

Research on Achievement Motivation

Differences in Achievement Preferences. The outcomes of various research investigations show that tasks having a medium probability of success (around \(p = 0.50\)) are preferred by individuals for whom Ms > Maf but avoided by individuals for whom Maf > Ms (see Figure 8.4). Atkinson and Litwin (1960) had male students stand any distance from the peg in a ring-toss game. It was assumed that intermediate distances should approximate a probability of 0.50 for successfully making a ring toss. The results indicated that Ms > Maf students selected the intermediate distances more than Maf > Ms students did. In another relevant investigation, Karabenick and Youseff (1968) examined learning performance in participants who were both low and high in Ms and Maf. Participants for whom Ms > Maf performed better on a learning task of intermediate difficulty (\(P = 0.50\)) than did participants for whom Maf > Ms. The Ms > Maf and Maf > Ms students, however, did not differ in their learning of a task that was either very easy or very difficult. Vocational choice or aspiration is also governed by the variables in achievement motivation theory. Mahone (1960) found that Ms > Maf students were more realistic in their vocational choices when they were based on their interests and abilities. Students with Maf > Ms, on the other hand, were more likely to make unrealistic choices. Morris (1966) examined the preferences for easy and difficult occupations of high school seniors as a function of the strength of their Ms and Maf. Seniors with high-achievement motivation preferred occupations at an intermediate probability of success; those with low-achievement motivation, however, preferred occupations that had either a low or high probability of success.

Achievement Motivation and Behavioral Persistence. Success at a task, project, or job depends on how long an individual persists. Individuals high in achievement motivation are expected to be more persistent, which is more likely to lead to success. In an early investigation of the need to achieve, Lowell (1952) found that high-Ms participants solved more anagrams during a 20-minute period than did low-Ms participants. When using addition problems, Lowell (1952) again found that high-Ms participants solved more problems than low-Ms participants. Sherwood (1966) had male and female students take the TAT for achievement motivation early in the semester and then participate in achievement tasks near the end of the semester. The achievement tasks required solving anagrams and addition problems. The results for both the male and female students showed that their output of solutions increased with their need to achieve. In another study, Atkinson and Litwin (1960) timed how long students spent taking their final exam in a psychology
course. Students for whom Ms > Maf spent more time working on their final exams and earned higher scores than did students for whom Maf > Ms.

**Hierarchical Model of Achievement Motivation**

In addition to developing alternative measures, researchers elaborated a theory of achievement motivation. In a hierarchical model developed by Elliot and Church (1997), the achievement motive and the fear of failure are only the initial stages in the motivation of achievement behavior (see Figure 8.5). At the top of the hierarchy is the achievement motive, which links to mastery goals and to performance-approach goals. Also at the top is fear of failure, which links to performance-approach goals and performance-avoidance goals. The strength of each goal is measured by an 18-item *Achievement Goal Questionnaire* shown in Table 8.3 (Elliot & Church, 1997). Students’ performance-approach goals were assessed by their agreement with the first six items, such as the statement “It is important for me to do better than the other students.” The next six items measured mastery goals based on their agreement with such statements as “I want to learn as much as possible from this class.” Students’ performance-avoidance goals were determined by their agreement with the last six statements, such as “I often think to myself, ‘What if I do badly in this class?’” The importance of both mastery goals and performance-approach goals correlated with course achievement: higher goals were linked with higher grades in the course. Performance-avoidance goals were negatively correlated with course achievement: higher avoidance goals were linked with lower course grades. Adopting mastery and performance-approach goals results in better classroom achievement, while adopting performance-avoidance goals leads to lower achievement (Elliot & Church, 1997).

**Need for Power**

Consider the following “get ahead or get along scenario”: A worker is offered a promotion to manager that will require supervising former coworkers who are friends. By declining the promotion, she can remain in a situation that provides the opportunity for being with

![FIGURE 8.5 Hierarchical Model of Achievement Motivation](image)

**FIGURE 8.5 Hierarchical Model of Achievement Motivation.** This model shows that the achievement motive links to mastery and performance-approach goals, both of which in turn lead to improved classroom performance. Fear of failure also links to performance-approach goals and to performance-avoidance goals. This latter goal leads to poorer classroom performance.

her friends. By accepting the promotion, however, she gains the opportunity to exercise authority. Would a person with a strong need for power accept this promotion?

