# CHAPTER 06
# SELF-REGULATION

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# SELF-REGULATION OF BEHAVIOR

Chances are you know people who work really hard at what they do. They always try their best and rarely give up. When the going gets tough, these people get going. You probably also know people who aren't like that at all. They're content to settle for "second best" or are easily frustrated when encountering difficulties.

In this chapter we will apply principles from the field of motivation to examine differences of this sort. Motivational psychologists are concerned with why people (and animals) behave as they do. Why do people choose to do one activity and not another? Why does one person persist in the face of difficulties, while another person withdraws and quits? These are the sorts of questions motivational psychologists pose.

We will begin by outlining a general model of motivated behavior. This model (referred to as a model of self-regulation) assumes that behavior is goal directed or purposive. This means that people select a goal from among various alternatives and then set about trying to reach their goal. Clearly, not all behavior is of this type. Often, people act out of habit, reflex, or impulse. This type of nonpurposive behavior is not covered in the analysis that follows.

Next, we will focus on how self-relevant processes affect goal-directed behavior. Numerous factors influence what people choose to do in life and whether or not they meet their goals. In the second section of this chapter, we will see that people's thoughts and feelings about themselves are among the most important of these factors.

The third section of this chapter will focus on behavior in achievement situations. Here we will examine how self-relevant thoughts and feelings influence persistence and performance in classroom settings.

Finally, we will consider situations in which people fail to effectively regulate their actions. Our concern here will be with understanding how people's self-relevant thoughts and feelings can contribute to negative behaviors, such as alcoholism, aggression, and suicide.

## I.     A General Model of Self-Regulation

### A.     *Three Component Processes*

Self-regulation models are concerned with what individuals choose to do and how they go about trying to accomplish their goals. In more formal terms, we can distinguish three components of the self-regulation process: (1) goal selection, (2) preparation for action, and (3) a cybernetic cycle of behavior (made up of several component processes) (Markus & Wurf, 1987).

#### 1.     *Goal Selection*

The first stage in the self-regulation process is the goal-selection stage. Before they can effectively regulate their behavior, people must select a goal; they must decide what they intend to do.

Many motivational theorists assume that goals arise in the context of an expectancy-

value framework (Atkinson, 1964; Rotter, 1954). Expectancy-value models assume that people select goals according to their expectancy of reaching the goal, in conjunction with the positive value they place on attaining the goal and the negative value they place on not attaining the goal. The idea here is really quite simple. If, for example, we want to predict whether a person will adopt getting a Ph.D. in psychology as a goal, we would want to know how likely the person thought it was that she would successfully complete the Ph.D. requirements and the value she places on receiving versus not receiving a Ph.D.

In an expectancy-value model, these factors are assumed to combine in a multiplicative fashion. This means that we multiply (rather than add) the two factors together to determine the strength of an individual's motivation to engage in some behavior. This assumption has an interesting and important consequence. It means that if either value is set at zero, the goal will not be adopted. If a person sees no possibility that she can successfully complete a Ph.D. program (i.e., if expectancy = 0), she will not apply to graduate school, no matter how much she might value getting a degree. Conversely, if she places absolutely no value on getting the degree (i.e., if value = 0), she will not apply to graduate school no matter how probable she thinks success would be.

Goals can be conceived at different levels of abstraction (Powers, 1973; Vallacher & Wegner, 1987). Some of these interpretations are specific and concrete; others are broad and abstract. For example, reading this passage may be relevant to several of your goals, such as "learning the material," "doing well on a test," or "preparing for graduate school." Generally speaking, goals conceived in broad terms assume greater value than do goals conceived in specific terms (Vallacher & Wegner, 1987).

At the most general level, people's goals center around who they want to be or what they want to become. For example, a person might be striving to "be independent" or even to "be a good person." Self-relevant goals like these have been studied by numerous researchers (e.g., Emmons, 1986; Klinger, 1977; Little, 1981; Zirkel & Cantor, 1990) and are often the most highly valued goals in life.

2.      *Preparation for Action*

Having adopted a goal, people prepare to attain it. This is the second stage in the self-regulation process. Here, people gather information, construct scenarios regarding possible outcomes, and engage in behavioral practice (rehearsal). In short, they design and prepare to implement a plan to achieve their goal. Of course, not all behavior fits this model. As noted earlier, sometimes people act impulsively without a good deal of forethought. Impulsive behavior of this type is not considered in this framework.

3.      *Cybernetic Cycle of Behavior*

The third stage in the self-regulation process has been conceptualized as a cybernetic cycle of action. Cybernetics is the study of how entities use information to regulate their actions (Wiener, 1948). It is also called control theory, as it emphasizes negative feedback control as the means by which machines (e.g., thermostats, guided missiles, cruise control settings in automobiles) as well as animals adjust their behavior to match some standard. In this context, negative feedback doesn't mean bad or unfavorable; it means discrepancy reducing.

A prototypic example from the field of engineering would be a thermostat and furnace. A thermostat is equipped to sense the temperature in a room. The room temperature is then compared against a desired value. If the present temperature in the room is below the desired value, the thermostat ignites the furnace, the heat comes on, and the discrepancy is reduced. When the standard is met, the furnace turns off.

Formally, this process is known by the acronym TOTE, as it involves four stages: (1) a test phase, in which a present value is compared against some relevant standard (the current temperature in the room is compared with the desired temperature); (2) an operate stage, in which an action is undertaken to bring the present value in line with the standard (the heat comes on if the room temperature is below the standard); (3) another test phase, in which the new value is compared with the standard (the new room temperature is compared with the desired temperature); and (4) an exit, or quit, stage, which occurs when the desired goal is reached (the furnace shuts off when the room reaches the selected temperature).

Table 6.1 describes this process, extending it to better capture the complexities of human behavior. The sequence begins after a person has selected a goal and has prepared to attain it. For purposes of illustration, imagine that someone has adopted the goal of running a mile in a specified time. After spending some time training (preparing), the person heads for the track. There, the person (1) runs a mile, (2) observes his behavior (times himself), and (3) compares his time against the adopted goal.

Table 6.1. The Processes That Make Up the Cybernetic Cycle of Behavior

1. Initial behavior (Run a mile)
2. Observe behavior (Time oneself)
3. Compare against some standard (Compare time against goal)
4. Expectancy (Form an expectancy that future behavior will reduce the discrepancy between present behavior and the standard)
5. Emotional reaction (React emotionally to discrepancy between performance and goal)
6. Behavioral adjustment (Continue striving toward goal or quit)

**Note: In this example, a person has set a goal of running a mile in a specified time. The table describes the various stages that occur once the person has prepared to reach the goal..**

Thus far, the sequence is no different than what was described with the thermostat. The complexities of human behavior enter into the analysis in the next two steps, labeled expectancy and emotional reaction in Table 6.1. Assume that the person has fallen short of his goal (i.e., his time was slower than his specified goal). The person then forms an expectancy about the likelihood that the discrepancy can be reduced. We will treat this expectancy as a binary, either-or decision; that is, the person has either a favorable or unfavorable expectation of being able to close the gap (Carver & Scheier, 1981).

At the same time the person is forming a cognitive expectancy, he will experience an emotional reaction to his performance. These emotional reactions can take many forms, ranging from positive emotions of pride and self-satisfaction to negative emotions of

disappointment and despair. Finally, based on the expectancies he has formed and the emotion he is experiencing, the person will readjust his behavior. If his expectancies of success are high and his emotional reaction is positive, he will probably continue working toward his goal, perhaps fine-tuning his training regimen. If his expectancies of success are low and his emotional reaction is largely negative, he may give up the goal altogether (and take up painting!).

B. *Three Self-Relevant Phenomena*

To this point we have looked only at a generic model of the self-regulation process, without considering where and how self-relevant processes come into play. We will explore this issue by first discussing three self-relevant processes that influence people's efforts to regulate their behavior. After describing these processes, we will examine their effect on motivated behavior.

1. *Self-Efficacy Beliefs*

People's beliefs about their ability to succeed exert a strong influence on the self-regulation process. Bandura (1986, 1989) refers to such beliefs as self-efficacy beliefs. People with high self-efficacy beliefs think they have the ability to succeed at a task, to overcome obstacles, and to reach their goals. People with low self-efficacy beliefs doubt their ability to succeed and do not believe they have what it takes to reach their goals. Importantly, these beliefs are only partly based on people's actual abilities. In any given domain, people with high self-efficacy beliefs are not necessarily more able than are those with low self-efficacy beliefs.

The classic tale of *The Little Engine That Could* illustrates these differences. The little blue engine that ultimately carried the toys over the mountain to the waiting children had high self-efficacy beliefs ("I think I can; I think I can"). Many of the other trains doubted their ability to make the trek over the mountain; they would be classified as having low self-efficacy beliefs. As we shall see momentarily, people's beliefs about their capabilities exert an important influence at virtually all stages of the self-regulation process.

2. *Possible Selves*

People's ideas about what they may be like in the future also influence motivated behavior. Markus and her colleagues (Markus & Nurius, 1986; Markus & Ruvolo, 1989) coined the term possible selves to refer to these beliefs. To illustrate, an aspiring gymnast might have a clearly articulated "Me winning an Olympic gold medal" possible self. This person is able to vividly imagine herself on the victory stand with the national anthem playing in the background and the crowd cheering while she receives her medal.

