

the LETTER

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THE PACIFIC INSTITUTE®

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Book Review by Dr. Glenn Terrell:

Self-Efficacy: The Exercise of Control

By Dr. Albert Bandura

This book is considered by some as the author's magnum opus, his greatest work.

It clearly is his synthesis of more than 20 years of research related to his wellknown social-cognitive theory, in which the concepts of self-efficacy, forethought, human agency and self-regulation play central roles. Because of the great importance of Bandura's theory and research to the structure and content of The Pacific Institute's curriculum, this review will be extensive so TPI personnel will have an overview of the theory, and its many applications, related to the client groups we serve around the world.

A glance at the table of contents reveals what this reviewer believes to be the most valuable contribution of *Self-Efficacy*: the power of Bandura's theory as revealed by his research and that of many others working within his social-cognitive framework. The power of a psychological theory is simply the degree to which the theory predicts behavior. Aside from the first three or four chapters (which consist, for the most part, of an explanation of his efficacy theory, its sources and processes), the book covers the specific behaviors and benefits which are

largely determined by perceived self-efficacy: school performance, behavior throughout the life cycle (early childhood, adolescence, mid-life and the elderly), health benefits, and clinical, athletic and organizational applications. The last chapter is devoted to collective efficacy, Bandura's most detailed and systematic treatment of this exceedingly important extension of individual efficacy.

It is important to distinguish between self-efficacy and two other concepts frequently used by behavior scientists: self-concept and self-esteem. Bandura defines self-efficacy as "belief in one's capabilities to organize and execute the courses of action required to produce given attainments," or in TPI's language, the

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"THE LETTER"

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Notes From Lou & Diane



By Lou Tice

The Pacific Institute

To improve ourselves and the environment in which we live, we need to be able to examine our daily performance — personally and professionally. Thinking we're too busy to review our performance will interfere with our growth. If we can get into a daily habit of "fess-up and fix-it," we will grow and advance in everything we do.

What is "Corrective Feedback?"

Depending on whom you're talking to, you'll hear this process referred to by different names. In the military, the U.S. Navy's elite Blue Angels call it the "AAR or after-action review." For some TV news program producers, it's called the 11 post-mortem." Business managers might call it a "de-brief."

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What they're all talking about is simply taking time to sit down and reflect upon what you've done and how you might do it better the next time. Setting aside the time to evaluate what you've accomplished is crucial to the personal and professional growth process.

Why Do It?

Those of us committed to personal excellence will not hesitate to review and reflect on our goals and expectations. It may sound simple enough, but tapping into the power of a successful "debriefing" session can be a sensitive process for many people. If it's done correctly, a good feedback session can create tremendous learning for an individual - and for everyone involved in a project. This process also helps focus you and your organization on your ideals and your goals.

How To Do It?

Make "debriefing" a part of your daily routine especially after important meetings and special events. To do it successfully, you need a strong sense of self-efficacy as well as a healthy desire to grow and improve yourself and/or your organization.

Set aside 10 minutes each day, whether it's at lunch-time or just before you leave the office, to review the expectations and goals you set for the day. Be sure to set benchmarks everyday. Reflect on what you've done - and what you plan to do next. Make a habit of reflecting on how effective, causative and purposeful you are. It's sure to make a difference!



Lou & Diane Tice

Malcolm Noble has had considerable success helping long-term unemployed youngsters get a job. The results speak for themselves:

From 85 long-term: unemployed youngsters who took: the STEPS course as part of training in Thanet, Kent, 5.6% progressed into jobs or further education as opposed to only 22% who took the same training without the STEPS element.

Of the two groups undertaking training at Kent TEC, not only did the STEPS participants secure more jobs, they stayed the full length of the training in far greater numbers.

	STEPS	Non STEPS
Progressions	69%	35%
Non Completers	4%	48%

Increasingly, Malcolm's findings found unexpected support in a total unrelated study published in The medical journal 'The Lancet' ("Effect of Cognitive-Behavioral Training (CBT) on Job-Finding Among. Long Term Unemployed People." Proudfoot, Guest, Carson, Dunn and Gray; The Lancet vol. 350, July 12th 1997.)