**Measuring Need for Power.** To exert influence over other people, to be in charge, to be noticed, and to have “high” status are all characteristics of the **power motive** (Winter, 1988, 1992). Look again at the picture of the two women in lab coats (see Figure 8.3). A story written in response to this resemblance of a TAT picture is scored for the power motive if the response contains phrases related to power, giving unsolicited help, or trying to influence or impress people. Another power motive characteristic is a reference that the person’s actions produce a strong emotional response in others. A character in the story might perform an action that produces gratitude on the part of the helped individual. Finally, a power motive involves a concern with reputation or image. For example, the women in the TAT picture might be described as having graduated from a top medical school and are now working for a well-known drug company (Veroff, 1992; Winter, 1992).

---

**TABLE 8.3 Achievement Goal Questionnaire**

*Indicate the extent each item is true of you on the scale below:*

*Not at all true of me = 1  2  3  4  5  6  7 = Very true of me*

**Items Measuring a Performance-Approach Goal**

It is important to me to do better than the other students.

My goal in this class is to get a better grade than most of the students.

I am striving to demonstrate my ability relative to others in this class.

I am motivated by the thought of outperforming my peers in this class.

It is important to me to do well compared to others in this class.

I want to do well in this class to show my ability to my family, friends, advisors, or others.

**Items Measuring a Mastery Goal**

I want to learn as much as possible from this class.

It is important for me to understand the content of this course as thoroughly as possible.

I hope to have gained a broader and deeper knowledge of psychology when I am done with this class.

I desire to completely master the material presented in this class.

In a class like this, I prefer course material that arouses my curiosity, even if it is difficult to learn.

In a class like this, I prefer course material that really challenges me so I can learn new things.

**Items Measuring a Performance-Avoidance Goal**

I often think to myself, “What if I do badly in this class?”

I worry about the possibility of getting a bad grade in this class.

My fear of performing poorly in this class is often what motivates me.

I just want to avoid doing poorly in this class.

I’m afraid that if I ask my TA or instructor a “dumb” question, they might not think I’m very smart.

I wish this class was not graded.

**Characteristics of Need for Power.** There are various ways people satisfy their need for power (Winter, 1988, 1992). One way is to place themselves in legitimate positions of power. Both men and women with a high need for power are more likely to be office holders or be in positions to make decisions affecting others. As students, they are more likely to be residence hall counselors or student government officers. A high power motive is associated with entering power-related careers, such as being teachers, business executives, mental health workers, psychologists, and journalists. The power motive is satisfied in these occupations because the person has the legitimate right and duty to direct the behavior of the people she is in contact with. Individuals with a moderate to high power motive are more likely to succeed as managers and executives of large corporations, especially when this motive is coupled with a low affiliation motive (McClelland & Boyatzis, 1982). Since power means being visible to others, individuals with a high need for power strive to do so. Students with a high power need are more likely to write letters to the editor of the school newspaper and to put their names on their residences. Another demonstration of a high power motive is owning trappings of power, such as high-tech stereo equipment, expensive wines, elite credit cards, fancy cars, or valuable pictures or wall hangings. Power-motivated women, more than men, are interested in using clothing as a show of power (Winter, 1988, 1992). Finally, men and women with a high need for power place greater importance on status and wealth than do those with a low need for power (Parker & Chusmir, 1991).

Individuals high in power motivation are also more likely to have autobiographical memories of peak experiences that involve power themes (McAdams, 1982). They like to take extreme risks, provided this occurs in situations where they can draw attention to themselves (McClelland & Watson, 1973). People with a high power motive are more likely to exploit members of the opposite sex and to drink, gamble, and use drugs (Winter, 1988). College-educated men with a high power motivation, compared to men with a low power motivation, have wives who are less likely to have professional careers of their own (Winter et al., 1977).