Tara Lipinski, an American figure skater, exemplifies this phenomenon. When she was 6 years old, Lipinski watched the 1988 Olympics on television. Mesmerized by the winning gold medalists, she had her father construct a cardboard podium so that she could stand on a pretend victory stand when the athletes received their medals. Less than 10 years later, at age 15, Lipinski became the youngest gold medalist in Olympic history, winning the women's figure skating championship at the Nagano Olympics.

Most of our possible selves are positive (Markus & Nurius, 1986), but people have negative possible selves as well. Typically, these negative possible selves involve fears of

what we may become if we fail to take some course of action. A recovering alcoholic, for example, may have a clear image of what he will be like if he returns to drinking. These negative possible selves can also serve a motivational function, to the extent that people are motivated to avoid them (Oyserman & Markus, 1990).

3.     *Self-Awareness*

A third variable of interest to a motivational analysis of behavior is self-awareness. As discussed throughout this text, the self has a reflexive quality: People are capable of taking themselves as the object of their own attention. But our attention is not always focused inward. Much of the time (perhaps most of the time) our attention is focused outward on the environment. This means that attentional focus is variable and that self-awareness is a transient state. Sometimes we are aware of ourselves; other times we are not.

Duval and Wicklund (1972) were among the first theorists to propose that differences in attentional focus have important motivational consequences. They argued that when people focus their attention inward (i.e., when they become self-aware), they tend to compare their present state with a relevant standard. Positive emotion arises when people believe they are meeting or exceeding a relevant standard; negative emotion arises when people believe they are falling short of a relevant standard. Duval and Wicklund further proposed that the negative emotion that arises from a perceived discrepancy is experienced as an aversive state of discomfort that people are motivated to reduce in one of two ways: (1) People can try to reduce the discrepancy by working to bring their behavior in line with the standard, or (2) they can attempt to avoid thinking about the discrepancy by shifting their attention away from themselves and onto the environment.

Let's look at an example. Imagine you are passing by a department store window when you see your reflection in the glass. As you gaze at yourself, you notice that your hair is not as neat as you would like it to be. You then run your fingers through your hair in an attempt to fix it. In the language of the theory, seeing your reflection in the window shifted your attention away from the environment and onto yourself. This attentional shift led you to notice a discrepancy between your present state and some relevant standard. The noticed discrepancy then engendered negative emotion, which you were motivated to reduce by fixing your hair. If, for some reason, you could not fix your hair, the theory would predict that you would try to reduce discomfort by shifting your attention away from your own reflection.

Carver and Scheier (1981) offered an elaboration and modification of these ideas. In agreement with Duval and Wicklund (1972), Carver and Scheier believe that self-awareness leads people to compare their present state with a relevant standard. Carver and Scheier do not, however, believe that the presence of a discrepancy inevitably produces discomfort in people. Instead, they contend that negative feelings arise only if the person believes the discrepancy cannot be reduced. In their model, then, it is not the presence of a discrepancy that determines the person's emotional reaction; rather, it is the person's expectancy about whether or not the discrepancy can be reduced.

Carver and Scheier (1981) also took issue with Duval and Wicklund's claim that behavioral regulation is driven by a desire to reduce an aversive state of discomfort.

Applying the principles of control theory, they argued that information processes, not emotional ones, guide the behavioral regulation process. For these theorists, "information regarding the outcome of one's action and the subsequent guidance it provides are [the basic elements of] self-regulation" (Carver & Scheier, 1982a, p.124). We will examine the importance of these claims in the sections that follow.

## II.     Putting The Self into Self-Regulation

Having defined three aspects of the self-regulation process (goal selection, preparation for action, and the cybernetic cycle of behavior) and discussed three self-relevant processes (self-efficacy beliefs, possible selves, and self-awareness), we are ready now to put these pieces together and look at how people's thoughts and feelings about themselves influence motivated behavior.

### A.     *The Self and Goal Selection*

We will begin by looking at what determines the goals people adopt in life. Earlier we noted that goals are adopted according to an expectancy-value framework. When making a choice among various courses of action, people take into account the likelihood that they will reach some goal and the positive value they place on doing so (relative to the negative value they place on failing to reach their goal).

Self-efficacy beliefs are directly relevant to the expectancy component in this model. All else being equal, people select goals they believe they can achieve. Because people with high self-efficacy beliefs assume that they have high ability, they adopt more challenging goals than do people with low self-efficacy beliefs. And because adopting more difficult goals is linked with superior performance (Locke & Latham, 1990), people with high self-efficacy beliefs tend to perform better on tasks than do those who doubt their ability to succeed.

People's ideas about themselves also influence goal selection through the value component in an expectancy-value model. What people value in life is tied to how they think about themselves. The person who thinks of herself as an intellectual values intellectual pursuits; the person who regards herself as an athlete values athletic pursuits. In more general terms, we can say that people value activities that match or reaffirm what they think they are like (Swann, 1990).

Possible selves also influence goal selection. People not only value activities that allow them to reaffirm who they think they are now, they also value activities that allow them to lay claim to possessing future identities. The youngster who clearly imagines himself pitching in the World Series one day values activities related to baseball. When choosing how to spend a Saturday afternoon, it is a pretty good bet this youngster will opt to play ball. This process is a bit different than the one just discussed, because here it is a future identity that the person is wishing to establish, not a present identity he is wishing to affirm.

There is another way in which possible selves influence motivation. This occurs when people tie goal attainment to the establishment of a desired identity. To illustrate, suppose I decide my house needs painting and I connect this goal to a future conception of "Me as handyman." I then set about the task of painting my house. The connection I have forged between the goal and how I think about myself means that having a freshly painted house is no

longer my only goal.  Painting the house is also important for what it says about me as a person; completing the goal allows me to lay claim to the desired identity of "handyman." At an even broader level, it might even signify that "I am a competent and responsible person who can accomplish what I set out to do." In this manner, goal attainment implicates how I think and feel about myself.  These connections add to the value of the goal, thereby increasing my motivation to succeed.

One way to think about these processes is in terms of the hierarchy of goals we discussed earlier.  Painting my house can be conceptualized at many different levels of abstraction.  At one level, I could be said to simply be painting the house.  At an even lower level, I could be said to be dipping my brush in paint; or lower still, to be tensing my muscles.  At higher levels, I could be said to be demonstrating my ability as a handyman, an artisan, or even a competent, worthwhile person.  Ordinarily, then, the more general and abstract our conception of an activity becomes, the more relevant self-processes become (Vallacher & Wegner, 1987).  By construing goals at very broad levels and tying them to how we think (or wish to think) about ourselves, we increase the value of goal attainment.

B.    *The Self and Preparation for Action*

Self-relevant phenomena also influence behavior during the preparation for action state.  Recall that during this stage, people gather information, plan and rehearse various courses of action, and engage in behavioral practice.  Self-efficacy beliefs have been linked to these processes.  People with high self-efficacy beliefs seek more information and spend more time practicing than do those who doubt their ability to succeed (Bandura, 1986, 1989).

At first, these effects may seem paradoxical:  Why should those who are highly confident of success spend more time in preparation than those who doubt their ability to succeed? The difficulty and familiarity of the task is relevant to this apparent contradiction. For tasks that are easy, familiar, or well learned, high self-efficacy beliefs do not necessarily lead to greater preparation.  But when a task is difficult or is being approached for the first time, people who believe they have what it takes to succeed spend more time and energy preparing to attain their goals than do those who are beset by doubt.

Self-efficacy beliefs and possible selves also influence the mental scenarios people construct prior to engaging in some activity.  Often people anticipate what is likely to happen before undertaking a task.  For example, athletes are encouraged to develop a clear mental picture of themselves succeeding before participating in an important competition. Self-efficacy beliefs influence these mental pictures.  People with high self-efficacy beliefs are more apt to imagine themselves succeeding than are those who doubt their ability to succeed.  The same is true for those who have clearly articulated positive possible selves.

