Overview of Social Cognitive Theory and of Self-Efficacy

Frank Pajares
Emory University

Social Cognitive Theory

In 1941, Miller and Dollard proposed a theory of social learning and imitation that rejected behaviorist notions of associationism in favor of drive reduction principles. It was a theory of learning, however, that failed to take into account the creation of novel responses or the processes of delayed and non-reinforced imitations. In 1963, Bandura and Walters wrote Social Learning and Personality Development, broadening the frontiers of social learning theory with the now familiar principles of observational learning and vicarious reinforcement. By the 1970s, however, Bandura was becoming aware that a key element was missing not only from the prevalent learning theories of the day but from his own social learning theory. In 1977, with the publication of "Self-efficacy: Toward a Unifying Theory of Behavioral Change," he identified the important piece of that missing element—self-beliefs.

With the publication of Social Foundations of Thought and Action: A Social Cognitive Theory, Bandura (1986) advanced a view of human functioning that accords a central role to cognitive, vicarious, self-regulatory, and self-reflective processes in human adaptation and change. People are viewed as self-organizing, proactive, self-reflecting and self-regulating rather than as reactive organisms shaped and shepherded by environmental forces or driven by concealed inner impulses. From this theoretical perspective, human functioning is viewed as the product of a dynamic interplay of personal, behavioral, and environmental influences. For example, how people interpret the results of their own behavior informs and alters their environments and the personal factors they possess which, in turn, inform and alter subsequent behavior. This is the foundation of Bandura’s (1986) conception of reciprocal determinism, the view that (a) personal factors in the form of cognition, affect, and biological events, (b) behavior, and (c) environmental influences create interactions that result in a triadic reciprocity. Bandura altered the label of his theory from social learning to social “cognitive” both to distance it from prevalent social learning theories of the day and to emphasize that cognition plays a critical role in people's capability to construct reality, self-regulate, encode information, and perform behaviors.

The reciprocal nature of the determinants of human functioning in social cognitive theory makes it possible for therapeutic and counseling efforts to be directed at personal, environmental, or behavioral factors. Strategies for increasing well-being can be aimed at improving emotional, cognitive, or motivational processes, increasing behavioral competencies, or altering the social conditions under which people live and work. In school, for example, teachers have the challenge of improving the academic learning and confidence of the students in their charge. Using social cognitive theory as a framework, teachers can work to improve their students’ emotional states and to correct their faulty self-beliefs and habits of thinking (personal factors), improve their academic skills and self-regulatory practices (behavior), and alter the school and classroom structures that may work to undermine student success (environmental factors). Bandura's social cognitive theory stands in clear contrast to theories of human functioning that overemphasize the role that environmental factors play in the development of human behavior and learning. Behaviorist theories, for example, show scant interest in soft-processes because theorists assume that human functioning is caused by external stimuli. Because inner processes are viewed as transmitting rather than causing behavior, they are dismissed as a redundant factor in the cause and effect process of behavior and unworthy of psychological inquiry. For Bandura, a psychology without introspection cannot even begin to explain the complexities of human functioning. It is by looking into their own conscious mind that people make sense of their own psychological processes. To predict how human behavior is influenced by environmental outcomes, it is critical to understand how the individual cognitively processes and interprets those outcomes. More than a century ago, William James (1890/1981) argued that "introspective observation is what we have to rely on first and foremost and always" (p. 185). For Bandura (1986), "a theory that denies that thoughts can regulate actions does not lend itself readily to the explanation of complex human behavior" (p. 15).

Similarly, social cognitive theory differs from theories of human functioning that overemphasize the influence of biological factors in human development and adaptation. Although it acknowledges the influence of evolutionary factors in human adaptation and change, it rejects the type of evolutionism that views social behavior as the product of evolved biology but fails to account for the influence that social and technological innovations that create new environmental selection pressures for adaptiveness have on biological evolution (Bussey & Bandura 1999). Instead, the theory espouses a bidirectional influence in which evolutionary pressures alter human development such that individuals are able to create increasingly complex environmental innovations that, "in turn, create new selection pressures for the evolution of specialized biological systems for functional consciousness, thought, language, and symbolic communication" (p. 683). This bidirectional influence results in the remarkable intercultural and intracultural diversity evident in our planet.