**Expressing Need for Power.** As stated earlier, psychological needs may be interpreted as categories of incentives. Thus, a person who seemingly has a need for power is really one who prefers power-related incentives. If this is the case, then individuals with a need for power should enter and remain in situations that provide those incentives. Jenkins (1994) investigated this possibility in a longitudinal study tracking the career development of women who varied in need for power. Power motive scores were collected on these women when they were college seniors and then correlated with various aspects of their professional careers at age 35. Several of Jenkins’s findings showed that women with a high need for power were sensitive to situations that allowed for expression of their power motives. First, they were more likely to have entered and remained in power-relevant careers (teacher, psychotherapist, business executive, journalist) than women with a low need for power. Second, their degree of job satisfaction was related to the opportunity to exercise interpersonal power. Third, they were more likely to progress professionally provided they were in power-relevant jobs. When in nonpower-relevant jobs, on the other hand, professional progress seemed absent. A conclusion of this study is that people with various needs are sensitive to the incentives that satisfy those needs. Consequently, we
should not be surprised that they enter situations or professions that satisfy their needs. In the “get ahead or get along” scenario, a person with a high need for power probably would accept the promotion to manager.

**Need for Cognition**

A more recently postulated need resembling Murray’s (1938) need for understanding is the **need for cognition** (Cohen et al., 1955; Cacioppo & Petty, 1982). This has been defined as “a need to structure relevant situations in meaningful, integrated ways. It is a need to understand and make reasonable the experiential world” (Cohen et al., 1955, p. 291). In an early demonstration of the validity of this need, Cohen and associates (1955) measured the need for cognition in students and then had them read either a structured or ambiguous story about a person’s interview with a potential employer. Students then rated the story for interest, liking, and understanding in addition to their effort in trying to understand it. Those with a high need for cognition rated the ambiguous story as less interesting and enjoyable than the structured story. Students with a medium or low need for cognition, however, did not differ in their ratings of the stories (Cohen et al., 1955). Using this research as a foundation, Cacioppo and Petty (1982) felt that a more precise measure of the need for cognition was necessary. Thus, they developed the **Need for Cognition Scale**, which contains statements measuring a person’s enjoyment in thinking and solving complex problems. For example, to what extent does a person enjoy thinking abstractly, coming up with new solutions to problems, putting forth mental effort, or watching educational programs?

A high need for cognition describes individuals who are disposed to engage in and enjoy analytical thinking. Thus, these individuals should pay closer attention to attitude change messages. To illustrate, imagine a situation in which you are asked to read and evaluate the proposal that “seniors be required to pass a comprehensive exam in their major as a requirement for graduation” (Cacioppo et al., 1983, p. 807). This proposal was presented to students as an editorial written by a journalism student. One version presented a weak set of arguments, and the other version a strong set of arguments. Students either low or high in the need for cognition read either the weak or strong editorial version and evaluated it for effectiveness, liking, and convincingness. The students also rated themselves for how much cognitive effort they put into evaluating the editorial and were asked to recall as many arguments as they could remember. The results showed that students with a high need for cognition were affected more by the strength of the editorial than those with a low need for cognition. They evaluated the strong argument more positively and the weak argument more negatively. They also reported expending more effort thinking about the editorial and recalled more messages than did students with a low need for cognition.

Need for cognition is also associated with **attitude polarization**, which means that as a result of thinking, favorable attitudes become more favorable and unfavorable attitudes become more unfavorable (Tesser, 1978). For example, if you are mildly in favor of comprehensive exams, then thinking about them makes you even more favorable toward them. On the other hand, if you have a mildly unfavorable attitude toward comprehensive exams, then thinking about them will make your attitude even more so. Leone (1994) reasoned that people low in the need for cognition would be more subject to attitude polariza-
tion, since they do not especially enjoy thinking. They are less likely to consider both the pros and cons of an issue. Instead they follow the easiest path and think only about information that is already consistent with their initial attitude, thereby strengthening their beliefs. For example, they might only think about the cons side of comprehensive exams and develop an even more negative attitude toward them. On the other hand, people high in the need for cognition, because they enjoy thinking about an issue, would more likely weigh additional pros and cons about an issue. These considerations are more likely to lead to a balancing out, whereby they would not change their initial attitude on this subject. Leone gave participants the Need for Cognition Scale and then divided them into two groups: one low and the other high in the need for cognition. Next, participants rated the extent they agreed or disagreed with a series of issues. Afterward they were asked to think about those issues on which they had only mildly agreed or disagreed. As predicted, polarization was greater for participants low in need for cognition than for those high in the need for cognition.

