

General Principles of Motivation

MODULE

11.1



- *What is motivation?*
- *What is the difference between motivated and nonmotivated behaviors?*

You are sitting quietly, reading a book, when suddenly you hear a loud noise. You jump a little and gasp. Was your action motivated? “No,” you say. “I jumped involuntarily.” Now I tell you that I want to do a little experiment. As soon as you hear me tap my pencil, you should try to jump and gasp just as you did the first time. I tap my pencil, and sure enough, you jump and gasp. Was that action motivated? “Yes,” you reply.

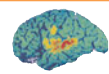
So, what appears to be approximately the same behavior can be motivated at one time and nonmotivated at another time. Can we trust people to tell us whether their behavior was motivated or not? No, we can’t. Someone accused of murder says, “I didn’t mean to kill. It was an accident.” Your friend, who promised to drive you somewhere and then left without you, says, “I didn’t do it on purpose. I just forgot.” We need to study how motivated behaviors differ from nonmotivated behaviors, but even then we will frequently be uncertain whether someone’s behavior was motivated or accidental.

Properties of Motivated Behavior

What, if anything, do various motivated behaviors have in common? That is, what distinguishes a motivated act from a reflex? Motivated behaviors vary from time to time and from person to person. For example, on a cold day, you might sit by the fireplace and drink hot chocolate, or you might put on heavy clothing or become more active. Someone else might find other strategies for keeping warm. The foremost characteristic of motivated behaviors is that they are goal directed. If you are motivated to accomplish something, you try one approach after another until you succeed. If necessary, you set up subgoals you need to meet on your way to the final goal (Austin & Vancouver, 1996). For example, if you were motivated to improve your house, you might start by listing the items that need repair and the tools you will need.

These criteria are good in principle. However, nearly all behaviors combine elements of motivation

and reflex. For example, walking depends on leg reflexes that maintain balance. Eating requires reflexes of digestion. Fixating your eyes on a target depends on reflexive movements of eye muscles.



CRITICAL THINKING

A STEP FURTHER

Motivations and Reflexes

A frog flicks its tongue at a passing insect, captures it, and swallows it. The behavior satisfies the frog’s need for food, so we might guess that it is motivated. However, the behavior appears to be as constant as a reflex. How might you determine whether this behavior is motivated?

Views of Motivation

Like many other important terms in psychology, motivation is difficult to define. Let’s consider several possibilities: “Motivation is what activates and directs behavior.” That description fits many examples, but it also fits some nonmotivational phenomena. For instance, light activates and directs the growth of plants, but we would hardly say that light motivates plants.

“Motivation is what makes our behavior more vigorous and energetic.” The problem with that definition is that some motivated behavior is not vigorous at all. For example, you might be highly motivated to spend the next few hours sleeping.

How about this: Based on the concept of reinforcement from chapter 6, we could define **motivation** as *the process that determines the reinforcement value of an outcome*. In more everyday language, motivation is what makes you want something more at one time and less at another. For example, something to eat or drink is more reinforcing at some times than others. Thus, we say that motivation for them has increased or decreased. Note the close relationship between learning and motivation.

That definition works as a description, although it offers no theory. Few psychologists today spend much time debating the true nature of motivation, but let’s briefly consider a few influential theories, with their strengths and weaknesses.

Motivation as an Energy

Motivation, which comes from the same root as *motion*, is literally something that “moves” a person. So we might think of it as a type of energy. According to Konrad Lorenz (1950), a pioneer in the study of animal behavior, animals engage in instinctive acts when specific energies reach a critical level. For example, a male stickleback fish has no specific energy for mating outside the breeding season, so it does not respond sexually. At the start of the breeding season, it has a small amount of mating energy, so it courts females and attacks males. At the height of the breeding season, it has a great amount of mating energy, so it courts females vigorously, as well as wood models that resemble females.

Figure 11.1 illustrates Lorenz’s model. A specific kind of energy builds up in the reservoir and flows into the tray below. The outlets in that tray represent ways of releasing this energy. If conditions are right, the energy is released through the lowest outlet—for example, the male stickleback mates with a female. If that opportunity is absent, the outlet is blocked and energy continues to build up until it spills through one of the higher, less preferred outlets. However, Lorenz’s theories are based on the idea of specific energies for specific tasks—an idea that neuroscience research has disconfirmed. He believed that every impulse had to be carried out in some way to use up the energy. We now know that an individual can simply inhibit an impulse.

