CHAPTER 2

# THE EVOLUTION OF SOCIAL COGNITIVE THEORY

ALBERT BANDURA

THE present chapter documents the evolution of social cognitive theory. Before retracing this theoretical odyssey, I will describe briefly the key tenet on which this theory is founded. Social cognitive theory adopts an agentic perspective to self-development, adaptation, and change (Bandura, 2001). To be an agent is to influence intentionally one's functioning and life circumstances. In this view, people are self-organizing, proactive, self-regulating, and self-reflecting. They are contributors to their life circumstances not just products of them.

## 2.1 AGENTIC PERSPECTIVE OF SOCIAL COGNITIVE THEORY

There are several core features of human agency. One such feature is intentionality. People form intentions that include action plans and strategies for realizing them. The second feature involves the temporal extension of agency through forethought. This includes more than future-directed plans. People set themselves goals and

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anticipate likely outcomes of prospective actions to guide and motivate their efforts anticipatorily. A future cannot be a cause of current behavior because it has no material existence. But by being represented cognitively in the present, visualized futures serve as current guides and motivators of behavior.

Agents are not only planners and forethinkers. They are also self-regulators. They adopt personal standards, and monitor and regulate their actions by self-reactive influence. They do things that give them satisfaction and a sense of self-worth and refrain from actions that bring self-censure. People are not only agents of action. They are self-examiners of their own functioning. Through functional self-awareness they reflect on their personal efficacy, the soundness of their thoughts and actions, the meaning of their pursuits, and make corrective adjustments if necessary. Forethought and self-influence are part of a causal structure.

Human functioning is rooted in social systems. Therefore, personal agency operates within a broad network of sociostructural influences. In these agentic transactions, people create social systems to organize, guide, and regulate human activities. The practices of social systems, in turn, impose constraints and provide resources and opportunity structures for personal development and functioning. Given this dynamic bidirectionality of influence, social cognitive theory rejects a dualism between personal agency and a social structure disembodied from human activity.

## 2.2 Centrality of Social Modeling

Discontent with the adequacy of existing theoretical explanations provides the impetus to search for conceptual schemes that can offer better explanations and solutions to phenomena of import. Behaviorism was very much in vogue at the time I began my career. The process of learning occupied the central position in this form of theorizing. The prevailing analyses of learning focused almost entirely on learning through the effects of one's actions. The explanatory mechanisms were cast in terms of establishing connections between stimuli and responses at the peripheral level through reward and punish consequences. The behavioristic theorizing was discordant with the evident social reality that much of what we learn is through the power of social modeling. I found it difficult to imagine a culture in which it's language, mores, familial customs and practices, occupational competencies, and educational, religious, and political practices were gradually shaped in each new member by rewarding and punishing consequences of their trial-and-error performances. This tedious and potentially

hazardous process where errors are costly was shortcut by social modeling. In modeling, people pattern their styles of thinking and behaving after the functional ones exemplified by others.

The foremost proponents of behaviorism, Watson (1908) and Thorndike (1898), dismissed the existence of observational learning because, in their view, learning required performance of responses. The notion of learning by observation was too divergent to be given serious consideration. This was a durable legacy. Despite the centrality and pervasiveness of social modeling in everyday life, there was no research to speak of on modeling processes until the publication of *Social Learning and Imitation* by Miller and Dollard in 1941. They recognized modeling phenomena, but construed them as a special case of discrimination learning. A model provides a social cue, the observer performs a matching response, and its reinforcement strengthens the tendency to behave imitatively.

I found this conception seriously wanting on the determinants, mechanisms, and scope of observational learning. We launched a program of research on observational learning as it typically occurs in the absence of reinforced performance. We tested the determinants of observational learning and the mechanisms through which it works.

In a chapter entitled "Vicarious Processes: A Case of No-Trial Learning" (Bandura 1965), I presented the findings of our studies showing that observational learning requires neither response enactment nor reinforcement. Social modeling operated through four cognitive subfunctions encompassing attentional, representational, enactive translational, and motivational processes (Bandura, 1971*a*). I came under heavy fire from operant conditioners for whom nonreinforced modeling posed a major problem for their explanatory system (Baer, Peterson, and Sherman, 1967). They contended that reinforcement of some matching responses would establish imitation as a conditioned reinforcer.