Feelings of boredom also vary with need for cognition. Watt and Blanchard (1994) have shown that participants low in need for cognition are more susceptible to boredom than those high in need for cognition. The reason is that people high in need for cognition enjoy thinking. They are more likely to rely on their own internal stimulation and therefore are less likely to become bored.

Self-Esteem, Relatedness, Autonomy, and Competence

As described previously, psychological needs do not have identifiable body or brain correlates. The validity of psychological needs is based on the mental impressions they make on individuals. In an attempt to determine the validity of ten postulated psychological needs, Sheldon and coresearchers (2001) instructed their participants to “bring to mind the single most personally satisfying event that you experienced” (p. 327). Their hypothesis was that gratifying an important psychological need is very satisfying, just like eating a delicious meal when hungry is very satisfying. Participants rated their satisfying events on need-relevant dimensions with a scale that ranged from 1 (not at all) to 5 (very much). For instance, if hunger were a psychological need, then some statements about eating that a participant might rate are:

1. During this event [eating] I felt that my body was getting just what it needed.
2. During this event [eating] I felt intense physical pleasure and enjoyment.

The strength by which a statement is endorsed reflects the strength of the psychological need. Participants also compared all psychological needs with one another in order to determine the strength of each need. The outcome of these comparisons indicated that the four strongest psychological needs were self-esteem, relatedness, autonomy, and competence. Table 8.4 provides a definition of each need, based on the feelings each produces (Sheldon et al., 2001).

These four psychological needs have several implications for motivation. First, they are a main source of internal motivation. Second, the amount of pleasure and satisfaction attained from fulfilling a need depends on need intensity. More intense needs provide
more fulfillment and satisfaction than less intense needs. Thus, satisfying their esteem, relatedness, autonomy, and competence needs should provide people a great amount of satisfaction. Third, each psychological need provides its own unique feeling of satisfaction when it is fulfilled, much like eating provides a unique pleasurable experience (see Table 8.4). Fourth, the need-relevant experiences were salient and easy for individuals to bring to mind. This finding implies that these needs are also prominent in people’s lives. Fifth, the opportunity to fulfill a psychological need is related to feelings of positive affect. Positive mood is one consequence of consistently being able to satisfy psychological needs. For instance, Reis and co-researchers (2000) measured the degree of daily need satisfaction in their participants over a 14-day period. Satisfaction of relatedness, autonomy, and competence needs were associated with feelings of vitality, overall well-being, and positive affect and with the absence of negative affect.

**Need for Affiliation and Intimacy**

The work by Sheldon and co-researchers (2001) and Reis and co-researchers (2000) verified that the need for relatedness is one of the top psychological needs. This need has also been referred to as the need for affiliation and belonging and has received extensive attention from psychologists beginning with Murray (1938, see Table 2.2) and Maslow (1970, see Table 8.2). The need for affiliation is also captured in the “get ahead or get along” scenario described previously. In this case, would a person who has a strong need for affiliation accept or decline the promotion?

**Measurement and Characteristics of Need for Affiliation.** Imagine writing stories in response to several TAT pictures. Your story is scored according to its indication of having a social relationship, desiring a relationship, or feeling bad following the termination of a

<table>
<thead>
<tr>
<th>Psychological Need</th>
<th>Characteristic Feeling of Each Psychological Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td>You are a worthy person who is as good as anyone else rather than feeling like a “loser.”</td>
</tr>
<tr>
<td>Relatedness</td>
<td>You have regular intimate contact with people who care about you rather than feeling lonely and uncared for.</td>
</tr>
<tr>
<td>Autonomy</td>
<td>You are the cause of your own actions rather than feeling that external forces or pressures are the cause of your actions.</td>
</tr>
<tr>
<td>Competence</td>
<td>You are very capable and effective in your actions rather than feeling incompetent or ineffective.</td>
</tr>
</tbody>
</table>

social relationship. Such imagery reflects a **need for affiliation**, which refers to the motive to establish, maintain, or restore positive social relationships with other individuals or groups (McClelland & Koestner, 1992). Like other psychological needs, the need for affiliation is latent until relevant environmental conditions arouse it, such as the presence or availability of other individuals. Shipley and Veroff (1952) aroused the affiliation motive in college fraternity members by having each member stand up in a group gathering and then be rated by his fellow members on various personality characteristics. A control group was questioned about food preferences, which was assumed not to arouse the affiliation motive. Stories written in response to TAT pictures depicting people in various poses contained a greater number of affiliation statements from fraternity members in whom the affiliation motive had been aroused compared to the control group. Affiliation statements contained references to loneliness, separation, rejection, or ways of preserving social relationships.