Drive Theories

A related set of theories describe motivation as a **drive**, *a state of unrest or irritation that energizes one behavior after another until one of them removes*

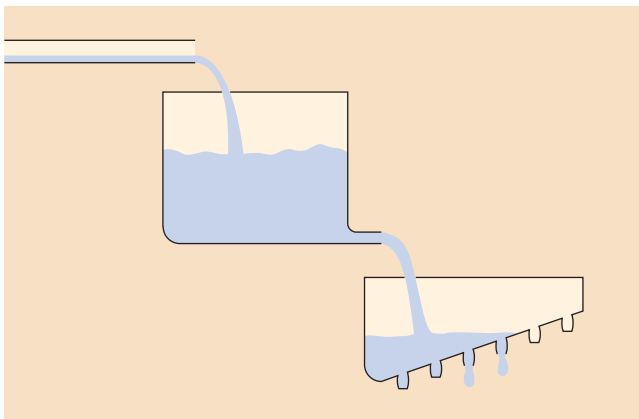


FIGURE 11.1 According to Konrad Lorenz, energy (represented as a fluid) builds up in a reservoir and needs to be discharged. For example, if your sex-specific energy cannot discharge through its normal outlets, it builds up until it discharges through some other outlet. (After Lorenz, 1950)

the irritation (Hull, 1943). For example, when you get a splinter in your finger, the discomfort motivates you to try various actions until you remove the splinter.

According to the *drive-reduction theory* that was popular among psychologists of the 1940s and 1950s, humans and other animals strive to reduce their needs and drives as much as possible. They eat to reduce their hunger, drink to reduce their thirst, have sexual activity to reduce their sex drive, and so forth. This view implies that if we satisfy all our needs, we would then become inactive. People’s search for new experiences—riding roller coasters or smelling odd flowers, for example—is a problem for this view.

Another flaw in drive theory is that it ignores the role of external stimulation. For example, your interest in food depends not only on hunger (an internal drive) but also on what foods are available. Similarly, interest in sex depends partly on an internal drive and partly on the presence of a suitable partner.

Homeostasis

One important advance upon the idea of drive reduction is the concept of **homeostasis**, *the maintenance of an optimum level of biological conditions within an organism* (Cannon, 1929). The idea of homeostasis recognizes that we are motivated to seek a state of equilibrium, which is not zero stimulation. For example, people maintain a nearly constant body temperature, resisting either an increase or decrease. We also work to maintain a fairly steady body weight, a nearly constant amount of water in the body, a moderate amount of sensory experience, and so on.

Unlike a rock, which remains static only because nothing is acting upon it, the homeostasis of the body is more like a spinning top; it needs additional energy from time to time to keep it spinning. For example, we maintain constant body temperature partly by shivering, sweating, and other involuntary physiological responses and partly by putting on extra clothing, taking off excess clothing, or finding a more comfortable location.

Human motivated behaviors differ from the actions of a thermostat, because our behavior often anticipates future needs. For example, you might eat a large breakfast even though you are not hungry, just because you know you are going to be too busy to stop for lunch. If you are angry or frightened, you start sweating before you begin the vigorous actions that might heat your body. (We call this phenomenon a “cold sweat.”) Furthermore, the optimum level of a condition varies. Your body raises its temperature in midafternoon and lowers it at night. Many animals put on extra fat and fur to protect against winter’s cold weather and then lose weight and shed the extra fur in spring. For many purposes a better concept than

homeostasis is **allostasis**, defined as *maintaining certain levels of biological conditions that vary according to an individual's needs and circumstances*.

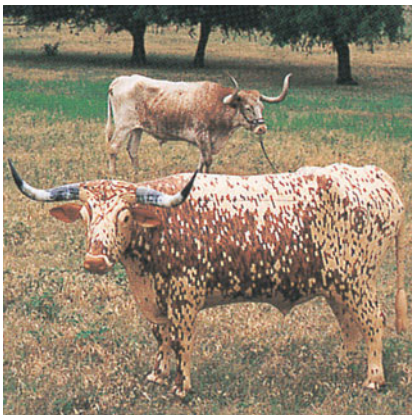
Incentive Theories

The homeostasis concept of motivation overlooks the power of new stimuli to arouse behaviors. For example, why do you sometimes eat tasty-looking foods even when you are not hungry? Why do we seek opportunities to enjoy music and art? Many strong motivations correspond to no apparent need.

Evidently, motivation includes more than the internal forces that push us toward certain behaviors. It also includes **incentives**—*external stimuli that pull us toward certain actions*. Most motivated behaviors are controlled by a combination of drives and incentives. You eat because you are hungry (a drive) and because you see appealing food in front of you (an incentive). You jump into a swimming pool on a hot day to cool your body (a drive) and because you will enjoy splashing around in the water with friends (an incentive).