Social cognitive theory is rooted in a view of human agency in which individuals are agents proactively engaged in their own development and can make things happen by their actions. Key to this sense of agency is the fact that, among other personal factors, individuals possess self-beliefs that enable them to exercise a measure of control over their thoughts, feelings, and actions, that "what people think, believe, and feel affects how they behave" (Bandura, 1986, p. 25). Bandura provided a view of human behavior in which the beliefs that people have about themselves are critical elements in the exercise of control and personal agency. Thus, individuals are viewed both as products and as producers of their own environments and of their social systems. Because human lives are not lived in isolation, Bandura expanded the conception of human agency to include collective agency. People work together on shared beliefs about their capabilities and common aspirations to better their lives. This conceptual extension makes the theory applicable to human adaptation and change in collectivistically-oriented societies as well as individualistically-oriented ones.

Environments and social systems influence human behavior through psychological mechanisms of the self-system. Hence, social cognitive theory factors such as economic conditions, political and social structures do not affect human behavior directly. Instead, they affect it to the degree that they influence people's aspirations, self-efficacy beliefs, personal standards, emotional states, and other self-regulatory influences. In all, this social cognitive view of human and collective functioning, which marked a departure from the prevalent behaviorist and learning theories of the day, was to have a profound influence on psychological thinking and theorizing during the last two decades of the twentieth century and into the new millennium.
Rooted within Bandura's social cognitive perspective is the understanding that individuals are imbued with certain capabilities that define what it is to be human. Primary among these are the capabilities to symbolize, plan alternative strategies (foresight), learn through vicarious experiences, self-regulate, and self-reflect. These capabilities provide human beings with the cognitive means by which they are influential in determining their own destiny.

Humans possess an extraordinary capacity to symbolize. By drawing on their symbolic capabilities, they can extract meaning from their environment, construct guides for action, solve problems cognitively, support thoughtful courses of action, gain new knowledge by reflective thought, and communicate with others at any distance in time and space. For Bandura, symbols are the vehicle of thought, and it is by symbolizing their experiences that they can provide their lives with structure, meaning, and continuity. Symbolizing also enables people to store the information required to guide future behaviors. It is through this process that they are able to model observed behavior.

Through the use of symbols, individuals solve cognitive problems and engage in self-directedness and foresight. People plan courses of action, anticipate the likely consequences of these actions, and set goals and challenges for themselves to motivate, guide and regulate their activities. It is because of the capability to plan alternative strategies that one can anticipate the consequences of an action without actually engaging in it.

People learn not only from their own experience but by observing the behavior of others. This vicarious learning permits individuals to learn a novel behavior without undergoing the trial and error process of performance. In many situations, it keeps them from risking costly and potentially fatal mistakes. The observation is symbolically coded and used as a guide for future action. Observational learning is governed by the processes of attention, retention, production, and motivation. Attention refers to one's ability to selectively observe the actions of a model. Retention involves memory, the process by which people encode, store, and retrieve information that can be used to guide thought and behavior in the future. Production refers to the process of engaging in the observed behavior. Finally, if engaging in the observed behavior produces valued results and expectation, the individual is motivated to adopt the behavior and repeat it in the future.

Individuals have self-regulatory mechanisms that provide the potential to direct their self-directed changes in their behavior. The manner and degree to which people self-regulate their own actions and behavior involve the accuracy and consistency of their self-observation and self-monitoring, the judgments they make regarding their actions, choices, and attributions, and, finally, the evaluative and tangible reactions they make to their own behavior through the self-regulatory process. This last subfunction includes evaluations of one's own self (self-concept, self-esteem, values) and tangible self-motivators that act as personal incentives to behave in self-directed ways.

For Bandura (1986), the capability that is most "distinctly human" (p. 21) is that of self-reflection, hence it is a prominent feature of social cognitive theory. Through self-reflection, people make sense of their experiences, explore their own cognitions, self-beliefs, and engage in self-evaluation, and alter their thinking and behavior accordingly. 