People with a need for affiliation do what the need suggests: they affiliate in order to satisfy that need. Students with a high need for affiliation work harder and receive higher grades in classes taught by teachers who call students by their names and take a personal interest in them (McKeachie et al., 1966). Presumably such students will then strive harder to earn good grades to please and affiliate with the teacher and with other students. Those with a high need for affiliation are better able to recognize photographs of faces that have been presented below the recognition threshold (Atkinson & Walker, 1956). They also tend to make more personal telephone calls and write more letters to friends and relatives compared to individuals with a low need for affiliation (Lansing & Heyns, 1959). In addition, people with a high need for affiliation prefer to work on a task with incompetent friends over competent strangers (French, 1956). In the “get ahead or get along” scenario, a person with a need for affiliation would probably turn down the promotion so as to remain with friends.

**Needing People in Different Ways.** According to Hill (1987), the need for affiliation can be expressed in different ways: emotional support, attention, positive stimulation, and social comparison. He devised the **Interpersonal Orientation Scale** to measure these four needs. In the case of the need for emotional support, a person needs others to help alleviate the negative feelings of being unhappy, depressed, or disturbed. For example, a person with such a need is more likely to turn to others to reduce stress. Attention refers to the satisfaction a person derives from being around people who express an interest in him, provide positive feedback, or show appreciation. Such a person, for example, might demand recognition from coworkers when working on a group project. Positive stimulation as a need is satisfied by affiliating with people because they provide friendships, relationships, contacts, and close feelings. For instance, an individual with a need for positive stimulation would consider a party as an opportunity to promote positive and stimulating interactions. Finally, an individual uses other people for social comparison, which is a way to assess one’s standing in a particular situation or group. A student with a high need for social comparison is more likely to compare her exam score with those of other students in order to determine her standing in the class.

**Intimacy Motive.** The affiliation motive may reflect a fear of rejection rather than a striving to attain positive social interactions (McClelland, 1985). For instance, individuals high
in the affiliation motive fear disapproval and are anxious about their social relationships. Consequently, they seek others for continual reassurance, which reduces their popularity (McClelland, 1985). Instead of focusing on the negative aspects of affiliation or fear of rejection, McAdams (1992a) postulated an intimacy motive to emphasize the positive feelings that exist between the individuals in a social relationship. This motive refers to a “readiness for experiences of warm, close, and communicative interactions with other persons” (McAdams, 1992a, p. 224). McAdams (1980) presented TAT pictures of actual intimate situations, such as a celebration initiating new members into fraternities or sororities, people at a large dance party, or couples who reported being in love. Participants’ stories about the TAT pictures were scored for the intimacy motive if they included themes about positive relationships or dialogue between individuals. The intimacy motive might concern two people sharing an encounter that involved feelings of love, friendship, happiness, or peace or tender behavior. In their dialogue, the individuals may sit and talk, confide in one another, or have a friendly argument (McAdams, 1992b).

Differences in the intimacy motive among individuals show up in terms of differences in their social behavior. McAdams and Constantian (1983) contacted students seven times a day for a week using a beeper. Each time the students recorded what they were thinking and doing. They also rated their degree of affect in connection with other people, such as being alert, carefree, content, friendly, happy, and sociable. Students with a high intimacy motive thought more about other people, had a greater number of conversations, and were more likely to be writing letters. As shown in Figure 8.6, students with a high intimacy motive experienced greater positive affect during their social interactions com-

FIGURE 8.6  Intimacy Motive and Social Interaction. During a social interaction, positive affect ratings were higher for students with a high intimacy motive compared to students with a low intimacy motive. There were no differences in mean affect scores during nonsocial interactions.

pared to those with a low intimacy motive. It is important to notice also that when not interacting with others, low and high intimacy motive students did not differ in their affective feelings. Apparently, people with a high intimacy motive enjoy their social interactions more than people with a low intimacy motive. In a second study, McAdams and associates (1984) had university students describe recent 15- to 20-minute-long interactions with friends. Their findings showed that higher intimacy motivation was associated with a greater frequency of interactions with friends, greater levels of self-disclosure, and higher levels of listening during conversations.