Two Groups	CBT	Non CBT
Group Size	95	95
Fall Time Jobs After 3 Months	34%	13%
Full & Part-Time Jobs After 3 Months	49%	27%

For more information contact Malcolm Noble at mnoble@dirrcon.co.uk

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belief that one can set and reach one's goals. Bandura's definition of self-concept is "a composite view of oneself." Bandura further differentiates self-efficacy from self-esteem with this statement: "Perceived self-efficacy is concerned with judgments of personal capability, whereas self-esteem is concerned with judgments of self worth." Bandura further states that, "There is no fixed relationship between beliefs about one's capabilities and whether one likes or dislikes oneself." This reviewer thinks of self-esteem as a by product of perceived self-efficacy.

As mentioned above, the terms *human agency*, *self-regulation* and *forethought* are also important in Bandura's theory. Human agency refers to those unique personal skills, such as thought, that are essential for human beings to contribute substantially to their future. Forethought is also essentially a skill unique to the human species and refers to the ability to anticipate the future and to use cognitive skills, such as affirmations and self-talk, that will assist in controlling the future. Finally, self regulation, or the ability to control one's behavior, is a by-product of perceived self-efficacy.

From the above, it is clear that efficacy theory is a formulation that predicts the control that human beings yearn for in all aspects of their lives, the control that enables them to set and reach goals and to perform at a level commensurate with their potential. We at The Pacific Institute teach the skills that are necessary to the attainment of high self-efficacy. It follows that Bandura's theory and research, which have received widespread attention throughout the world, are such an important scientific foundation for the programs of The Pacific Institute. For this reason, it is recommended that everyone associated with The Pacific Institute have a copy of Self-Efficacy in his or her personal library, to be used primarily as a reference book. This will be easy since there are three extensive alphabetical indices: author, name and subject. (For example, to find discussions in the book on self-esteem, guided mastery or modeling, simply refer to the subject index. To find research performed by Seligman, refer to the name index.)

Health Benefits of Perceived Self-Efficacy

Much research has been done with animals and human subjects showing the adverse effects of stress on physiological processes. For obvious reasons some of this research cannot be done on human subjects (some even oppose the use of animals). Bandura devised a remedy for this problem by using subjects with pre-existing phobic conditions and giving mastery experience designed to provide a sense of coping efficacy which eliminated the stress. All subjects were eventually given the mastery experience. As Bandura states, "The findings of these experiments reveal that perceived coping efficacy operates as a critical cognitive mediator of biological stress reactions." The biological stress reactions used were variations of heart-rate and blood pressure. It is important to note that it is not the stress itself but the perceived inability to manage the stress that creates the adverse reactions in the cardiovascular system.

From this and similar studies, Bandura concludes that, "Effective self regulation is not achieved through an act of will. It requires the development of self-regulatory skills. Once empowered with skills and belief in their capabilities [the cognitive skills that we at TPI teach], people are better able to choose behaviors that facilitate the acquisition of self-regulation skills and to eliminate those that impair it. A growing body of evidence reveals that the impact of therapeutic interventions on health behavior is partly mediated by their effects on efficacy beliefs. This has been shown in studies conducted in such diverse areas of health as enhancement of pulmonary function in patients suffering from chronic obstructive pulmonary disease; recovery of cardiovascular function in post-coronary patients; reduction of pain and dysfunction in rheumatoid arthritis; amelioration of tension headaches; control of labor and childbirth pain; management of chronic lower back, neck and leg pain and impairment; stress reduction; weight reduction; exercise of control over bulimic behavior; reduction of cholesterol through dietary means; adherence to a regular program of physical exercise; maintenance of diabetic self-care; successful coping with painful invasive

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medical procedures; effective management of sexual coercion and contraceptives used to avoid unwanted pregnancies; post-abortion adjustment; control of sexual practices that pose high risk for transmission of AIDS; and control of addictive habits that impair health such as alcohol abuse, smoking and use of opiate drugs.” The fact that efficacy predicts such a broad range of health-related behaviors underscores the enormous power of self-efficacy theory.