### Self-efficacy Beliefs

Of all the thoughts that affect human functioning, and standing at the very core of social cognitive theory, are self-efficacy beliefs. People's judgments of their capabilities to engage in designated types of performance are called self-efficacy judgments. For example, self-efficacy beliefs provide the foundation for human motivation, well-being, and personal accomplishment. This is because unless people believe that their actions can produce the outcomes they desire, they have little incentive to act or persevere in the face of difficulties. Much empirical evidence now supports Bandura's belief that virtually every aspect of people's lives—whether they think productively, self-debilitatingly, pessimistically or optimistically; how well they motivate themselves and persevere in the face of adversity; their vulnerability to stress and depression, and the life choices they make. Self-efficacy is also a critical determinant of self-regulation.

Of course, human functioning is influenced by many factors. The success or failure that people experience as they engage the myriad tasks that comprise their life naturally influence the many decisions they must make. Also, the knowledge and skills they possess will certainly play critical roles in what people choose to do and not do. Just as they make judgments about the quality of the knowledge and skills they possess. Imagine, for example, a student who has just received a grade of B on a term paper. In and of itself, attaining a grade of B has no inherent causal properties. What can we predict about how receiving such a grade will affect a student? An "A" student who worked hard on that assignment will view that B in ways quite dissimilar from that of a "C" student who worked equally hard. For the former, the B will be received with disappointment; for the latter, the B is likely to be received with elation. The student acostumed to A's is likely to have his writing confidence bruised; the C-acostumed student is sure to have his confidence boosted.

Bandura's (1997) key contentions as regards the role of self-efficacy beliefs in human functioning is that "people's level of motivation, affective states, and actions are based more on what they believe than on what is objectively true" (p. 2). For this reason, how people behave can often be better predicted by the beliefs they hold about their capabilities than by what they are actually capable of accomplishing, for these self-efficacy beliefs determine what individuals do with the self-regulated skills they have. This helps explain why people behave as they do; why people's beliefs are sometimes disjoined from their actual capabilities and why their behavior may differ widely even when they have similar knowledge and skills. For example, many talented people suffer frequent (and sometimes debilitating) bouts of self-doubt about capabilities they clearly possess, just because they are confident about what they can accomplish despite possessing a modest repertoire of skills. Belief and reality are seldom perfectly matched, and individuals are typically guided by their beliefs when they engage the world. As a consequence, people's accomplishments are generally better predicted by their self-efficacy beliefs than by their previous attainments, knowledge, or skills. Of course, no amount of confidence or self-appreciation can produce success when requisite skills and knowledge are absent.

It bears noting that self-efficacy beliefs are themselves critical determinants of how well knowledge and skill are acquired in the first place. The contention that self-efficacy beliefs are a critical ingredient in human functioning is consistent with the view of many theorists and philosophers who have argued that the potent affective, evaluative, and episodic nature of beliefs make them a filter through which new phenomena are interpreted (e.g., Aristotle, James, Dewey, Kant, Maslow, Nisbett and Ross, Rokeach).

People's self-efficacy beliefs should not be confused with their judgments of the consequences that their behavior will produce. Typically, of course, self-efficacy beliefs help determine the outcomes one expects, confident individuals anticipate successful outcomes. Students confident in their social skills anticipate successful social encounters. Those confident in their academic skills expect high marks on exams and expect the quality of their work to reap personal and professional benefits. The opposite is true of those who lack confidence. Students who doubt their social skills may avoid social interaction entirely in their academic activities. Those who lack confidence in their academic skills may avoid the social setting even before they begin an examination or enroll in a course. The expected results of these imagined performances will be differently envisioned: social success or greater career options for the former, social isolation or curtailed academic possibilities for the latter.