**Section Recap**

This section described seven psychological needs or motives: achievement, power, cognition, esteem, autonomy, competence, and relatedness (affiliation). Achievement motivation is guided by two internal sources of motivation: the *need to achieve*, or motive for success, and the *motive to avoid failure*. The need to achieve is characterized by wanting to do things well, being persistent, and having a high standard of excellence. In contrast, the motive to avoid failure is characterized by fear and anxiety about failing at a task. Achievement motivation theory has been expanded to include additional determinants of achievement behavior, such as the probability of success and failure and the incentive value of success and failure. A recent hierarchical model maintains that an achievement motive leads to a mastery goal and to a performance-approach goal, whereas fear of failure also leads to a performance-approach goal and also a performance-avoidance goal.

Needs are measured by *projective tests* in which a person verbally responds to an unstructured stimulus in a manner that is presumably consistent with her psychological needs. One type of projective test is the TAT, which consists of a series of pictures of people in ambiguous settings. Stories written in response to these tests have been scored for the need to achieve as well as the need for affiliation and power.

The *power motive* is the wish to influence the lives of other individuals, to be in command, to have high status, and to be noticed. People with a power motive are more likely to be successful in occupations that allow for the legitimate exercise of power. The *need for cognition* refers to a desire to understand one’s experiences and things in the world through thinking. The need for cognition has an effect on *attitude polarization*, which means that a person’s attitudes become more extreme after he has thought about them. People with a high need for cognition show less attitude polarization, because in thinking about an issue they are more likely to consider both the positive and negative aspects of a proposal.

Four important sources of internal motivation are the psychological needs of self-esteem (self-worth), autonomy (self-determination), competence (capability and effectiveness), and relatedness (affiliation). Each need provides its own unique feeling of satisfaction. Their fulfillment is linked to positive affect and well-being. Relatedness, or the *need for affiliation*, is the desire to initiate, maintain, and restore a positive social relationship with another person or group. This need may involve seeking emotional support, attention, positive stimulation, and social comparison. A specific aspect of affiliation involves the *intimacy motive*, which emphasizes the shared positive feelings between two individuals.
Motivation without Awareness

Are people aware that psychological needs motivate their behavior? Can psychological needs be activated without an individual being aware of it? According to Freud’s theory about the workings of the unconscious, this is indeed possible (see Chapter 2). For example, people can laugh at jokes about sex or aggression without being aware that they are satisfying associated instinctual impulses.

The purpose of this section is to describe the role of awareness in motivation and a current elaboration of how this may be possible according to the idea of reflexology and the auto-motive hypothesis.

Reflexology

According to the ancient Roman poet Ovid (43 B.C.–A.D. 17), “The cause is hidden but the effect is known.” This statement could be interpreted to mean that humans may not be aware of some of the events that motivate their behavior. For instance, in not being aware of the motivational source, a person may consider thoughts or intentions to be responsible for her behavior. According to the Russian physiologist Ivan Sechenov (1863/1965), this would be an error. Sechenov reasoned that stimulation from an external stimulus may produce thought and behavior simultaneously or may produce thought with behavior being inhibited. These joint occurrences lead to the belief that thought and behavior are two separate entities and that one causes the other, especially when the source of stimulation is unknown. Sechenov’s view is called reflexology and assumes that all human action, both involuntary and voluntary, is reflexive in nature—that is, in response to external stimulation and not in response to thought or intention. Although humans are consciously aware of the link between thought and behavior, they may be unaware of the original stimulus that triggered thought. Thus, the motive available in consciousness is given as the reason for behavior, while in actuality it may be an external event that was responsible (Nisbett & Wilson, 1977).