Development of Self-Efficacy

Bandura presents an interesting description and analysis of the development of self-efficacy throughout the life cycle, from early childhood through advanced age, emphasizing the adaptive character of human agency at each development level. Infants learn that they have the power to control their immediate environment through their own actions, or as Bandura would put it, through their agency. The development of language rapidly accelerates this learning of self-efficacy. Bandura further emphasizes the importance of parents providing the infant and preschool child with experiences that contribute to perceived self-efficacy, such as providing mastery and modeling experiences, encouragement through reading and time spent through activities that require thinking skills. The skills learned through such activities carry over into adolescence and adulthood.

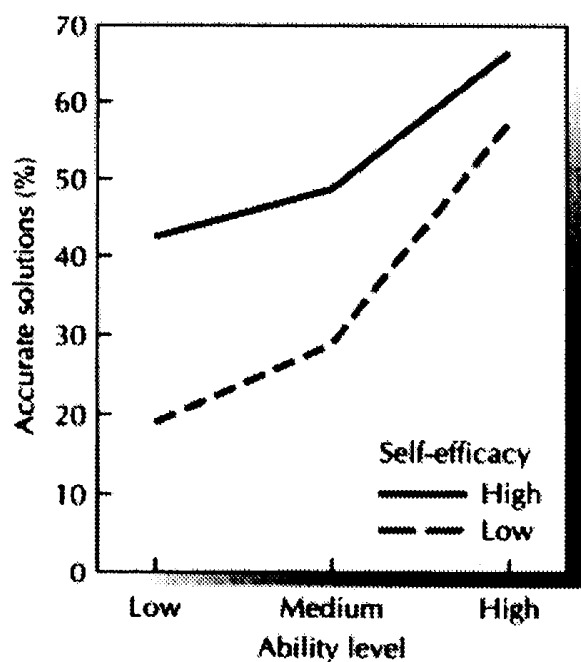
Bandura stresses the life-long learning of one’s perceived efficacy, with each level of development contributing uniquely to this process. For example, in adolescence, the influence of the peer group and the school are powerful forces in the attainment of efficacy, which in turn greatly affects the choice of friends, school performance, decisions of lifestyle and subsequently the choice of careers. Significantly, research shows that programs involving instruction in self-regulation decreases the probability that individuals will engage in risky drug and sexual behavior, whereas just teaching the facts of the possible consequences of risky behavior has little impact.

Predictably, the role of effective self-regulation in extending effective cognitive functioning during the later years of life is considerable. In a study by Bandura and others, four factors were found to determine whether or not the elderly continue to experience effective cognitive functioning: A sense of efficacy to influence events in one’s life; educational level; physically active life style; and pulmonary capacity. Also, much recent research shows that memory

can actually be improved in the later years. Interestingly, if the elderly believe they can improve their memory, they will do so.

Cognitive Functioning

In this chapter, Bandura discusses the interrelationships between perceived self-efficacy and numerous other variables on performance in a variety of tasks. One important study shows the interaction of perceived mathematics efficacy and ability on mathematics performance. The figure below shows that for students of low, medium and high ability, those with high efficacy in mathematics perform at a significantly higher level than those with low efficacy. Interesting, the chart also shows that the importance of self-efficacy on performance decreases as ability level increases.