Visual images of this sort can influence performance.  In general, people who are able to clearly visualize themselves attaining a goal are more likely to reach it than are people who have difficulty forming such a mental image (Feltz & Landers, 1983; Markus, Cross, & Wurf, 1990).  A study by Sherman, Skov, Hervitz, and Stock (1981) illustrates this effect.  In this study, participants were told that they were about to take an anagram test. Prior to taking the test, one-third of the participants were asked to spend a few minutes imagining they had already taken the test and had done very well.  Another one-third of the

participants were asked to spend a few minutes imagining they had already taken the test and had done very poorly. A third group of participants were in a control condition and were given no imagination instructions. Finally, participants rated their performance expectancies and took the anagram test.[1]

Figure 6.1 presents the results from the anagram task. The figure shows that participants who were asked to imagine themselves succeeding at the task solved more problems than did participants in the control condition, and that participants in the control condition solved more problems than did participants who were asked to imagine themselves failing at the task. These findings support the claim that the mental scenarios people construct prior to undertaking a task can influence their level of performance (Campbell & Fairey, 1985).
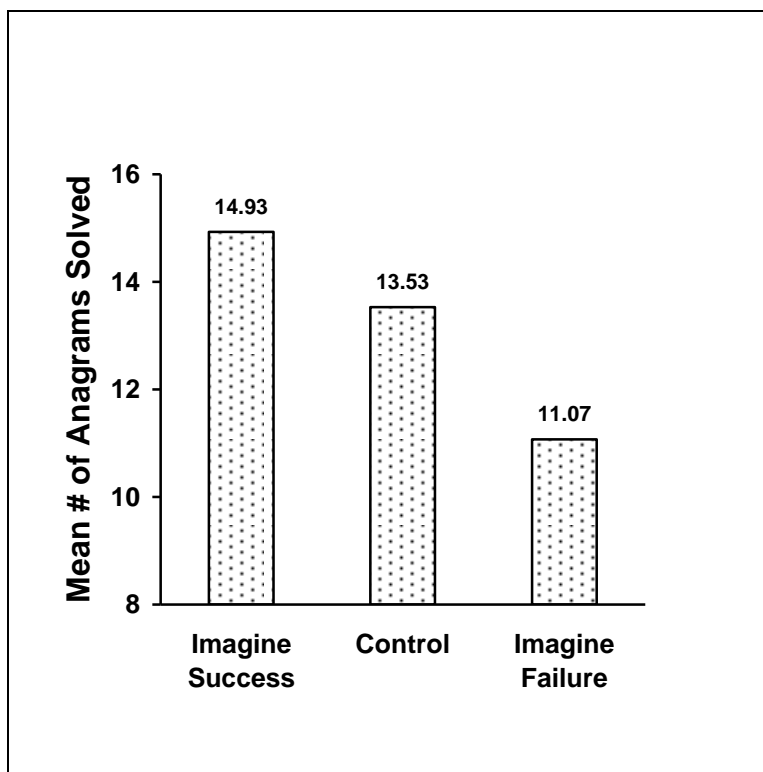


**Figure 6.1.** Visualization and task performance. **Participants who imagined themselves succeeding solved more problems than did control participants, and control participants solved more problems than did participants who imagined themselves failing. These findings support the claim that mental images of success or failure influence task performance. (Source: Sherman, Skov, Hervitz, & Stock, 1981,** *Journal of Experimental Social Psychology*, **17, 142–158**

## C.     *The Self and the Cybernetic Cycle of Behavior*

The next stage in the self-regulation process is the cybernetic cycle. Having adopted a goal and formulated a plan of action, individuals set out to achieve it. Generally speaking,

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[1] This is only a partial description of the study by Sherman et al. (1981). Additional experimental conditions were included but are not discussed here.

success at any activity depends on four factors: ability, effort, strategy, and luck (Heider, 1958). Whether I win my next tennis match, for example, depends on (1) how skillful I am relative to my opponent's skill; (2) how hard I try; (3) the strategies—both cognitive and behavioral—I use during the match; and (4) luck.

For purposes of our discussion, we will regard ability as a fixed quality—akin to aptitude. As we use the term, then, ability refers to actual underlying capacity. In this sense, it is more a property of personality than of the self. Luck resides outside of the person's influence, so it, too, is not a property of the self. But the other two factors that influence goal attainment, effort and strategy, are strongly influenced by self-relevant thoughts and feelings.

1.     *Self and Effort*

As concerns effort expenditure, self-efficacy judgments influence how hard and long people will work at attaining a goal. All else being equal, people work harder and persist longer when they believe they have the wherewithal to succeed than when they have doubts about their abilities (Bandura, 1986). This is particularly true when obstacles to success are encountered, which is the case with almost all important goals in life.

The important role these beliefs play in performance was documented by John White (1982) in his book *Rejection*. White notes that a common characteristic of many eminent scientists, artists, and writers is an unshakable belief in their abilities. These beliefs allowed them to weather rejection and overcome disappointment. Gertrude Stein, for example, submitted poems to editors for over 20 years before finally having one accepted. Similarly, over 20 publishers rejected James Joyce's book, *Dubliners*. A resolute belief in their ability allowed these writers to continue trying, ultimately leading them to succeed.

Possible selves have also been linked to this stage of the motivation process. People who can vividly imagine themselves reaching some goal work harder than do those who lack this capability. This may be particularly true when the positive possible self is accompanied by a negative possible self (Oyserman & Markus, 1990). Imagine, for example, a person who enters medical school with both a clearly articulated positive possible self (myself winning the Nobel prize in medicine) and a clearly articulated negative possible self (myself flunking out and ending up on the streets). The positive self-image provides a powerful incentive to succeed (a carrot) and the negative self-image provides a powerful reason not to fail (a stick). As long as the positive image is more powerful than the negative, the two images working in concert can boost motivation more than either one alone.

2.     *Self and Strategy*

Self-processes also influence the strategies people adopt in their pursuit of goals. People who believe they have the ability to succeed adopt more efficient and sophisticated problem-solving strategies than do those who doubt their ability to succeed (Bandura & Wood, 1989). Being high in self-efficacy also reduces anxiety and keeps one's attention focused on the task. This is particularly true when initial difficulties are encountered. Because anxiety itself can be debilitating and impair performance, the link between self-efficacy and anxiety reduction provides another means by which self-efficacy beliefs

promote success.

The ability to stay focused on the task at hand is related to another important factor that affects whether or not people achieve their goals.  This factor is the ability to suppress the attractiveness of competing activities.  For example, in order to finish writing this chapter, I need to put thoughts of alternative activities out of my mind.  Kuhl (1985) refers to this process as the shielding of an intention.  Bandura's (1986) research suggests that people who are confident of their abilities to succeed are better able to shield their intentions than are those who are plagued by doubt.  They are less apt to become distracted or enticed by competing activities.  This, then, constitutes another avenue through which self-efficacy beliefs affect performance.

3.      *Self and the Comparison Process*

After working on some activity, people monitor their behavior and compare their performance against some reference value or standard.  This comparison process is an important part of the self-regulation process.  It tells us whether or not we are making progress toward our goal and what, if any, kinds of adjustments need to be made.

Earlier we noted that self-awareness is an important element of this process.  People are more apt to compare their current behavior with a relevant standard when their attention is focused on themselves than when their attention is focused on the environment (Carver & Scheier 1981; Duval & Wicklund, 1972).

A study by Scheier and Carver (1983) tested the hypothesis that self-awareness increases the likelihood that people will compare their present behavior against a relevant standard.  The subjects in this study were asked to reproduce a series of geometric shapes from memory.  To help them with the task, they were allowed to momentarily view the geometric shape as many times as they wished.  The number of times subjects asked to view the shape was used as an index of the degree to which they were comparing their present behavior (i.e., their drawing) against a standard.

To determine whether self-awareness affects this comparison process, Scheier and Carver (1983) experimentally manipulated the extent to which the participants' attention was focused on themselves.  Half of the participants performed the task in front of a mirror, in which their own reflection was visually salient.  The remaining participants did not perform the task in front of a mirror.  On the assumption that seeing oneself in a mirror focuses one's attention on oneself, and that self-awareness leads people to compare their present behavior against a relevant standard, Scheier and Carver predicted that participants situated in front of the mirror would examine the geometric shapes more frequently than would participants who were not situated in front of the mirror.  This proved to be the case.  Although there are alternative explanations for this finding, the data are consistent with the claim that self-awareness leads people to compare their present situation with a relevant standard.

4.      *Self, Expectancies, and Behavioral Adjustment*

After comparing their performance with a relevant standard, people form an expectancy regarding the likelihood that future efforts will meet with success.  They then adjust their behavior.  Broadly speaking, this adjustment involves persistence (continued

striving toward the goal, perhaps with a different strategy) or disengagement (quitting or otherwise psychologically withdrawing from the task) (Carver & Scheier, 1981).

Self-relevant phenomena influence which route people take.  As noted earlier, people who have high self-efficacy beliefs persist longer and work harder at attaining their goals than do those with low self-efficacy beliefs (Bandura, 1986).  In a similar vein, people who have favorable possible selves persist longer than do people who have failed to forge a connection between themselves and their goals (Markus & Nurius, 1986).

Attentional processes also enter into the relation between expectancies and behavioral adjustment (Carver & Scheier, 1981).  When expectancies are favorable, self-awareness promotes high effort and high persistence; when expectancies are unfavorable, self-awareness leads to low effort and low persistence.  Formally, we say the two variables (expectancies and self-awareness) interact.  The effect of one variable depends on the other variable.  Whether self-awareness leads to more or less effort depends on whether expectancies are favorable or unfavorable.

An investigation by Carver, Blaney, and Scheier (1979) demonstrates these effects.  All of the participants in this experiment first performed poorly on a set of difficult anagram problems.  This was done to ensure that a discrepancy between current behavior and some standard (a desire to do well) was present.  The participants were then told that they would be taking a second test.  Half of the participants were led to believe that they were likely to do very well on the second test (high expectancy condition) and half were led to believe that they were likely to do very poorly on the second test (low expectancy condition).  After receiving this information, the second test was administered.  Half of the participants took the test while seated in front of a large mirror (the high self-awareness condition); the remaining participants took the test under controlled conditions, with no mirror present (the low self-awareness condition).  These manipulations enabled the investigators to experimentally vary participants' expectancies of success at the second task and their level of self-awareness.