We conducted research demonstrating that generalized imitation is governed by social beliefs and outcome expectations rather than by infused reinforcement (Bandura and Barab, 1971). When the functional value of modeled behavior was systematically varied, children faithfully adopted the behavior of a female model who rewarded them for doing so, but quickly ignored the behavior of a male model when it brought them no rewards. When the discriminability of the rewarded modeled behavior was varied, children adopted discriminable rewarded motor responses, ceased imitating discriminable nonrewarded verbal responses, but imitated nonrewarded responses that lacked features that would make them easily discriminable from the other rewarded response classes.

On the occasions when children modeled discriminable behavior in the nonrewarded class, this tendency was very much under cognitive control. Some of the children believed that the model demanded it ("I supposed to"), others performed nonrewarded imitations on the mistaken hope that the nonrewarding model would become more beneficent ("I thought if I kept trying lots of times

he might get used to it and start up giving candy like the lady did"); and still others acted like seasoned scientists testing hypotheses about outcome contingencies by systematically varying their behavior and observing its outcomes ("Sometimes I'd do it and sometimes no to see if I'd get any candy"). So much for conditioned reinforcers.

Theorists tend to focus selectively on explaining either human cognition or human action. As a result, the mechanisms governing the translation of thought into proficient performance have received little attention. The dual knowledge system (Anderson, 1980)—combining declarative knowledge with procedural knowledge embodying decision rules for solving tasks—was widely adopted as the solution to the translation problem. Explaining the acquisition of competencies in terms of factual and procedural knowledge may be adequate for cognitive problem solving where the implementation actions are trivially simple. However, in developing proficiency in complex styles of behavior procedural knowledge is not enough. It requires enlistment of multifaceted self-regulative operations and corrective feedback systems through which knowledge structures are converted to proficient performances. For example, a novice given factual information on how to ski, a full set of procedural rules, and then launched from a mountain top would most likely end up in an orthopedic ward or in an intensive care unit of a local infirmary.

We devised a series of experiments to test the notion that the behavioral translation operates through a conception-matching process (Carroll and Bandura, 1982, 1985, 1987, 1990). Cognitive representations conveyed by modeling serve as guides for the production of skilled performances and as standards for making corrective adjustments in the development of behavioral proficiency. Skills are usually perfected by repeated corrective adjustments in conception-matching during behavior production. Monitored enactment with instructive feedback serves as the vehicle for converting conception to proficient performance. The feedback accompanying enactments provides the information for detecting and correcting mismatches between conception and action. The behavior is thus modified based on the comparative information to master the desired competencies. The findings of these experiments added to our understanding of how cognitive representations, monitored enactments, and instructive feedback operate in concert in the development of competencies.

The value of a psychological theory is judged not only by its explanatory and predictive power, but also ultimately by its operative power to promote changes in human functioning. Social cognitive theory lends itself readily to social applications because it specifies modifiable determinants and how they should be structured based on verified mechanisms through which they operate. Knowledge of modeling processes provided informative guides on how to enable people to effect personal, organizational, and social changes (Bandura, 1969, 1997; Bandura and Rosenthal, 1978).

## 2.3 Correcting Misconceptions About the Nature and Scope of Modeling

There were a number of entrenched misconceptions about the nature and scope of modeling that put a damper on the research and social applications of this powerful mode of learning. Progress in this area, therefore, required research designed not only to eluciate the determinants and mechanisms of social modeling, but to put the misconceptions to rest.

One such misconception was that modeling, construed as "imitation," could produce only response mimicry. Exemplars usually differ in content and other details but embody the same underlying principle. To cite a simple example, the passive linguistic form may be embodied in any variety of utterances. Research on abstract modeling (Bandura, 1986; Rosenthal and Zimmerman, 1978) showed that social modeling involved abstracting the information conveyed by specific exemplars about the structure and the underlying principles governing the behavior, rather than simple response mimicry of specific exemplars. Once individuals learn the guiding principle, they can use it to generate new versions of the behavior that go beyond what they have seen or heard. They can tailor the behavior to suit changing circumstances. Thus, for example, generic managerial skills, developed through modeling and guided enactments with instructive feedback, improve managerial functioning that, in turn, reduces employee absentee and turnover rates, and raises the level of organizational productivity (Latham and Saari, 1979; Porras, et al., 1982).

Another misconception, requiring retirement, held that modeling is antithetical to creativity. We were able to show how innovation can emerge through modeling. When exposed to models who differ in their styles of thinking and behavior, observers rarely pattern their behavior exclusively after a single source. Nor do they adopt all the attributes even of preferred models. Rather, observers combine various features of different models into new amalgams that differ from the individual modeled sources (Bandura, Ross, and Ross, 1963). Thus, two observers can construct new forms of behavior entirely through modeling that differ from each other by selectively blending different features from the variant models.