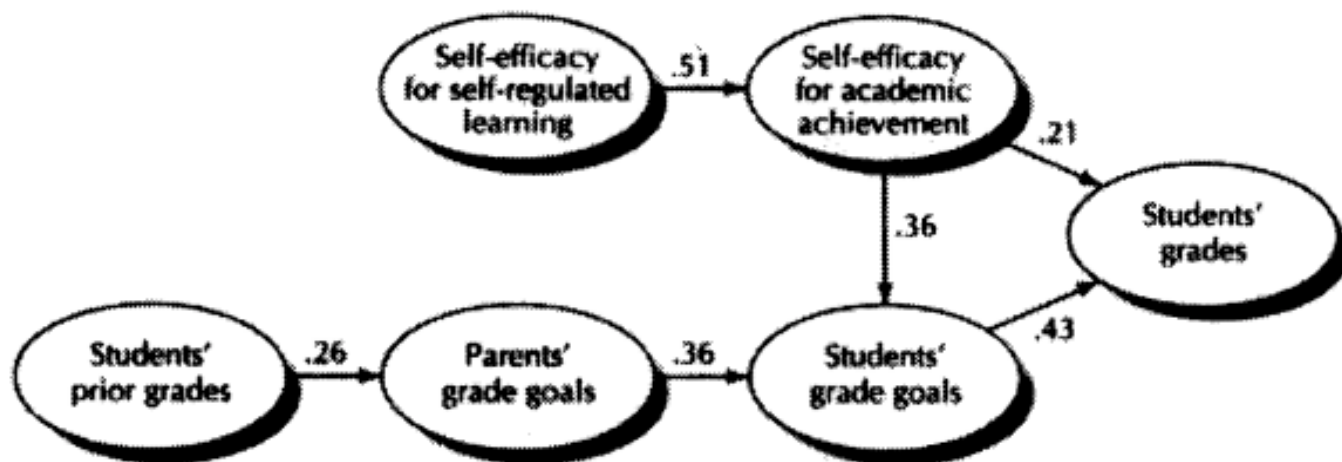


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In another somewhat more complicated study by Bandura and others, represented by the figure below, we see the influence of perceived self-efficacy and parents' and children's academic aspirations on children's academic achievement. The numbers above the lines connecting the variables shown indicate correlation between the variables. For example, the correlation between self-regulated learning and self-efficacy for academic achievement is .51; between self-efficacy for academic achievement and student's grade goals is .36 and so on. It is important to note that efficacy beliefs have both direct and indirect (through raising personal goals) effects on achievement.



The analysis of Cognitive Functioning in various settings would not be complete without at least a reference to the importance of perceived self-efficacy in the performance of more complicated tasks. Studies have shown that learning in graduate colleges is more effective when the beliefs of personal efficacy are higher. In fact, Bandura asserts that self-efficacy “has a substantially greater impact on academic performance than the personal, social, and occupational outcomes,” and that “perceived academic efficacy plays an influential role in career choice and development. It predicts academic grades, the range of career options considered, and persistence and success in chosen fields.” Other studies show that perceived efficacy is exceedingly important in creative work.

Clinical Applications

Bandura discusses clinical applications of his human agency theory to psychological problems, including phobias, anxiety, depression, eating disorders and drug and alcohol dependency. Predictably, the emphasis in understanding and treating these disorders, is on the development of a sense of personal efficacy, and much research is reported which substantiates this approach (further evidence of the extensive power of Bandura's efficacy theory). Because of space limitations, this review will not include the details of the research substantiating efficacy theory in clinical settings. Suffice it to say that personality disorders are seen as distortions of thinking. Accordingly, the most successful I treatment consists of the acquisition of skills of thought that enable the individual to gain control of negative ruminative thoughts and replace them with thoughts that are optimistic, and in fact, usually more realistic. Bandura suggests teaching modeling and mastery skill. The Pacific Institute would add the skills of self-talk, visualization and affirmations.