The results of this study are shown in Figure 6.2. The figure shows that participants with high expectancies of success were more persistent when seated in front of a mirror, but that participants with low expectancies of success were less persistent when seated in front of a mirror.  These findings support the contention that self-awareness promotes persistence when expectancies are high but leads to withdrawal when expectancies are low.
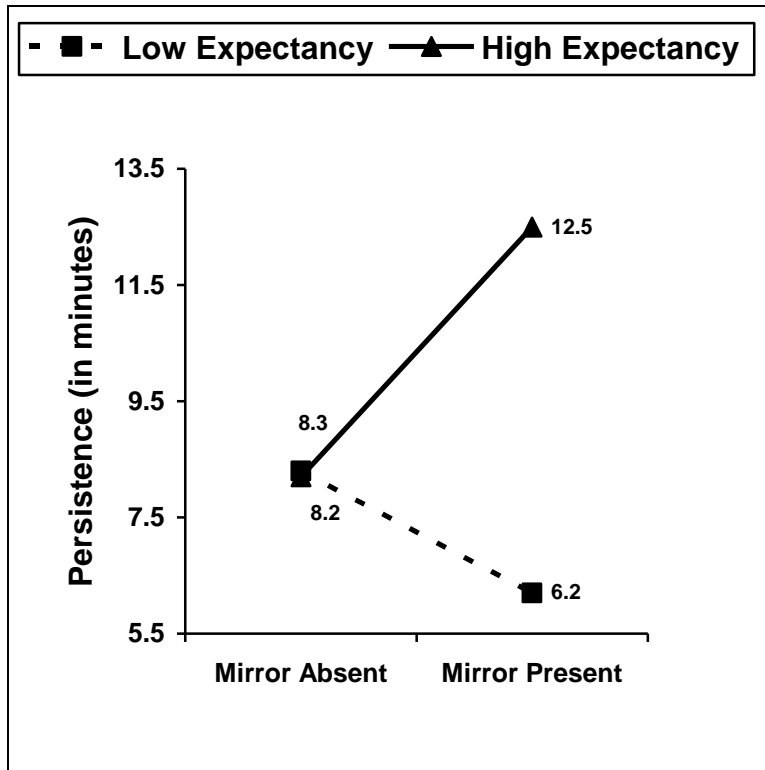
**Figure 6.2.**  Task persistence, expectancies, and self-awareness **Participants with high expectancies of success persisted longer at the task when self-awareness was high than when it was low, but participants with low expectancies of success did just the opposite.  These findings support the claim that self-awareness has positive effects when expectancies are favorable, but negative effects when expectancies are unfavorable.  (Source:  Carver, Blaney, & Scheier, 1979, *Journal of Personality and Social Psychology*, *37*, 1859–1870)**

Scheier and Carver (1982a) extended these findings in a subsequent investigation. They began by noting that people vary with regard to how much they generally think about themselves.  Some people are very aware of themselves and spend a lot of time examining their thoughts and feelings.  These individuals are said to be high in private self-consciousness.  Other people are not very attentive to themselves and are less introspective.  These individuals are said to be low in private self-consciousness.

Table 6.2 presents the scale Scheier and Carver used to measure these differences.

Table 6.2. Private Self-Consciousness Scale

Please indicate the extent to which each of the following items describes you by choosing one number on the rating scale next to each item.

|  | 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
|  | extremely uncharacteristic |  |  |  | extremely characteristic |

| | | | | | |
|---|---|---|---|---|---|
| 1. I'm always trying to figure myself out. | 0 | 1 | 2 | 3 | 4 |
| 2. Generally, I'm not very aware of myself. | 0 | 1 | 2 | 3 | 4 |
| 3. I reflect about myself a lot. | 0 | 1 | 2 | 3 | 4 |
| 4. I'm often the subject of my own fantasies. | 0 | 1 | 2 | 3 | 4 |
| 5. I never scrutinize myself. | 0 | 1 | 2 | 3 | 4 |
| 6. I'm generally attentive to my inner feelings. | 0 | 1 | 2 | 3 | 4 |
| 7. I'm constantly examining my motives. | 0 | 1 | 2 | 3 | 4 |
| 8. I sometimes have the feeling that I'm off somewhere watching myself. | 0 | 1 | 2 | 3 | 4 |
| 9. I'm alert to changes in my mood. | 0 | 1 | 2 | 3 | 4 |
| 10. I'm aware of the way my mind works when I work through a problem. | 0 | 1 | 2 | 3 | 4 |

**Note:  To determine your score, reverse the scoring for items 2 and 5 (0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0), and then add up your score to all 10 items.  The higher the score, the higher your level of private self-consciousness.  (Source:  Fenigstein, Scheier, & Buss, 1975, *Journal of Consulting and Clinical Psychology*, *43*, 522–528.**

Scheier and Carver (1982a) wanted to see whether individual differences in private self-consciousness produce effects comparable to those found with situationally induced variations in self-awareness.  Toward this end, they adapted the procedures of the Carver et al. (1979) study, using scores on the private self-consciousness scale in place of the experimental manipulation of self-awareness.  The findings paralleled the data displayed in Figure 6.2:  High scores on the private self-consciousness scale were associated with high persistence when expectancies were favorable, but low persistence when expectancies were unfavorable.

Self-awareness and expectancies not only influence task persistence, they also interact to affect task performance.  Self-awareness leads to superior performance

among people with high expectancies of success, but it leads to inferior performance among people with low expectancies of success (Brockner, 1979; Carver & Scheier, 1982b). These findings provide further evidence that self-focused attention can have beneficial effects when expectancies are favorable, but detrimental effects when expectancies are unfavorable.

5.    ***Self, Emotion, and Behavioral Adjustment***

Earlier we noted that in addition to forming expectancies of success, people also react emotionally to their task performances. They feel happy and proud or unhappy and dejected. The source of these feelings and the role they play in guiding behavior is the subject of some debate. One possibility is that the perceived distance from a goal is the critical determinant of emotion. Positive emotion arises when goals are judged to be within reach; negative emotion arises when goals are judged to be out of reach.

Carver and Scheier (1990) have offered an intriguing modification of this position. They have argued that the perceived rate of progress toward a goal is a more important determinant of emotion than is the absolute distance from a goal. Positive emotion arises when people believe they are making adequate progress toward their goals; negative emotion arises when people believe they are not making adequate progress toward their goals. This means that people can still feel good when they are far from their goals, as long as they perceive that they are making progress. For example, an aspiring pianist who has "playing Carnegie Hall" as her goal may feel elated after her first piano recital because it signifies that she is on her way. Research testing these ideas has just begun, but the evidence suggests that both factors (i.e., distance from the goal and progress toward it) influence emotion (Hsee & Abelson, 1991; Hsee, Salovey, & Abelson, 1994).

Another unresolved issue is the extent to which the emotional reaction (whether it be determined by distance from the goal or rate of progress) guides behavioral adjustment. As noted earlier, Duval and Wicklund (1972) proposed (1) that negative emotion arises whenever people become aware of a discrepancy between their current state and a relevant standard and (2) that this negative emotion is the main force that drives further attempts at discrepancy reduction. A similar position has been espoused by Pyszczynski and Greenberg (1987b).

Bandura (1986) has also argued that emotions play a critical role in the behavioral regulation process. In addition to discussing the role of negative emotions, he emphasizes that positive emotions, such as pride and self-satisfaction, motivate behavior by virtue of their capacity to function as positive reinforcers. The idea is that people are motivated to experience these positive emotions and that they regulate their behavior in an attempt to maximize these feelings of self-worth. For Bandura, these feelings, not information, govern people's behavior.

Carver and Scheier (1981) disagreed with these positions. They maintain that informational factors, not emotional ones, guide the self-regulation process. If people believe that further efforts at discrepancy reduction will be successful, they persevere; if people do not believe that further efforts at discrepancy reduction will be successful, they withdraw and quit. People may also experience various emotions when making these decisions, but the emotions themselves play no role in guiding behavior. The only

important factor to consider, according to Carver and Scheier, is the expectancy of success.

6.      *Summary*

To summarize, the self is implicated in virtually all aspects of the self-regulation process. Table 6.3 documents this involvement. Self-relevant phenomena influence (1) goal selection, via their effect on people's values and expectancies; (2) preparation for action, via their effect on information seeking, practice, and mental rehearsal; and (3) goal attainment, via their effect on various aspects of the cybernetic cycle of behavior.

Table 6.3. **Summary of the role self-relevant phenomena play in the self-regulation process**.

I. **Goal Selection** (Within an expectancy-value framework)

   A. Self and Expectancies

      1. Self-efficacy beliefs:  People undertake activities they believe they can successfully complete and avoid activities they think they cannot successfully complete.

      2. Possible selves:  People who can vividly imagine themselves succeeding hold higher expectancies of success than do those who lack such an image.