Intrinsic and Extrinsic Motivations

Similar to the distinction between drives and incentives, psychologists also distinguish between intrinsic and extrinsic motivations. An **intrinsic motivation** is *a motivation to do an act for its own sake*; an **extrinsic motivation** is *based on the reinforcements and punishments that the act may bring*. For example, reading a book for enjoyment displays an intrinsic motivation; reading a book to pass a test depends on an extrinsic motivation. The two kinds of motivation frequently combine. For instance, an artist paints for the joy of creation (intrinsic) and for the hope of profit (extrinsic). Even if you read a book because it is assigned—this one, for example—you might also enjoy it. We seldom do anything for just one reason.



■ The artist who created this wooden cow probably hoped for recognition and money (an extrinsic motivation) but also must have enjoyed the creative process itself (an intrinsic motivation). The back of the cow folds out to reveal a desk.

Does a combination of intrinsic and extrinsic motivations lead to more persistent and effective performance than, say, intrinsic motivation alone? Not always. In a classic study, researchers let monkeys play with a device like the one in Figure 11.2. To open it a monkey had to remove the pin, lift the hook, and then lift the hasp. The monkeys played with the device for 10 days, apparently just for fun (an intrinsic motivation). Then the device was placed over a food well containing a raisin. If they opened the device, they could get the raisin (an extrinsic motivation). Suddenly, their ability to open the device deteriorated. Instead of patiently removing the pin, the hook, and the hasp as before, they attacked the hasp forcefully. They took longer to open the device for food than they did for play. Later, when they were offered the device by itself with no food available, they played with it less than before (Harlow, Harlow, & Meyer, 1950). The device had become work, not play.

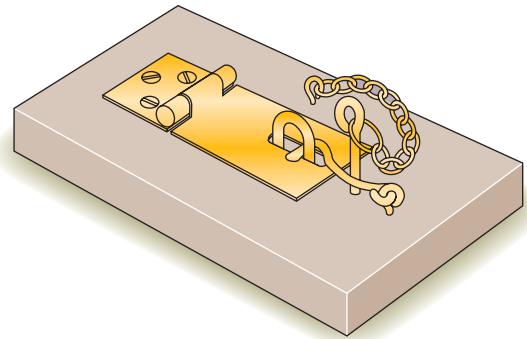


FIGURE 11.2 Monkeys learned to remove the pin, hook, and hasp to open this device. When they started receiving a raisin instead of opening it just for fun, their performance deteriorated.

Does the same principle apply to human behavior? In a typical experiment, college students were asked to try to arrange seven plastic pieces with complex shapes to match figures in a drawing. At one point halfway through the experiment, students in the experimental group were paid \$1 for each correct match. (Students in the control group did not know that the experimental group was being paid.) Later, the experiment continued without pay for anyone. After pay was suspended, the experimental group decreased their efforts (Deci, 1971). As with the monkeys, once you have been paid, the task becomes work and not play.

Results such as these illustrate the **overjustification effect**: *When people are given more extrinsic motivation than necessary to perform a task, their intrinsic motivation declines.* The same principle works for both rewards and punishments. You could work hard to get a reward or to avoid a punishment. In either case, after you finished what you had to do, you probably would stop working on the task, even if it was something you previously enjoyed (Ryan & Deci, 2000).

One explanation for the overjustification effect is that after working extra hard on a task, you become tired of it. However, even after a rest period, people still often show a decreased interest in the task. According to another explanation, people ask themselves, “Why am I doing this?” They then answer, “It’s not because I enjoy the task. It’s because I’m being paid.” (Or “Because I’ll be punished if I stop.”) Therefore, they no longer do it for the sheer joy of it.

The overjustification effect applies under some conditions but not others, and it is sometimes a weak effect (Eisenberger & Cameron, 1996). For example, would you guess that praising a child for work well done would strengthen intrinsic motivation, or would it act like a payment does and decrease intrinsic motivation? The results vary from one study to another (Henderlong & Lepper, 2002). As a rule praise helps if the recipient thinks the praise was deserved. If the praise appears insincere, it accomplishes nothing. Someone who is praised after a mediocre effort may conclude, “They expected very little of me.”

Table 11.1 summarizes four views of motivation.



CONCEPT CHECK

1. Suppose you want to encourage your younger cousin to continue taking piano lessons. Based on the overjustification effect, would it be wise to pay him for practicing? (Check your answer on page 403.)

Delay of Gratification

Often, a motivation requires you to choose a less pleasant behavior now to have a more pleasant opportunity later. People differ in how well they can *defer gratification*—that is, choose the action that produces the bigger payoff later instead of the smaller pleasure now (Simpson & Vuchinich, 2000). Recall the Choice-Delay task from chapter 8: You might be offered a choice between a small, immediate reward and a larger, delayed one. You might know that the delayed reward is better, and you would like to wait for it, but that immediate reward is tempting. Think of some examples: If you study hard now, you will get a good grade later, but you would really like to do something fun right now. If you eat just a light meal tonight, you will start losing weight, but you would really enjoy that triple cheeseburger and a hot fudge sundae.