Because the outcomes we expect are the result of the judgments of what we can accomplish, our outcome expectations are unlikely to contribute to predictions of behavior. Moreover, efficacy and outcome judgments are sometimes inconsistent. A high sense of efficacy may not result in behavior consistent with that belief, however, if the individual also believes that the outcome of engaging in that behavior will not fulfill his or her undesired effects. A person with an academic capability who chooses not to apply to a particular university whose entrance requirements are such as to discourage all but the hardest souls. Low self-efficacy and positive outcome expectations are also possible. For example, students may realize that strong mathematics skills are essential for a good GRE score and eligible for graduate school and, this, in turn, may ensure a lifetime of satisfying work. However, they may doubt their abilities are likely to keep them away from certain courses and they may not even bother with the GRE or graduate school. In the social arena, a young man may realize that his social graces and physical attractiveness will be especially useful for wooing the young lass who has caught his eye, which, in turn, may lead to a romantic interlude and even a lasting relationship. If, however, he has low confidence in his social capabilities and doubts his physical appearance, he will likely shy away from making contact and hence miss a potentially promising opportunity.

Because individuals operate collectively as well as individually, self-efficacy is both a personal and a social construct. Collective systems develop a sense of collective efficacy—a group's shared belief in its capability to attain goals and accomplish desired tasks. For example, schools need develop collective beliefs about the capability of their students to learn, of their teachers to teach and otherwise enhance the lives of their students.
How Self-Efficacy Beliefs Influence Human Functioning

Self-efficacy beliefs can enhance human accomplishment and well-being in countless ways (see this page). They influence the choices people make and the courses of action they pursue. Individuals tend to select tasks and activities in which they feel competent and confident and avoid those in which they do not. Unless people believe that their actions will have the desired consequences, they have little incentive to engage in those actions. How far will a student go to study if he feels hopeless in arithmetic? Whatever factors operate to influence behavior, they are rooted in the core belief that one has the capability to accomplish that behavior.

Self-efficacy beliefs also help determine how much effort people will expend on an activity, how long they will persevere when encountering obstacles, and how resilient they will be in the face of adverse situations. The higher the sense of efficacy, the greater the effort, persistence, and resilience. People with a strong sense of personal competence approach difficult tasks as challenges to be mastered rather than as threats to be avoided. They have greater intrinsic interest and deep engrossment in activities, set themselves challenging goals and maintain strong commitment to them, and heighten their sense of failure. Moreover, they quickly recover their sense of efficacy after failures or setbacks, and attribute failure to insufficient effort or deficient knowledge and skills that are accessible.

Self-efficacy beliefs also influence an individual's thoughts patterns and emotional reactions. High self-efficacy helps create feelings of serenity in approaching difficult tasks and activities. Conversely, people with low self-efficacy may believe that things are tougher than they really are, a belief that fosters anxiety, stress, depression, and a narrow vision of how best to solve a problem. As a consequence, self-efficacy beliefs can powerfully influence the level of accomplishment that one ultimately achieves. This function of self-beliefs can also occur in the reverse direction. People can quickly lose their sense of efficacy after failure, and this belief-associated with low self-efficacy helps ensure the failure that further lowers confidence and morale.

The mediational role that judgments of self-efficacy play in human behavior is affected by a number of factors. There may be disincentives and performance constraints; that is, even highly self-efficacious and well-skilled people may choose not to concert in their beliefs and abilities because they simply lack the incentive to do so, because they lack the necessary resources, or because they perceive social constraints in their envisioned path or outcome. In such cases, efficacy will fail to predict performance. An individual may feel capable but do nothing because he feels impeded by these real or imaginary constraints.

It is not unusual for individuals to over- or underestimate their abilities and suffer the consequences of such errors of judgment. These consequences of misjudgment play a part in the continual process of efficacy self-appraisals. When consequences are slight, individuals may not feel the need to reevaluate their abilities and may continue to engage in tasks beyond their competence. In such situations, the reevaluation of efficacy judgments and subsequent behavior is muddled by the misjudgment of skills. Self-efficacy judgments must also be checked periodically to assess the effect of experiences on competence, for the degree of relationship between self-efficacy and action is affected by temporal disparities. Bandura argued that because strong self-efficacy beliefs are generally the product of time and multiple experiences, they are highly resistant and predictable. Weak self-efficacy beliefs, however, require constant reappraisal if they are to serve as predictors. Both, of course, are susceptible to a powerful experience or consequence.