Modeling was shown to promote creativity in two main ways. Modeled unconventional ways of thinking increases innovativeness in others (Harris and Evans, 1973; Gist, 1989). Creativity usually involves synthesizing existing knowledge into new ways of thinking and doing things (Bandura, 1986). Organizations engage in a great deal of selective modeling of what is found to be effective (Bolton, 1993). People are too perceptive and do not have the time and resources to keep reinventing the core characteristics of successful systems, services, and products. They adopt advantageous elements, improve upon them, synthesize them into new forms, and tailor

them to their particular circumstances. These lines of research provided new insight into how selective modeling can, indeed, be the mother of innovation.

There was another oft-repeated misconception regarding the scope of modeling. Many activities involve cognitive skills on how to gain and use information for solving problems. Critics argued that modeling cannot build cognitive skills because thought processes are covert and are not adequately reflected in modeled actions, which are the end-products of the cognitive operations. This was a limitation of conceptual vision rather than an inherent limitation of modeling.

Meichenbaum (1984) showed that cognitive skills can be readily promoted by verbal modeling in which models verbalize aloud their reasoning strategies as they engage in problem-solving activities. The thoughts guiding their decisions and actions are thus made observable. During verbal modeling, the models verbalize their thought processes as they evaluate the problem, seek information relevant to it, generate alternative solutions, weigh the likely outcomes associated with each alternative, and select the best way of implementing the chosen solution. They also verbalize their strategies for handling difficulties, how to recover from errors and how to motivate themselves. Cognitive modeling proved to be more powerful in enhancing perceived self-efficacy and building innovative and other complex cognitive skills than the commonly used tutorial methods (Gist, 1989; Gist, Bavetta, and Stevens, 1990; Gist, Schwoerer, and Rosen, 1989; Debowski, Wood, and Bandura, 2001).

## 2.4 Power and Reach of Symbolic Modeling

A growing influential source of social learning is the varied and pervasive symbolic modeling through the electronic media. A major advantage of symbolic modeling is that it can transmit information of virtually limitless variety to vast populations simultaneously in widely dispersed locales. Extraordinary advances in the technology of communication are transforming the nature, reach, speed, and loci of human influence. These technological developments have radically altered the social diffusion process. Video systems feeding off telecommunications satellites have become the dominant means for disseminating symbolic environments. New ideas, values, and styles of conduct are now being rapidly spread worldwide in ways that foster a globally distributed consciousness. The internet provides instant communicative access worldwide. This makes electronic modeling a powerful

vehicle for transcultural and sociopolitical change (Bandura, 2002*a*; Braithwaite, 1994).

In this broadened function of social diffusion of innovation through symbolic modeling, I integrated sociocognitive theory with the knowledge from social network theory (Bandura, 1986, 2001; Rogers, 1995). Sociocognitive influences instruct people in new ideas and practices and motivate them to adopt them. Multilinked social networks provide the potential diffusion path through which they spread and are supported.

Through a collaborative partnership (Bandura, 2002*c*), the social cognitive approach combined three major components into a model for promoting society-wide changes. The first component is a *theoretical model.* It specifies the determinants of psychosocial change and the mechanisms through which they produce their effects. This knowledge provides the guiding principles. The second component is a *translational and implementation model.* It converts theoretical principles into an innovative operational model. It specifies the content, strategies of change and their mode of implementation.

Effective psychosocial models of change usually have limited social impact because of inadequate systems for their social diffusion. As a result, we do not profit from our successes. The third component is a *social diffusion model* on how to promote adoption of psychosocial programs in diverse cultural milieus. Each of these components serves a unique function requiring different types of expertise. The applications of social cognitive theory in Africa, Asia, and Latin America to alleviate some of the most urgent global problems document how these three competent functions evolved into a powerful model for social change (Bandura, 2002*c*).

Some forty years ago, I used modeling of novel physical and verbal styles of aggression toward a Bobo doll as the vehicle for studying the mechanisms of observational learning. The Bobo doll follows me wherever I go. The photographs are published in every introductory psychology text and virtually every undergraduate takes introductory psychology. I recently checked into a Washington hotel. The clerk at the desk asked, "Aren't you the psychologist who did the Bobo doll experiment?" I answered, "I am afraid that will be my legacy." He replied, "That deserves and upgrade. I will put you in a suite in the quiet part of the hotel." I recently was going through the Canadian customs in Vancouver. The customs' agent looked at the passport and asked, "Didn't you do the Bobo doll study?" She was a psych major at the University of British Columbia.