One way to overcome the temptation to choose the immediate reward is to commit yourself to an action well in advance. For example, suppose you expect that you would choose an immediate \$500 over

TABLE 11.1 Four Views of Motivation

View	Basic Position	Major Weaknesses
Energy Theories According to energy theories, motivation is a kind of energy that builds up until it finds a release.	Motivations are energies that accumulate; each energy specifies a preferred action, although it might spill over into a less preferred outlet.	Based on obsolete view of the nervous system.
Drive Theories According to drive theories, motivation is an irritation that continues until we find a way to reduce it.	Motivations are based on needs or irritations that we try to reduce; they do not specify particular actions.	Implies that we always try to reduce stimulation, never to increase it. Also overlooks importance of external stimuli.
Homeostasis (plus anticipation) Homeostasis is the process of maintaining a variable such as body temperature within a set range.	Motivations tend to maintain body states near some optimum intermediate level. They may react to current needs and anticipate future needs.	Overlooks importance of external stimuli.
Incentive Theories Incentives are external stimuli that attract us even if we have no biological need for them.	Motivations are responses to attractive stimuli.	Incomplete theory unless combined with drive or homeostasis.

\$1,000 a year later. Economically, that is a poor choice, as 100% interest over one year is outstanding. You can make the wiser decision if you choose far in advance. For example, which would you prefer, \$500 a year from now or \$1,000 two years from now? You know that when you get to one year from now, you will wish you could have the \$500 right away, but if you choose now, you can commit yourself to the better but delayed reward.

Similarly, suppose someone offers to pay you a reasonable price to do a somewhat unpleasant job a year from now. This far in advance, you can agree to the deal. When you get close to the actual time, you start thinking more about the unpleasant details, and if you could make the decision anew, you probably would find excuses to refuse (Trope & Liberman, 2003). However, having already committed yourself, you keep the deal.

Although we generally prefer a reward now to a bigger one later, the reverse occurs if the reward will be emotionally exciting. Most people would prefer a passionate kiss from their favorite movie star a few days from now instead of right now (Loewenstein, 1987). Presumably, they enjoy the anticipation, the opportunity to look forward to an emotionally exciting event. Conversely, most would prefer to receive a painful, unavoidable shock today than 10 years from now. It feels better to get it over with than to dread it for so long. Similarly, most people don't object to waiting a couple of weeks to receive good news, but they want to know bad news as quickly as possible (Lovallo & Kahneman, 2000). The period of dreading the bad news only makes it worse.



CONCEPT CHECK

- If you want to invite someone to be a guest speaker for your favorite organization, should you make the invitation long in advance or wait until close to the time of the talk? Why?
- Can you explain why many people would prefer to bet on a lottery than a roulette wheel, which produces immediate results? (Check your answers on page 403.)

IN CLOSING

Many Types of Motivation

People frequently puzzle over why a person did something that has no apparent benefit. Often, it is a combination: curiosity, the desire to have something unusual to talk about with friends, perhaps even a desire

for fame. As you will see in later modules of this chapter, even clearly adaptive behaviors such as hunger and sex are based on multiple and complex motives. ■

Summary

- Characteristics of motivated behaviors.* Motivated behaviors vary from time to time, from situation to situation, and from person to person. They persist until the individual reaches the goal. (page 399)
- Motivation as energy or drive reduction.* Viewing motivation as a type of energy is an analogy that should not be taken too seriously. Some aspects of motivation can be described as drive reduction, but people strive for new experiences that do not reduce any apparent drive. (page 400)
- Motivation as a way of maintaining homeostasis.* Many motivated behaviors tend to maintain body conditions and stimulation at a near-constant, or homeostatic, level. This view of motivation can account for much behavior if we also assume that behaviors anticipate future needs instead of just responding to current needs. (page 400)
- Motivation as incentive.* Motivations are partly under the control of incentives—external stimuli that pull us toward certain actions. Both drives and incentives control most motivated behaviors. (page 401)
- Delayed gratification.* People vary in how well they can postpone pleasure, choosing a larger reward later over a smaller one now. It is often easier to make the economically logical decision if you make it far in advance. Although people usually prefer a reward now instead of later, they reverse that preference if the reward has high emotional value so they can enjoy the anticipation. (page 402)

Answers to Concept Checks

- According to the overjustification effect, you should not pay him enough so that he starts practicing just for the reward. However, sincere verbal praise would be good. (page 402)
- Make the invitation far in advance. Far in advance, it is easy to see that the advantages of an action outweigh the disadvantages. When the time is close, the details of the task become more salient, and people will find an excuse for not participating. (page 403)
- Someone who bets on a lottery can enjoy the long period of anticipation of how exciting the win might be. If the payoff from a gamble comes quickly, that long anticipation is not possible. (page 403)