Auto-Motive Hypothesis

It is possible that individuals may not always be aware that a particular need has been activated or that they have been sensitized to a certain class of incentives. It may be as Freud believed, namely that an individual is unaware of the psychological need that evoked his behavior (Uleman 1987; Vollmer, 1993). When an individual is asked the reason for his behavior, he might reply, “I am not certain why I did that.” Furthermore, in addition to not being aware of the stimulus that activates a motive, a person may also be unaware that his behavior is an attempt to satisfy that motive. Bargh (1990) considers these possibilities in his auto-motive hypothesis, which describes the nonconscious activation of motives and intentions by environmental stimuli and the subsequent effect of those motives and intentions on behavior. First, environmental stimuli activate mental representations of motives and goals. This activation is possible because the stimuli and their mental representations have been frequently associated together in the past. Second, these motives and goals reside in the preconscious, and the person is not aware of them, since they have not yet captured the attention of the conscious. Third, when activated these
motives and goals arouse behavioral strategies or plans designed to satisfy them. Finally, in the appropriate context these strategies or plans then manifest themselves as behavior in an environment that allows for the satisfaction of a motive or the achievement of a goal.

**Priming Achievement Behavior.** Research on nonconscious motivation involves activating a motive, without a person’s awareness, to determine if that motive affects behavior. In one demonstration, Bargh and coresearchers (2001) primed participants without their awareness for a high-performance goal—that is, a goal or motive to do well on a puzzle task. To prime this goal, participants worked on a word-search puzzle that required finding words embedded in a $10 \times 10$ matrix of letters. Words designed to prime a high-performance goal included *win, compete, succeed, strive, attain, achieve,* and *master.* When participants found these words, it was assumed that this would prime a high-performance motive. In the neutral prime control condition, participants solved a word-search puzzle that contained words such as *ranch, carpet, river, shampoo, robin, hat,* and *window.* A high-performance motive was assumed not to be activated in this condition. After completing one of these initial puzzles, participants were instructed to work on three additional puzzles that contained words related to foods, bugs, and colors. Performance on these puzzles during a 10-minute period served to measure the different effects produced by the prior high-performance versus neutral priming procedures. The results showed that participants primed for a high-performance goal discovered significantly more solution words than did the neutrally primed participants. Furthermore, in a postexperimental debriefing, no participant reported being aware of the relationship between the priming nature of the first puzzle and performance on the second set of puzzles. These results imply that a nonconsciously primed high-performance goal elevates achievement performance, at least in the case of puzzle-solving behavior.

**Priming an Action.** Further evidence for Bargh’s (1990) auto-motive hypothesis comes from experimental procedures that nonconsciously activate motives that are relevant for social behavior (Bargh et al., 1996). In their first experiment, Bargh and associates (1996) primed participants to be either rude, polite, or neither in a social setting. Priming of the motive was accomplished by asking participants to construct a grammatically correct sentence from a list of five randomly presented words. To prime the rude motive, synonyms and words implying rudeness were employed. To prime the polite motive, synonyms for politeness were used. Although participants were aware of creating the sentences, they were not aware that this was priming a motive to be either rude or polite. The participants were told that when finished with the sentence task, they were to walk to another room to find the experimenter so that they could complete another experiment. Now, suppose you are the participant and you find the experimenter engaged in conversation with another person. How long will you wait before interrupting so that you can receive instructions about what to do next? Will how soon you interrupt depend on whether you have been primed with the rude or polite motive? Figure 8.7 shows that participants who had a motive for rudeness activated were most likely to interrupt, while participants who had a motive for politeness activated were least likely to interrupt. Furthermore, of those who interrupted, rude participants were more likely to interrupt sooner, while polite participants waited longer.
In a second experiment, Bargh and associates (1996) primed a stereotype of the elderly and assumed that participants would act in accordance with characteristics of that stereotype. The scrambled sentence task primed an elderly stereotype by using such words as worried, Florida, old, lonely, and gray. A control group was primed with a set of neutral words. Following the task, participants were debriefed, thanked for their participation, and monitored for how fast they walked away. The hypothesis was that participants with the activated stereotype of the elderly would walk away more slowly than participants in the control group, since presumably slow walking is a trait of the elderly. The results supported the hypothesis. Participants primed for the elderly stereotype took longer to walk down a corridor than participants in the neutral primed condition. In other words, participants acted in accordance with the stereotypic trait that had been activated without their awareness.