   B. Self and Values

      1. Current self-conceptions imply values (e.g., a person who thinks of herself as an artist values artistic pursuits).

      2. Possible selves (future self-conceptions) influence values.  People want to think of themselves a certain way.  Anything that promotes these possible selves assumes value.  For example, attending medical school assumes value for a person who wishes to think of himself as a physician.

      3. Goals construed at broad, abstract levels almost always implicate the self.  For example, a person may be striving to "be independent" or to "be a good person."

II. **Preparation for Action**

   A. Gather Information:  People with high self-efficacy beliefs engage in greater information-seeking than do those who doubt their ability to succeed.

   B. Mental Rehearsal:  People with high self-efficacy beliefs and people with clearly articulated possible selves are able to imagine themselves succeeding.  These images, in turn, generally make success more likely.

   C. Practice:  People with high self-efficacy beliefs spend more time in preparation than do those with low self-efficacy beliefs.

III. **Cybernetic Cycle of Behavior**

   A. Initial Behavior

      1. Ability — a component of personality, not self-relevant.

      2. *Effort* — self-efficacy beliefs influence how long and how hard people try.

      3. *Strategy* — self-efficacy beliefs and possible selves influence strategies, particularly the ability to tune out distracting thoughts and suppress competing activities.

      4. *Luck* — not influenced by self.

   B. Observe Behavior (Not directly related to self-relevant processes).

   C. Compare against some standard: Self-focused attention:  People are more apt to compare their current behavior with a relevant standard when self-awareness is

high.

D.  Expectancy

1.  Self-efficacy beliefs:  People who believe they have the ability to succeed are more optimistic that they can overcome obstacles to goal attainment than are those who doubt their ability to succeed.

2.  Self-awareness: Self-awareness and expectancies interact to influence whether a person persists or withdraws.  When expectancies are favorable, self-awareness leads to persistence; when expectancies are low, self-awareness leads to withdrawal.

E.  Emotional reaction

1.  Duval and Wicklund (1972) believe that emotion is a critical component of the self-regulation process.  Becoming aware of a discrepancy produces negative emotion which people are motivated to reduce.

2.  Bandura (1986) also believes that emotion is critical to the self-regulation process.  He has emphasized that self-relevant emotions (e.g., feelings of pride for finishing a job) serve as powerful incentives and reinforcers.

3.  Carver and Scheier (1981) believe that emotion is not a critical component of the self-regulation process.

F.  Behavioral Adjustment

## III. Applications to the Achievement Domain

The theoretical ideas we have been discussing in this chapter have been applied to a wide range of human behaviors.  One of the most commonly studied areas is performance in achievement-related situations.  In this section, we will consider three ways in which people's thoughts and feelings toward themselves influence their performance at achievement tasks.

### A. Defensive Pessimism

I had a friend in college who used to exasperate me.  Before every test, she would tell me how nervous she was and how bad she was going to do.  Invariably, she would then proceed to set the curve for the test by getting the highest score.  The first few times this happened, I figured my friend was just trying to save face in case she did poorly on the test.  But as I got to know her better, I realized this strategy of expecting the worst was an important element in her success.

Norem and Cantor (1986; Cantor & Norem, 1989) coined the term defensive pessimism to describe my friend's behavior.  Despite having a history of success in achievement situations, defensive pessimists doubt their ability to succeed in the future.  Instead of imagining themselves doing well, they exaggerate their odds of failing and dwell on all the ways things could go wrong.

This does not mean that defensive pessimists adopt a passive, "what's the use" attitude.  In fact, just the opposite is true.  Focusing on potential problems prods defensive

pessimists to make sure these calamities don't occur. This is the key component to making defensive pessimism work. Defensive pessimists feel anxious and out of control when they approach a performance situation. To quell their anxiety, they painstakingly work through all the ways things could go wrong, and then "cover their bases" by taking active steps to avoid these pitfalls. In this manner, imagining the worse motivates the defensive pessimist to work harder and perform better.

An investigation by Spencer and Norem (1996) showed how important these strategies are to a defensive pessimist. Spencer and Norem had participants perform a test of manual dexterity (a dart-throwing task). Before the performance, participants were randomly assigned to one of three mental rehearsal conditions. Participants in a mastery-imagery condition were asked to imagine themselves turning in a stellar performance, entirely free of mistakes. Participants in the coping-imagery condition were asked to imagine they had made some mistakes during the performance, and then to think about how they would recover from those mistakes and make necessary corrections. Another third of the participants (i.e., those in a relaxation-imagery condition) were instructed to relax prior to the performance.

Spencer and Norem (1996) reasoned that although most people perform best when they imagine themselves succeeding, defensive pessimists perform best when they are given the opportunity to plan for how things could go wrong. This proved to be the case. Defensive pessimists performed better in the coping-imagery condition than in either of the other two conditions. These results show that high expectations of success do not always improve performance. For some people, imagining worst-case scenarios can be beneficial, as long as this pessimism is accompanied by active attempts to find solutions.

B.  ***Goal Orientations in Achievement Settings***

Expectancies of success are not the only factor that influences performance in achievement settings. The goals individuals pursue also affect performance. Research by Carol Dweck and her colleagues is particularly relevant to some of the ideas we have been discussing in this chapter (for reviews, see Dweck, 1991; Dweck & Leggett, 1988).

Dweck's early work was conducted with young children. At the beginning of an experimental session, the children were given several problems to solve. All of these problems were of easy or moderate difficulty, and the children were able to solve most of them. Later, the children were given a very difficult problem to solve. Dweck noted strong differences in how the children responded to this challenge. Some of the children exhibited signs of helplessness. These helpless-oriented children (as Dweck refers to them) became frustrated and angry, and they indicated that they did not want to continue working on the task. Other children were more mastery oriented. They became interested and engaged in the activity, and they expressed a strong desire to keep working on the task, often increasing their efforts to solve the problem. Interestingly, these differences did not depend on ability level. On average, the helpless-oriented children did not have lower ability (as measured by performance on the set of initial problems) than did the mastery-oriented children.

The key question to Dweck and her colleagues was "why?" Why do some children

respond to obstacles with frustration and withdrawal, while others respond to obstacles with excitement and engagement? Dweck hypothesized that the goals individuals adopt when entering an achievement situation guide the way they respond to performance feedback (see also, Ames & Ames, 1984; Nicholls, 1984).  According to Dweck, helpless-oriented children adopt performance goals in achievement settings.  Their goal is to demonstrate competence—to prove to themselves and others that they are intelligent and capable.  In contrast, mastery-oriented children adopt learning goals in achievement settings.  Their goal is to cultivate competence—to acquire knowledge, attain skills, and grow and develop as an individual.

Dweck's research has shown how these different goal orientations shape people's reactions to achievement setbacks (Dweck & Leggett, 1988).  People with performance goals generally respond poorly to obstacles and setbacks.  They view poor performance as an indication that they lack ability, and they disengage from the task and quit.  People with learning goals show a different reaction.  Instead of attributing failure to a lack of ability, they attribute it to insufficient effort or an ineffective strategy; and instead of viewing setbacks as threats to be endured, they view them as challenges to be mastered.

In her more recent work, Dweck has considered how these different goal orientations develop.  She believes that the goals are a product of the theories people hold about the nature of intelligence.  People with performance goals hold an entity theory of intelligence.  They view intelligence as a fixed, immutable quality.  Intelligence is something you either have or don't have (like blue eyes), and your goal in an achievement setting is to demonstrate that you have it.  People with learning goals adopt an incremental theory of intelligence.  They view intelligence as a fluid, malleable quality that can be developed and cultivated.  This perspective leads them to enter achievement situations with the goal of increasing their ability level, of becoming more proficient and skillful.

Table 6.4 summarizes the two different orientations and shows how different theories about the nature of intelligence influence people's performances in achievement settings.  One thing is missing from Table 6.4, however.  Performance goals aren't always maladaptive.  Elliott and Dweck (1988) found that people who hold performance goals and believe their ability is high actively seek opportunities to demonstrate this competence and do not shy away from challenging tasks.  This suggests that performance goals are detrimental only when they are accompanied by low perceptions of competence (see also Harackiewicz & Elliot, 1988).

**Table 6.4.** Summary of Helpless- and Mastery-Oriented Achievement Orientations

| Achievement Orientation | Theory of Intelligence | Dominant Goal | Attributions | Task Preference | Persistence and Performance |
|---|---|---|---|---|---|
| Helpless | Entity (Intelligence is fixed) | Performance (goal is to demonstrate competence to self and others) | Ability | Avoid challenging tasks that threaten to reveal low ability | Quit easily in the face of difficulty; show performance decrements when confronting obstacles and setbacks. |
| Mastery | Incremental (intelligence is malleable) | Learning (goal is to cultivate competence and increase skills) | Strategy or effort | Seek challenging tasks that foster learning and skill acquisition | Remain focused on task in the face of difficulty; maintain a high level of performance when confronting obstacles and setbacks. |

C.     *Intrinsic versus Extrinsic Motivation*

The goal orientations Dweck describes are closely related to another issue of importance in achievement settings. This is the issue of whether behavior is motivated from within (i.e., intrinsically motivated) or driven by a desire to gain external rewards (i.e., extrinsically motivated). People who are intrinsically motivated strive to do well in achievement situations for personal reasons. They take pleasure in learning and find the educational process to be inherently interesting and enjoyable. People who are extrinsically motivated strive to do well in achievement situations in order to gain external rewards. These rewards can include positive attention from teachers, parents, or peers, or material rewards, such as money or related privileges (e.g., you can use my car if you maintain a 3.0 average).