One morning I received a call from Miguel Sabido, a creative producer at Televisia in Mexico City. He explained that he was developing long-running serial dramas founded on the modeling principles to promote national literacy and family planning in Mexico (Sabido, 1981). These televised productions dramatize people's own everyday lives and the problems they have to manage. The enabling dramas help viewers to see a better life and provide them with the strategies and incentives that enable them to take the steps to achieve it.

Social cognitive theory provided the theoretical model. Sabido created the generic translational and implementational model. Based on the demonstrated success of this macrosocial approach, *Population Communication International* in New York designed the social diffusion model (Poindexter, 2004). They provide the resources, enabling guidance, and technical assistance to media personnel in the host nations to create serial dramas appropriate to their culture and the problems with which they are struggling. These worldwide applications are promoting national literacy, family planning in countries with soaring population growth, raising the status of women in societies that marginalize or subjugate them, curtailing the spread of HIV/AIDS infection, fostering environmental conservation, and in other ways bettering people's lives (Bandura, 2002*c*).

We often cite examples in the natural and biological sciences where knowledge pursued for its own sake has unforeseen human benefits. The knowledge gained from the early modeling experiments spawned, through interdisciplinary partnership, unimagined global applications forty years later to alleviate some of the most urgent global problems.

## 2.5 Exercise of Agency Through Self-Regulatory Capabilities

During this behavioristic era, learning was presumed to occur through classical and instrumental conditioning. In this conception, motivation was regulated by a crude functionalism grounded in rewarding and punishing consequences. This approach presented a truncated image of human nature given the self-regulatory capabilities of people to affect their thought processes, motivation, affective states, and actions through self-directed influence. As part of the development of the agentic theory of human behavior, I mounted a program of research aimed at elucidating the acquisition and function of self-regulatory capabilities (Bandura, 1971*c*; 1986). Before reviewing the development of this aspect of social cognitive theory, I will describe personal experiences that informed my theorizing and experimentation regarding self-regulatory mechanisms.

Theorists often get themselves into a disconcerting egocentric predicament. They exempt themselves from the theory they develop to explain how others behave. For example, Skinner argued that humans are shaped and controlled by environmental forces. As he put it, "Man does not act on the environment. The environment acts on him." But then he exhorted people to become agents of change and shape their society by dutifully applying his operant conditioning

methods. It is amusing to see radical postmodernists arguing authoritatively for the correctness of their view that there is no one correct view. Physical eliminationists think, argue and act agentically but characterize other folks as simply epiphenomenal hosts of automata orchestrating their behavior under the illusion that they are personally influencing events.

The agentic theory of human self-development and functioning applies equally to the road I have traveled. I grew up in a tiny hamlet in northern Alberta, Canada. The one school in town was woefully short of educational resources. Because two teachers had to teach the entire high school curriculum, they were often poorly informed in key subject areas. We once pilfered the answer book for the trigonometry course and brought it to an abrupt halt. We had to take charge of our own learning. Self-directed learning was the means of academic self-development not a theoretical abstraction. The paucity of educational resources turned out to be an enabling factor that has served me well, rather than an insurmountable handicapping one. The content of courses is perishable, but self-regulatory skills have lasting functional value.

During summer vacations in high school, my parents, who had no formal schooling but placed a high value on education, encouraged me to seek experiences beyond the confines of this hamlet. I worked in a furniture manufacturing plant in Edmonton. The skills I acquired helped to support me through college in part-time work.

During another high school summer break, I ventured to the Yukon, where I worked in one of the base camps that maintained the Alaska highway from sinking into the muskeg. It contained an interesting mix of characters fleeing creditors, probationary officers, the military, and angry ex-wives demanding alimony payments. Alcohol was their main nutrient. They were brewing their own. One early morning they left jubilantly to distill their fermented mash only to return profoundly despondent. The grizzly bears had partied on their alcoholic mash. We were faced with animated grizzlies stumbling drunkenly in our camp. Fortunately, they were too uncoordinated to do much damage. Life amidst this frontier subculture of drinking and gambling elevated the survival value of personal resourcefulness and initiative. It provided me with a uniquely broad perspective on life.