**Imperceptive Effects of Mimicry.** Psychologists have long been aware of people’s motivation to associate with others as formulated in the need for affiliation, relatedness, and the intimacy motive. James (1890/1950) postulated a love instinct, Murray (1938) postulated a need for affiliation, and Maslow (1970) did the same for the need to belong. A way to satisfy those needs and be liked by others may be to mimic the individuals with whom one is interacting. Is a person aware of being mimicked? And does mimicry actually lead to greater liking and to smoother and more pleasant social interactions? To test this possibility, Chartrand and Bargh (1999) matched people’s behavior, with the use of mimicry, to determine if it increased liking and the feeling that their interaction went smoothly. In their experiment two participants (one was actually a confederate of the
experimenters) described what they saw in a series of photographs. The alleged purpose of this task was to evaluate the photographs for their possible use in a *Thematic Apperception Test*. During the mimic condition, the confederate mimicked the participant’s mannerisms, while in the control condition, the confederate acted in a neutral fashion with regard to the participant. After the photograph evaluation task, participants were asked how likeable was the other participant (the confederate) and how smooth was their interaction with him. Mimicked participants liked the confederate more than control participants. Mimicked participants also rated the interaction as going more smoothly than did control participants. Were participants aware that being mimicked led to higher ratings about the confederate? The answer to this question seems to be “no.” When questioned, participants reported not being aware of being mimicked by the confederate. Thus, being mimicked without awareness increased participants’ liking of the confederate and increased the apparent smoothness of social interaction.

**Implication of Nonconscious Need Activation.** The evidence is mounting that people’s psychological needs, goals, and intentions may be activated without their awareness. The likelihood of activation depends on the intensity of the need when it is dormant and the strength of the initiating circumstances. When a psychological need is strong, for instance, activation by need-relevant circumstances is more likely to occur than when a need is weak. Need-fulfilling behavior results as a consequence of the activation. In other words, a person with a strong psychological need is more likely to have that need activated and to behave accordingly. Finally, a person may only be aware of the end product of this sequence of events and not at all of what initiated the process.

**Section Recap**

*Reflexology* is the idea that external stimulation is responsible for all motivated action, both involuntary and voluntary, regardless of whether individuals are aware of the source of motivation. Current research on the awareness of motivation has led to the formulation of the *auto-motive hypothesis*. Accordingly, environmental stimuli can activate motives and goals, accompanying strategies, and subsequent behaviors to satisfy them. This all happens without the person’s awareness. Research has shown that when a motive is activated in this manner, participants behave in a manner consistent with that motive. The nonconscious activation of motives has been shown to affect the behavior of achieving a high-performance goal, of social interactions, and mimicry.

**ACTIVITIES**

1. **Hierarchy of Needs.** Fill out Lester’s *Need Satisfaction Inventory* in Table 8.2 of this chapter. Was your level of satisfaction in agreement with Maslow’s theory—that is, highest satisfaction for physiological needs and lowest satisfaction for self-actualization needs? Do you think your results would be affected by any of the following:

   a. You are on a tight budget so you cannot meet some of your physiological needs easily.
   b. The campus is a place to make new friends and lifelong partners, thereby easily satisfying your need for belonging. (So far, during my teaching career three couples met in my classes and married.)
c. The four years you spend at the university are filled with feedback about progress toward your goals, thereby contributing to meeting your need for self-esteem and self-actualization.

Do you think your other-sex counterpart has the same level of satisfaction of the need for safety as you?

2. Achievement Motivation. In our society we often emphasize intelligence over achievement motivation as a predictor for success. For example, to apply to the university you must take the SAT; to apply to graduate school, the GRE; and law, business, and medical schools also have their aptitude tests. Yet you probably know people who are smart but not motivated and people who are not smart but very motivated. Do you think it would be worth the effort to construct a test like the SAT that would measure achievement motivation, which could then be used to predict success in college?

Would it even be possible? Do you think your high school grades partly reflect your achievement motivation?

3. Affiliation or Relatedness Motive versus Power Motive. The phrase “get ahead or get along” pits the need for power (get ahead) against the need for affiliation or intimacy (get along). Do you think to be successful at your profession you will have to exercise your need for power at the expense of your need for affiliation or intimacy? Or can you satisfy those needs in different domains of your life?

4. Need for Cognition. Are some people thinkers and others doers? Do thinkers go on to the university, while doers go to vocational schools or apprentice on the job? Are thinkers philosophy and art majors and doers accounting and physical education majors? How would you classify yourself?