1.     *Extrinsic Motivation Impairs Task Performance*

Although the differences are not always large, students who are extrinsically motivated tend to perform worse in school than students who are intrinsically motivated (Deci, Vallerand, Pelletier, & Ryan, 1991). An extrinsic orientation can also dampen creativity. In one experiment, Amabile (1985) randomly assigned some students in a creative-writing class to focus on extrinsic reasons for writing (e.g., the market for freelance writers is expanding; you enjoy public recognition of your work). Another group was led to focus on the intrinsic rewards associated with writing (e.g., I write because I like to express myself; I feel relaxed when I write). A third group was given no instructions. Later, all three groups of students wrote a poem, and the poems were rated for creative expression by an independent set of judges.

Figure 6.3 shows that students who were in the extrinsic motivation condition wrote poems that were less creative than those written by students in the other two conditions. Along with the results from other investigations (e.g., Amabile, 1983; Amabile, Hill, Hennessey, & Tighe, 1994), these findings reveal that extrinsic motivation can stifle creativity.
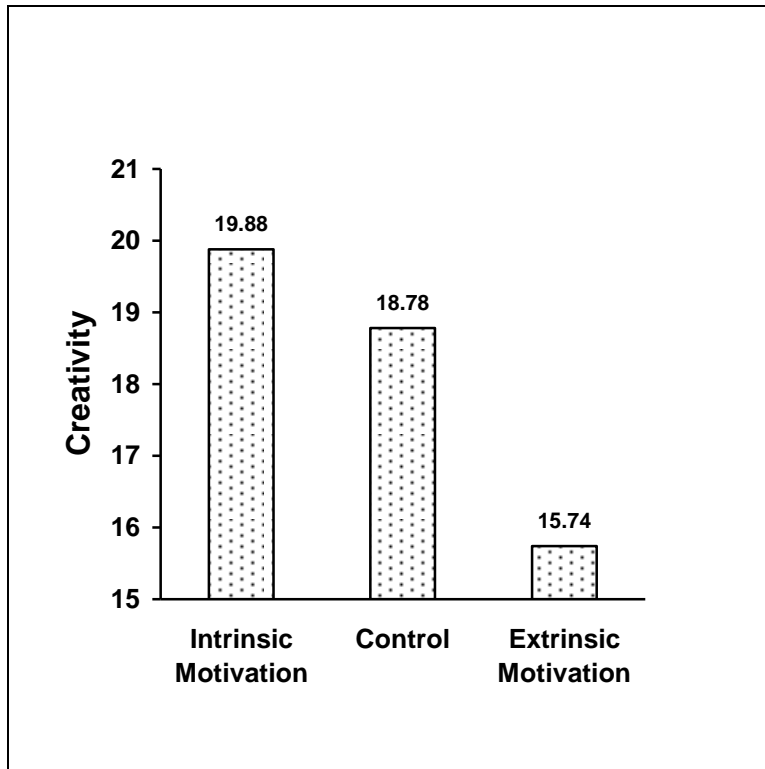


**Figure 6.3.** Creativity and motivation. **Students in a creative-writing class were asked to write a poem under one of three conditions: Some were instructed to focus on intrinsic enjoyment, some were instructed to think about extrinsic incentives, and some were in a control condition and were given no instructions. Later, the poems were judged for their creativity. The data show that students who wrote poems after thinking about extrinsic incentives wrote less creative poems than students in the other two conditions. (Source: Amabile, 1985,** *Journal of Personality and Social Psychology*, *48,* **393-399)**

2. ***Extrinsic Motivation Undermines Intrinsic Interest***

Thinking too much about external rewards can have other negative consequences. For example, Lepper, Greene, and Nisbett (1973) found that students who perform an activity with the expectation of receiving an award subsequently show less interest in the activity than students who perform the activity without the promise of an external reward. In this study, nursery school children were encouraged to draw with some felt-tip markers. One-third of the children were in the expected-reward condition. These children were told they would receive a reward (in the form of a special certificate) if they drew with the markers. Another one-third of the children were in the unexpected-reward condition. They also received a reward for playing with the markers, but they didn't know they were going to get it when they chose to play with the markers. Finally, children in a control condition neither expected nor received an award for playing with the markers.

Several days later, the children were brought back into the laboratory and were given the opportunity to play with a number of attractive toys, including the felt-tip markers.   No rewards were mentioned or administered during this phase of the experiment.  To measure intrinsic interest, the researchers noted the amount of time the children spent playing with the markers during this free period.  Consistent with the claim that external rewards can dampen intrinsic motivation, the data shown in Figure 6.4 reveal that the children in the expected-reward condition spent less time playing with the markers during the second stage of the experiment than did children in the other two conditions (for related research, see Boggiano & Main, 1986; Higgins, Lee, Kwon, & Trope, 1995).
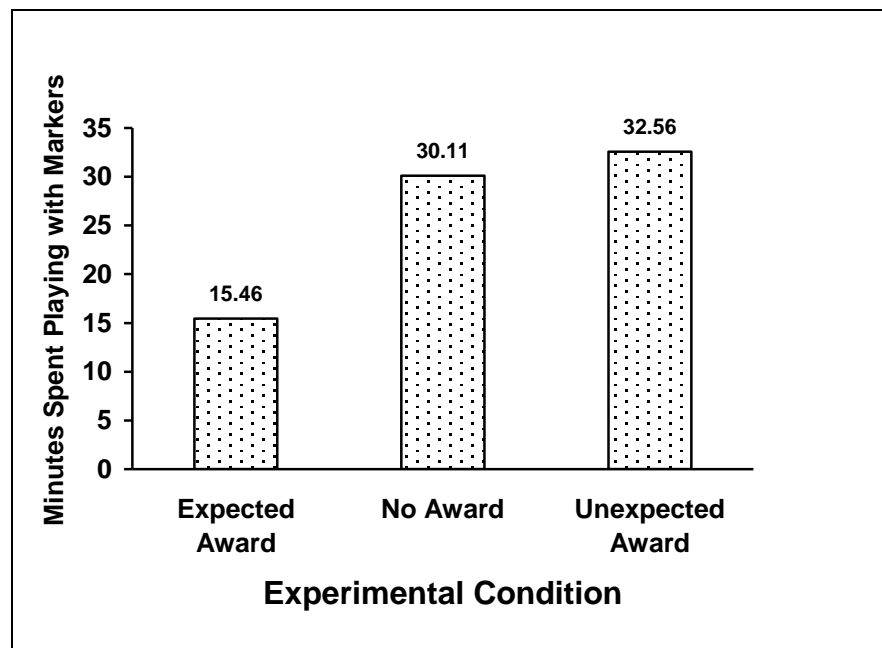


**Figure 6.4.** Rewards and the Undermining of Intrinsic Motivation. **Children who earlier had received an expected reward for playing with felt-tip markers subsequently showed less interest in the markers than did children who received either an unexpected reward or no reward at all.  These findings document that expected rewards can undermine intrinsic motivation. (Source:  Lepper, Greene, & Nisbett, 1973,** *Journal of Personality and Social Psychology,* *28,* **129-137)**

Fortunately, external rewards do not always undermine intrinsic motivation.  Deci (1975) noted that external rewards contain two components.  On the one hand, they can function as a bribe and reduce freedom by coercing people to behave in ways they normally would not.  At the same time, external rewards can provide important information about the quality of one's efforts and accomplishments (as when a person receives a reward for trying hard or for turning in an exemplary performance).  Rewards appear to undermine intrinsic interest *only* when the controlling aspect of the reward is more prominent than its informational value (Ryan, Mims, & Koestner, 1983).  This means that rewarding someone for a job well done does not necessarily diminish the person's enthusiasm for performing the task (Eisenberger, Armeli, & Pretz, 1998; Eisenberger, Rhoades, & Cameron, 1999).  The same is true of praise.  Verbal reinforcement heightens enjoyment when it is sincere and promotes choice and autonomy (Henderlong & Lepper, 2002), but dampens enthusiasm

when it is controlling and conditional (Assor, Roth, & Deci, 2004).

It is interesting to consider this distinction with respect to a reading program being conducted in Tifton, Georgia.  This town has undertaken a quest to become the Reading Capital of the World (http://www.readingcapital.com).  To achieve this aim, the town offers monetary rewards to citizens who read.  The program is a huge success, as the town's inhabitants are reading much more than they did before the program was initiated.  The question arises, however, as to whether rewarding people in this manner will undermine their intrinsic enjoyment of reading.  The developers of this program think not.  They note that the rewards are given only when readers demonstrate competency.  To receive a reward, the reader must pass a comprehension test for every book he or she reads.  Because these rewards convey information about performance standards, they are unlikely to dampen people's enthusiasm for reading.