Although self-efficacy beliefs exercise a powerful influence on human action, a number of factors can affect the strength of the relationship (see this page). It should not be overemphasized that, when exploring the relationship between efficacy and behavior, we must be certain to measure the self-efficacy beliefs relevant to the behavior in question, and vice-versa. Faulty assessment of self-percepts or performance will create an ambiguous relationship. Bandura (1986) has argued that “measures of self-precept must be tailored to the domain of psychological functioning being valued” (p. 396). It is important to know the precise skills and subsequent behavior required to successfully perform the behavior. The misweighting requisite subskills results in discrepancies between self-efficacy and behavior, and the problem is worsened when individuals are called on to make efficacy judgments about their own cognitive skills. Similarly, when individuals are uncertain about the nature of their task, their efficacy judgments can mislead them. Tasks perceived as more difficult or demanding than they really are in inaccurate low efficacy ratings. Conversely, tasks perceived as less difficult may result in inflated confidence. Individuals often perceive their abilities as only partially mastered, feeling more competent about some components than about others. How they focus on and appraise these components will strongly affect their sense of efficacy about the task to be undertaken.

If obscure aims and performance ambiguity are perceived, sense of efficacy is of little use in predicting behavioral outcomes, for individuals do not have a clear idea of how much effort to expend, how long to sustain it, and how to correct mistakes and misjudgments. The aims of a task and the performance levels required for successful execution must be accurately appraised for self-efficacy judgments to serve as useful regulators and predictors of performance. This factor is especially relevant in situations where an individual’s “accomplishment is socially judged by ill-defined criteria so that one has to rely on others to find out how one is doing” (Bandura, 1986, p. 398). In such situations, people lack the experience to accurately assess their sense of efficacy and have no option but to gauge their abilities from knowledge of other experiences, often a very poor indicator and predictor of the required performance. This faulty self-knowledge can have unpredictable results.

How Self-Efficacy Beliefs Are Created

Individuals form their self-efficacy beliefs by interpreting information primarily from four sources (see this page). The most influential source is the interpreted result of one's previous performance, or mastery experience. Individuals engage in tasks and activities, interpret the results of their actions, use the interpretations to develop beliefs about their capability to engage in subsequent tasks or activities, and act in concert with the degree of confidence that the emotional state they experience as they contemplate an action. Strong emotional reactions to a task imbue cues about the anticipated source or failure of the outcome. When they experience positive thoughts and feelings about their performance and the sources of confidence are the easiest to use, they are likely to engage in the task. The feedback they receive regarding their accomplishments reinforces their self-efficacy beliefs. Conversely, when feedback is negative and the self-beliefs are devalued, the individual is more likely to engage in tasks where the outcome is contrary to the degree of confidence.

Formative and emotional states such as anxiety, stress, arousal, and mood states also provide information about efficacy beliefs. People can experience changes in their degree of confidence by the emotional state they experience as they contemplate an action. Strong emotional reactions to a task provide cues about the anticipated source or failure of the outcome. When they experience positive thoughts and feelings about their performance and the sources of confidence are the easiest to use, they are likely to engage in the task. The feedback they receive regarding their accomplishments reinforces their self-efficacy beliefs. Conversely, when feedback is negative and the self-beliefs are devalued, the individual is more likely to engage in tasks where the outcome is contrary to the degree of confidence.

Efficacy beliefs are a product of the social learning process. Individuals learn about their capabilities through observation of others, vicarious experience. The models provide information about the outcomes of the actions, while the observer learns about the capabilities. Observers learn about the outcomes of the actions, while the observer learns about the capabilities of the models. Bandura (1997) argues that “it is not the goal but the process of achieving the goal that is learned” (p. 261).