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Athletic Functioning

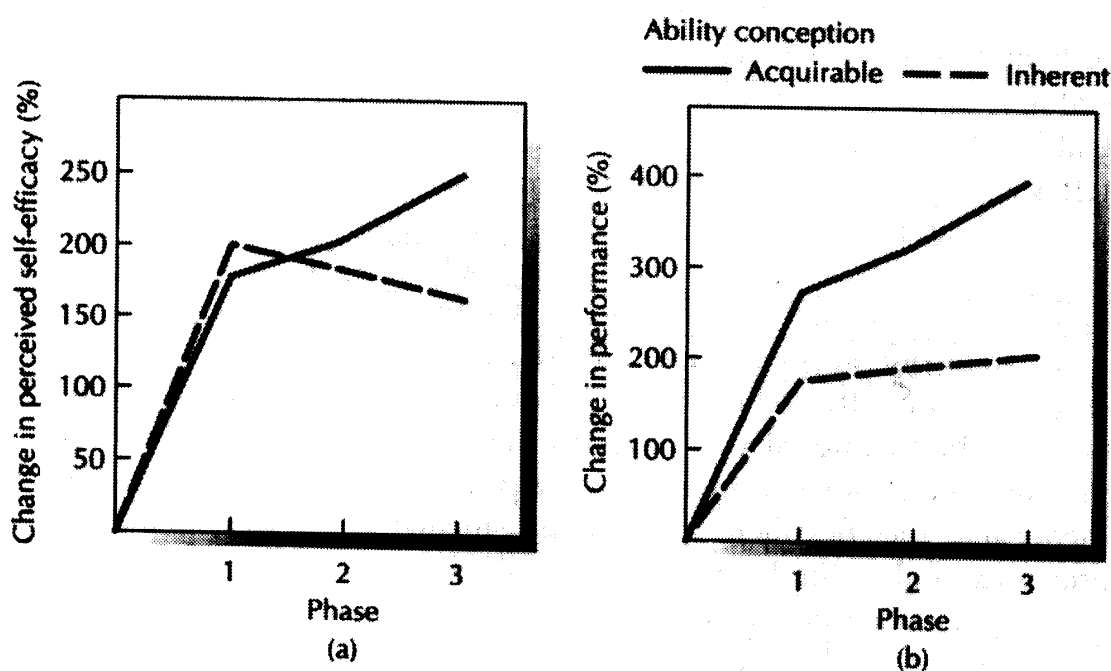
It is generally recognized that the way athletes think about themselves and their ability to perform under extremely tense conditions in highly competitive events actually influences their performances. Bandura has applied his efficacy theory to this important domain of human activity, and in so doing, he has stimulated much well-conceived research relating specifically to the relevance of perceived self-efficacy in such areas: development of athletic skills, self regulation of athletic performance, collective team efficacy and psychobiological effects of physical exercise. This review will focus briefly on a few studies which capture the heart of Bandura's treatment of this topic, while at the same time provide the research support for some of the cognitive concepts we teach at The Pacific Institute.

Bandura and others show that cognitive simulation through visualization improves both development and performance of motor skills. Bandura explains that these skills were not as important as those produced by physical practice because of the "skimpy way in which they [visualization skills] are typically applied," and concludes that "athletes need efficacy-affirming evidence that they can exercise better control over their performance attainments with cognitive aids than without them."

In another study, Jourden and others demonstrated that subjects, who were instructed that performance of the assigned task was due to inherited ability, performed less effectively and experienced less development in perceived self-efficacy than another group of subjects who were told that they were essentially in control of their performance. The figure below shows this outcome graphically.

In a third study, Kane and others demonstrate the importance of perceived self-efficacy, particularly in highly competitive wrestling tournaments. In this study, the perceived self-efficacy, although important in the preliminary matches, was not as important in the final matches where the difference in physical abilities between the contestants was slight.

Bandura discusses factors that encourage collective team efficacy which is more than the aggregate of the individual efficacies of each team member. In a recent study by Hodge and Carron, one group of team members were given



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negative information about their physical strength, while another team was given favorable information about their strength. The two groups were comparable in strength. Quoting Hodges and Carron, “Teams whose collective efficacy was arbitrarily raised improved team’s performance following competitive defeat. Teams whose sense of collective efficacy was lowered suffered substantial decrements in team performance.”

Bandura cites evidence from Spinks’ study that efficacy affects group processes and performance. “Teams with a strong sense of collective efficacy have high cohesiveness, whereas those of low collective efficacy experience more factionalism. On teams with high group cohesiveness, players subordinate their self-interests for team success and coordinate their efforts in deft teamwork. Among elite volleyball teams, players’ beliefs in their teams’ competitive efficacy, measured before the tournament, predicted their performance success in the contests.”

Organizational Functioning/Collective Efficacy

Bandura chose to present collective efficacy in two components: Organizational Functioning and Collective Efficacy. In the former, considerable emphasis is given to two aspects of organizational functioning: Career development and mastery of occupational roles that are typically influenced more by personal rather than group efficacy. There are two other components to Bandura’s discussion of Organizational Functioning that are both interesting and important: Self-Efficacy in Organizational Decision-Making and Collective Organizational Efficacy. The last chapter of Bandura’s book is devoted to Collective Efficacy, and since this topic is of utmost importance and because of space limitations, most of this section of the review will focus on the collective efficacy chapter. Suffice it to say Bandura presents convincing evidence from numerous studies of the important role of efficacy in the selection and enactment of career decisions. (Here again, the power of his efficacy theory in this domain of human thought and action is substantiated.)