## IV.   **Self-Regulation Failure**

To this point, we have focused on how self-relevant processes promote successful self-regulation.  People are not always successful in their efforts to regulate their own behavior, however.  Indeed, many of the problems that currently plague American society—alcoholism, domestic violence, drug use, drunk-driving, excessive gambling, smoking, and unsafe sexual practices—reflect, to some extent, people's inability to control themselves.  Even our national debt represents an inability to control our collective spending.

Using principles discussed in this chapter, Baumeister, Heatherton, and Tice (1994; see also Baumeister & Heatherton, 1996) have developed a theoretical model of self-regulation failure.  The model begins by assuming that people must often choose between conflicting goals.  A person wants to save for the future and buy a new CD player; a person wants to act responsibly and gratify sexual desires.  Successful self-regulation occurs when higher-order goals and desires (the desire to save money and act responsibly) override or supersede lower-order impulses and desires (the desire to own a new stereo or satisfy sexual urges).

As noted earlier, higher-order goals are ones that involve self-images (Vallacher & Wegner, 1987).  They represent the way people wish to think of themselves; the kind of person they want to be.  Successful self-regulation requires activating these superordinate, higher-order goals and making sure they are sufficiently strong to guide behavior.

Baumeister et al.  (1994) refer to this process as one of transcendence.  Transcendence occurs when individuals are able to see beyond the present situation (which may offer immediate gratification) and focus upon more distant goals involving desired self-images.  A person who focuses on how smoking will kill him in the long run is engaging in transcendence.  He is focusing on distant concerns and ignoring the immediate gratification a cigarette would bring.

Finally, Baumeister et al.  (1994) assume that a person's ability to transcend the present situation and override impulses and urges varies as a function of situational factors.  These factors include fatigue, stress, and distraction.  This approach does not deny that some individuals generally are more proficient at self-control than others (Mischel, Shoda, & Peake, 1988); it simply underscores that several factors can impede everyone's ability to regulate their

own behavior.

A.    *Negative Effects of Too Little Self-Awareness*

One of these factors is a lack of self-awareness. As noted throughout this chapter, successful self-regulation demands that people compare their behavior against a relevant standard, and this comparison process is more apt to occur when people are aware of themselves. Anything that diminishes self-awareness, then, can hinder self-regulatory efforts.

1.    *Deindividuation and Moral Behavior*

Deindividuation illustrates this effect. Deindividuation occurs when people lose their sense of individuality. Deindividuation tends to occur in group situations, and it is often accompanied by a loosening of moral behavior. For example, deindividuation has been shown to increase aggression (Mullen, 1986). The kind of rioting that can characterize a mob provides a suitable example. Being anonymous (or deindividuated) by virtue of their immersion in a group, normally law-abiding citizens can run amok and cause considerable financial and physical damage. The riots that sometimes occur following soccer games in Europe provide a fitting example of this phenomenon.

Deindividuation can also give rise to other forms of antisocial behavior. In one study, Diener and Wallbom (1976) gave college students an alleged intelligence test. The students were told they had only 5 minutes to work on the test, but that the experimenter would not be back for 10 minutes. This gave the students an opportunity to cheat on the test by working past the allotted time. Half of the students were seated in front of a large mirror while they worked on the test (and thus were in a state of heightened self-awareness); the remaining students (those in the low self-awareness condition) did not sit in front of a mirror. In accordance with the claim that diminished self-awareness undermines moral behavior, 71 percent of the students who took the test in the low self-awareness condition cheated on the test by working past the allotted time, but only 7 percent of the students who took the test in the high self-awareness condition did so. These and similar findings (e.g., Beaman, Klentz, Diener, & Svanum, 1979) suggest that people are less likely to act on higher-order moral principles when self-awareness is low.

2.    *Alcohol Consumption and Self-Regulatory Failure*

Alcohol is implicated in many instances of self-regulatory failure. Domestic violence, aggression, unsafe sexual practices, and many other troublesome behaviors are more likely to occur when people have been drinking. There are many explanations for this effect, but one is that alcohol reduces self-awareness (Hull, 1981). When intoxicated, individuals become less aware of themselves, and they fail to compare their present behavior with appropriate, higher-order standards. Consequently, they do things they would ordinarily not do.

Hull, Levenson, Young, and Sher (1983) conducted a study to see whether alcohol reduces self-awareness. The participants in this study were asked to give a short speech, and the researchers took note of how often participants referred to themselves during the speech. Half of the participants consumed alcohol before giving the speech; the rest of the participants consumed tonic water. Consistent with the notion that alcohol reduces self-awareness, participants who drank alcohol referred to themselves less often during their

speeches than did participants who drank tonic water.  Because self-awareness is an essential component of successful self-regulation, alcohol's ability to diminish self-awareness can explain why it is often associated with self-regulation failure.

There is another, related, way in which alcohol can lead to self-regulatory failure. Steele and Josephs (1990) have argued that alcohol restricts people's attention to immediate cues and reduces their ability to think abstractly.  This tendency (which Steele and Josephs refer to as alcohol myopia) may explain why people fail to consider the broader implications of their actions when intoxicated.  Instead of focusing on the general implications of their behavior (e.g., on what kind of person they want to be), they focus on the immediate pleasures of the action they are contemplating.  In more formal terms, we can say that alcohol interferes with the transcendence process identified by Baumeister et al. (1994).  This interference may explain why alcohol is implicated in so many instances of self-regulatory failure, including date rape and unsafe sexual practices (MacDonald, Zanna, & Fong, 1996).

Unfortunately, the positive effects of alcohol are also alluring.  Alcohol not only makes people feel better physically (e.g., it relaxes them), it also makes people feel better about themselves.  Banaji and Steele (1989) found that many people evaluate themselves more positively after they have ingested moderate amounts of alcohol.  People also tend to drink after they have suffered a threat to their self-image, and doing so helps them feel better about themselves (Steele, Southwick, & Critchlow, 1981).  These effects provide powerful psychological reasons for drinking alcohol.

B.    *Negative Effects of Too Much Self-Awareness*

In the preceding section we discussed situations in which a lack of self-awareness can impair self-regulation.  Somewhat paradoxically, too much self-awareness can also be harmful.

1.    *Choking*

Choking provides one instance of this effect.  Choking occurs when individuals fail to perform at optimal levels under conditions in which optimal performance is desired. Athletic competitions provide the prototypic example.  The annals of sports lore abound with fabled stories of teams or individuals who have been in a winning position only to lose because of a series of flagrant errors.  For example, the Australian golfer, Greg Norman, led by six strokes going into the final round of the 1996 Masters Golf Tournament.  Despite having this commanding lead, Norman ended up losing by five strokes, largely due to a spate of errors he committed.

Baumeister (1984; Baumeister, Hamilton, & Tice, 1985) linked choking to heightened self-awareness.    Baumeister argued that choking occurs when situational pressures (such as those induced by competition or the presence of an audience) heighten self-awareness.  This increased attention to oneself leads people to compare their present behavior with a relevant standard and to think too much about what they're doing.   This, in turn, interferes with the execution of well-learned, highly demanding skills.  Interestingly, both anticipation of success (Baumeister & Steinhilber, 1984) and fear of failure (Schlenker, Phillips, Boniecki, & Schlenker, 1995) can increase self-awareness and produce choking.

2.     ***Stereotype Threat***

Steele and Aronson (1995) have used these ideas to explain racial differences in academic performance.  There is considerable evidence that many Black Americans fail to perform up to their intellectual potential in achievement situations (Steele, 1992).  Steele and Aronson suggested that heightened self-awareness may account for this effect.  They argued that Black Americans feel intense pressure to perform well at achievement tasks in an attempt to disconfirm cultural stereotypes of intellectual inferiority.  This pressure, which Steele and Aronson refer to as stereotype threat, increases self-awareness and ultimately undermines performance (i.e., causes choking).

To test their ideas, Steele and Aronson administered an intellectual test to Black and White college students.  Before taking the test, half of the students were instructed to indicate their race on a pretest questionnaire; the other half of the students were not asked to indicate their race.  Steele and Aronson assumed that asking students to indicate their race would make race salient and that, for Black students, racial salience would lead to heightened self-awareness and poor task performance.