In addition to interpreting the results of their actions, people form their self-efficacy beliefs through the vicarious experience of observing others perform tasks. This source of information is weaker than mastery experience in helping create self-efficacy beliefs, but when people are unable to act on their own abilities or when they have limited prior experience, they become more sensitive to it. The effects of modeling are particularly relevant in this context, especially when the individual has had little prior experience with the task. Even experienced and self-efficacious individuals, however, will raise their self-efficacy even higher if models teach them better ways of doing things. Vicarious experience is often helpful when observers are unsure of themselves or the similarities in skill development and then assume that the model’s performance is due in their own abilities. For example, a girl will raise her perceived physical efficacy on seeing a woman model exhibit physical strength but not after seeing a male model do so. In this case, gender is the attribute for assumed similarity. Observing the successes of such models contributes to the observers' beliefs about their own capabilities ("If they can do it, so can I."). Conversely, watching models with poor similar attributes fail can undermine the observers' beliefs about their own capability to succeed. When people perceive the model's attributes as highly divergent from their own, the influence of vicarious experience is greatly minimized. It bears noting that people seek out models who possess qualities they admire and capabilities to which they aspire. A significant model in one's life can help instill self-beliefs that will influence the course and direction that life will take.

Individuals also create and develop self-efficacy beliefs as a result of the social persuasions they receive from others. These persuasions can influence people to the degree of confidence by the emotional state they experience as they contemplate an action. Strong emotional reactions to a task provide cues about the anticipated source or failure of the outcome. When they experience positive thoughts and feelings about their performance and the sources of confidence are the easiest to use, they are likely to engage in the task. The feedback they receive regarding their accomplishments reinforces their self-efficacy beliefs. Conversely, when feedback is negative and the self-beliefs are devalued, the individual is more likely to engage in tasks where the outcome is contrary to the degree of confidence.

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Annual Review of Psychology, 52
Psychological Review, 84
American Psychologist, 44

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The sources of self-efficacy information are not directly translated into judgments of competence. Individuals interpret the results of events, and these interpretations provide the information on which judgments are based. The types of information people attend to and use to make efficacy judgments, and the rules they employ for weighting and integrating them, form the basis for such interpretations. Thus, the selection, integration, interpretation, and recollection of information influence judgments of self-efficacy.

Self-Efficacy and Human Attainment

The Roman poet Virgil observed that "they are able who think they are able." The French novelist Alexander Dumas wrote that, when people doubt themselves, they make their own failure certain by themselves being the first to be convinced of it. There is now ample evidence to suggest that Virgil and Dumas were absolutely correct.

Since Bandura first introduced the construct of self-efficacy in 1977, researchers have been very successful in demonstrating that individuals' self-efficacy beliefs powerfully influence their attainments in diverse fields (see Stajkovic and Luthans 1998, for meta-analysis of research on the relationship between self-efficacy beliefs and achievement outcomes). In his 1997 book, Self-Efficacy: The Exercise of Control, Bandura set forth the tenets of his theory of self-efficacy and its applications to fields as diverse as life-course development, education, health, psychopathology, athletics, business, and international affairs. In this volume, Bandura also further situated self-efficacy within a social cognitive theory of personal and collective agency that operates in concert with other sociocognitive factors in regulating human well-being and attainment. He also addressed the major facets of agency—the nature and structure of self-efficacy beliefs, their origins and effects, the processes through which such self-beliefs operate, and the modes by which they can be created and strengthened. In addition, Bandura reviewed a vast body of research on each of these aspects of agency in diverse applications of the theory. A search for the term "self-efficacy" in most academic databases reveals that, by the year 2000, over 2500 articles had been written on this important psychological construct.

Self-efficacy has generated research in areas as diverse as medicine, athletics, media studies, business, social and political change, psychology, psychiatry, and education. In psychology, it has been the focus of studies on clinical problems such as phobias, depression, social skills, assertiveness, smoking behavior, and moral development. Self-efficacy has been especially prominent in studies of educational constructs such as academic achievement, personal attributes, goal setting, social comparisons, memory, problem solving, career development, and teaching and teacher education. In general, researchers have established that self-efficacy beliefs and behavior changes and outcomes are highly correlated and that self-efficacy is an excellent predictor of behavior. The depth of this support prompted Graham and Weiner (1996) to conclude that, particularly in psychology and education, self-efficacy has proven to be a more consistent predictor of behavioral outcomes than have any other motivational constructs. Clearly, it is not simply a matter of how capable one is, but of how capable one believes oneself to be.

References and Suggested Reading