One final point before proceeding to the last chapter of Bandura’s book. Bandura has an excellent treatment of the importance of self-efficacy in organizational decision-making. Essentially, he cites studies supporting the vital role of leaders’ personal efficacy in the processes of decision-making in organizations. He laments the methodological difficulties of the studies that have been done. He, and others, devised an experiment that permitted the assessment of the importance of belief in the performance of all members of an organization. One group of individuals was told that the skills involved in the successful performance of carrying out the decisions in the study were inherent, while another group was told that the outcome of their efforts was essentially under their control. The latter group performed significantly better than the former, thus demonstrating the power of belief transmitted through a highly efficacious manager to other members of the organization, who in turn behaved in an efficacious manner.

In the words of Bandura, “Perceived collective efficacy is concerned with the performance capability of a social system as a whole. Belief in collective efficacy affects the sense of mission and purpose of a system, the strength of a common commitment to what it seeks to achieve, how well its members work together to produce results, and of the group’s resiliency in the face of difficulties.”

Collective Efficacy

Bandura defines collective efficacy as “a group’s shared belief in its conjoint capabilities to organize and execute the course of action to produce given levels of attainment.” Bandura stresses the importance of enabling (not empowering, a term that has “become meaningless through its use in promotional hype and political rhetoric”), in equipping people with a firm belief that they can produce valued effects by their collective action and in providing them with the means to do so.” These are what Bandura says are the key ingredients in an enabling process. We at The Pacific Institute provide our clients with the means to become enablers.

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Collective efficacy is not the algebraic sum of the individual efficacies of the members of an organization or group. “Importantly, personal and collective efficacy differ in the unit of agency, but in both forms efficacy beliefs have similar sources, serve similar functions, and operate through similar processes. These processes, which shared efficacy beliefs activate, affect how well group members work together and how much they accomplish collectively.”

Bandura points to the methodological difficulties of measuring collective efficacy. Briefly, there are three ways of measuring collective efficacy: the aggregate of each member’s self appraisal; the aggregate of each member’s appraisal of how well their group performs as a whole; and a measure obtained by group members together. None of these approaches is perfect since the measures of collective efficacy obtained by all three methods would depend on a number of characteristics of the group being studied. For example, the degree of interdependence in the work style of the group may result in a measure of collective efficacy having spuriously lower predictability. Allowances can be made for these problems through careful analysis and statistical and experimental controls.

Bandura and others have shown that collective efficacy does indeed exist “as a group attribute,” and that it predicts performance in many settings with many kinds of populations, including schools, organizations and athletic teams. Bandura concludes that, “The totality of teachers’ beliefs in their own efficacy is just as predictive of school performance as the totality of teacher’s beliefs in their schools’ efficacy as a whole.”

Bandura caps his magnum opus with an interesting discussion of the implications and applications of collective efficacy in the political and media domains. If people possess strong efficacy beliefs they are much more likely to be successful in their efforts to bring about political changes through social action. Some of these studies show the resiliency of politically efficacious people who seem to be more determined in bringing about social action as a result of initial failure.

Reading Bandura’s most recent book strengthens my conviction that everything about Efficacy theory is related to what we teach at The Pacific Institute. Bandura says, in effect, that having self or collective efficacy ENABLES people to do what they do better to work alone or as members of organizations in setting goals and to do so with greater persistence, resilience, creativity and with a higher probability of developing to their full potential. How much closer could this statement conform to our own mission statement?



About the Author

Albert Bandura is David Starr Jordan Professor of Social Science in Psychology at Stanford University and past president of the American Psychological Association. Among the awards he has received are the Distinguished Scientific Contribution Award of the American Psychological Association and the William James Award. He has been elected to the American Academy of Arts and Sciences and the Institute of Medicine of the National Academy of Sciences, and has received honorary degrees from eleven universities. He is the author of nine books, including, most recently, *Social Foundations of Thought and Action: A Social Cognitive Theory*.
(reprinted from book jacket)

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