Figure 6.5 presents the results for the task performance measure.  After adjusting the scores for preexisting differences in verbal ability, Steele and Aronson found that African Americans who indicated their race performed worse on the task than African Americans who did not indicate their race.  The opposite tended to occur among European Americans, although the effect was not significant.  Although these findings do not establish that stereotype threat explains racial differences in achievement, they do show that African Americans suffer performance impairments when their race is salient (Sackett, Hardison, & Cullen, 2004).
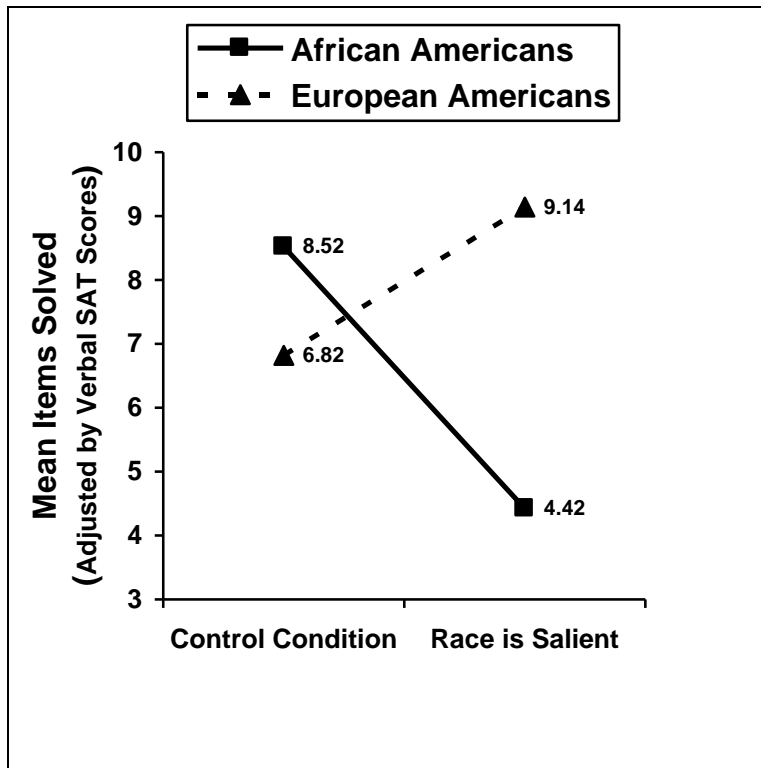
**Figure 6.5.**  Stereotype Threat and Test Performance**.  African Americans performed just as well as European Americans in the control condition, but performed more poorly when European Americans when they had first been asked to think about their race.  These findings suggest that African Americans may sometimes suffer from stereotype threat in achievement-relevant situations. (Source: Steele & Aronson, 1995,** *Journal of Personality and Social Psychology, 69,* **797-811, Study 4)**

Stereotype threat primarily affects students who identify strongly with doing well in school.  If success means very little to a student, the student won't usually be vulnerable to stereotype threat.  Because good students care most about doing well, this means that stereotype threat will have its greatest effect on the most promising students (Pronin, Steele, & Ross, 2004; Schmader, 2002).  Moreover, stereotype threat can occur even when students have substantial confidence in their own ability to succeed.  The stereotype applies to the group, not the individual, and a student needn't accept the stereotype in order to be susceptible to its negative effects.  It is simply the threat of being judged by the stereotype that undermines performance.  (Aronson, Lustina, Good, Keough, Steele, & Brown, 1999; Steele, 1997).

Finally, you don't have to be African American to suffer from stereotype threat.  The phenomenon can occur for any group that is characterized by a negative stereotype.  For example, common stereotypes maintain that European Americans are inferior to Asians in science and engineering and inferior to African Americans in athletic ability.  Consistent with Steele's theory of stereotype threat, research has found that the task performance of European Americans suffers in these areas when they are reminded of these stereotypes (Stone, Lynch, Sjomeling, & Darley, 1997).

Fortunately, several steps can be taken to reduce the negative effects of stereotype

threat. First, stereotype threat can be attenuated by the presence of positive role models (Marx, & Roman, 2002; McIntyre, Paulson, & Lord, 2001). Apparently, being reminded that other people have persevered inspires minority students to rise above the stereotype and perform their best. Stereotype threat is also reduced when students are encouraged to view intelligence as a malleable quality that can be cultivated, rather than a fixed capacity one either has or does not possess (Aronson, Fried, & Good, 2002; Good, Aronson, & Inzlicht, 2003).

3.    ***Self-Destructive Behavior As Escape from Self-Awareness***

Excessive self-awareness has also been implicated in acts of self-destruction (Baumeister & Scher, 1988). Substance abuse provides the best example. Earlier we noted that alcohol reduces self-awareness (Hull, 1981) and that drinking alcohol can make people feel better about themselves (Banaji & Steele, 1989). Many people who drink to excess do so for these reasons. They turn to alcohol as a means of reducing self-awareness, particularly when things are going poorly in life (Hull & Young, 1983). Nearly 1,000 years ago, the Persian poet Omar Khayyam described the experience in this way:

> I drink not from mere joy in wine nor to scoff at faith—no, only to forget myself for a moment, that only do I want of intoxication, that alone.

Baumeister and Scher (1988) have argued that a desire to reduce self-awareness plays a role in many other acts of self-destruction (e.g., smoking, thrill seeking, and masochism). When self-awareness becomes too intense and aversive, people turn to these activities in an attempt to escape from themselves.

A desire to escape self-awareness may even underlie suicide. According to Baumeister (1990), suicide can arise when negative experiences, such as a business failure or the break-up of an important interpersonal relationship, lead to an intense state of heightened self-awareness. When other efforts to eliminate this aversive state fail to bring relief, people begin to contemplate suicide. For these people, suicide represents a last-ditch attempt to escape an acute state of self-awareness.

V.     **Chapter Summary**

In this chapter we explored how self-relevant processes influence motivated behavior.  We began by outlining a general model of self-regulation.  This model is concerned with the goals people adopt and the manner in which people go about trying to attain their goals.  We then identified three self-relevant processes that influence self-regulation.  These are (1) self-efficacy beliefs (the extent to which people believe they have the ability to reach their goals); (2) possible selves (people's ideas about what they will be like in the future); and (3) self-awareness (the extent to which people's attention is focused on themselves or is focused on the environment).  Finally, we reviewed research showing that these phenomena affect virtually every aspect of the self-regulation process.

Next, we discussed task performance in achievement situations.  Most people function best when they imagine themselves succeeding and have high expectancies of success.  But some people (called defensive pessimists) function best when they are allowed to think about all the ways things could go wrong.  Task performance is also influenced by the goals people adopt in achievement settings.  Some people strive to demonstrate to themselves and others that they are competent; other people strive to cultivate competence and to improve themselves.  These different goal orientations influence people's responses to setbacks and obstacles.  In a similar vein, some people are motivated by intrinsic (or personal) concerns when they enter an achievement situation, whereas others are driven to gain external rewards or attention from others.  Under some circumstances, an extrinsic orientation can stifle creativity and reduce task enjoyment.

Finally, we looked at situations in which self-relevant processes can interfere with self-regulatory efforts.  Here we saw that both a lack of self-awareness and an excess of self-awareness can lead to self-regulatory failure.

- Self-regulation models of motivated behavior are concerned with what individuals choose to do and how they go about trying to accomplish their goals.  There are three aspects of the model:  (1) goal selection (which can be understood in terms of an expectancy-value model); (2) preparation for action; and (3) a cybernetic cycle of behavior.

- Cybernetic models of behavior assume that people use information to regulate their behavior.  After adopting a goal or standard, people periodically monitor their behavior and compare it against some standard.  This comparison process yields (1)an expectancy that future efforts will be worthwhile, and (2)an emotional reaction.  These factors, in turn, determine whether people continue to pursue their goals or abandon them.

- Self-efficacy beliefs refer to people's ideas about their ability to bring about desired outcomes.  People with high self-efficacy beliefs are confident they have what it takes to succeed; people with low self-efficacy beliefs doubt their ability to succeed.  These beliefs play an important role in the behavioral regulation process, influencing (1) the goals people adopt; (2) how thoroughly people prepare to attain their goals; and (3) how long, hard, and effectively people work at achieving their goals.

- Possible selves refers to people's ideas about what they will be like in the future. Some of these possible selves are positive; others are negative. Vivid and clearly defined possible selves affect goal selection by influencing what people value in life. Possible selves also help people to remain focused on their goals by suppressing the attractiveness of competing activities.

- Attentional focus varies from a state of heightened self-awareness to a relative lack of self-awareness. People whose attention is focused on themselves are more apt to compare their current state with a relevant standard than are people who are less aware of themselves. When expectancies are favorable, self-focused attention leads to high effort, continued persistence, and superior task performance; when expectancies are unfavorable, self-focused attention leads to low effort, a lack of persistence, and poor task performance.

- Defensive pessimists perform best in achievement settings when they are allowed to focus on all the ways things might go wrong. This occurs because planning for the worst reduces anxiety.

- Some people enter achievement situations with the goal of demonstrating to themselves and to others that they possess high ability. These individuals tend to believe that intelligence is a fixed quality that you either have or do not have. Other people enter achievement settings with the goal of cultivating competence. These individuals tend to believe that intelligence is a malleable quality that you can acquire and develop.

- External rewards can reduce creativity and undermine intrinsic interest in an activity. This occurs when the controlling aspect of the reward (I'll pay you if you do your homework) is more salient than the reward's informational value (here's a reward for doing such a good job on your homework).

- Self-awareness can interfere with effective self-regulation. When self-awareness is too low, people fail to compare their current behavior with appropriate higher-order standards. This can lead to aggression and irresponsible behavior (such as unsafe sexual practices). Excessive self-awareness can also be harmful. People who become too aware of themselves sometimes turn to self-destructive behaviors (such as drinking or thrill seeking) in an attempt to reduce self-awareness. In extreme cases, suicide can result when efforts to escape self-awareness fail.

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