In search of a benign climate, I enrolled in the University of British Columbia in Vancouver. Being short of the coin of the realm, I worked in a woodwork plant in the afternoons and took a heavy course load in the mornings to graduate early. I enrolled in the doctoral program at the University of Iowa. It was the center of Hullian learning theory, the dominant theoretical orientation in psychology at the time. Iowa equipped us with the values and tools to be productive scientists whatever future course our scholarly pursuits took. After I completed my doctoral study, I joined the faculty at Stanford University. I was blessed with illustrious colleagues, gifted students, and a university ethos that approaches scholarship, not

as a matter of publish or perish, but with puzzlement that the pursuit of knowledge should require coercion. Stanford provided considerable freedom to go wherever one's curiosity might lead.

The exercise of personal agency over the direction one's life takes varies depending on the nature and modifiability of the environment. The environment is not a monolith bearing down on individuals unidirectionally. Operative environments take three different forms: those that are *imposed*, *selected*, and *created*. There is the physical and sociostructural environment that impinges on people whether they like it or not. They do not have much control over its presence, but they do have leeway in how they construe it and react to it.

For the most part, the environment is only a potentiality with affordances and impediments, and rewarding and punishing aspects. The environment does not come into being until it is selected and activated by appropriate action. This constitutes the selected environment. Which part of the potential environment becomes the actual experienced environment thus depends on what people make of it and recruit from it. Under the same potential environment, individuals whose sense of efficacy is raised focus on the opportunities it provides, whereas those whose self-efficacy is lowered dwell on problems and risks (Krueger and Dickson, 1993; 1994).

And finally, there is the environment that is created. It did not exist as a potentiality waiting to be selected and activated. Rather, people create the nature of their situations to serve their purposes. Gradations of environmental changeability require increasing levels of personal agency, ranging from cognitive construal agency, to selection and activation agency, to constructional agency. People's beliefs in their personal and collective efficacy play an influential role in how they organize, create, and manage the life circumstances that affect the paths they take and what they become.

Given the meager educational resources and prevailing normative influences in this rural hamlet, the widely used psychological predictors would probably have me toiling in the fields in Northern Alberta, playing pool, and drinking myself to oblivion in the local beer parlor, which was the main pastime. Viewed from a nonagentic perspective, I should not have gone to college, I should not have attained a doctoral degree, I should not be teaching amidst the balmy palms at Stanford University, and I should not be writing this chapter.

There is much that people do designedly to exercise some measure of control over their self-development and life circumstances. But there is a lot of fortuity in the courses lives take. Indeed, some of the most important determinants of life paths occur through the most trivial of circumstances. People are often inaugurated into new life trajectories, marital partnerships, occupational careers through fortuitous circumstances (Austin, 1978; Bandura, 1986; Stagner, 1981).

A chance event is an unintended meeting of persons unfamiliar with each other. Although the separate chains of events in a chance encounter have their own causal

determinants, their intersection occurs fortuitously rather than by design (Nagel, 1961). A seemingly insignificant fortuitous event can set in motion constellations of influences that alter the course of lives. These branching processes alter the linearity, continuity, and gradualism of life-course trajectories. The profusion of separate chains of events in everyday life provides myriad opportunities for such fortuitous intersects. This complicates immensely the prediction of human behavior.

Fortuitous events got me into psychology and my marital partnership. I initially planned to study the biological sciences. I was in a car pool with pre-meds and engineers who inrolled in classes at an unmercifully early hour. While waiting for my English class I flipped through a course catalogue that happened to be left on a table in the library. I noticed an introductory psychology course that would serve as an early time differ. I enrolled in the course and found my future profession. It was during my graduate school years at the University of Iowa that I met my wife through a fortuitous encounter. My friend and I were quite late getting to the golf course one Sunday. We were bumped to an afternoon starting time. There were two women ahead of us. They were slowing down. We were speeding up. Before long we became a genial foursome. I met my wife in a sand trap. Our lives would have taken entirely different courses had I showed up at the early scheduled time.

Some years ago I delivered a presidential address at the Western Psychological Convention on the psychology of chance encounters and life paths (Bandura, 1982). At the convention the following year an editor of one of the publishing houses explained that he had entered the lecture hall as it was rapidly filling up and seized an empty chair near the entrance. In the coming week he will be marrying the woman who happened to be seated next to him. With only a momentary change in time of entry, seating constellations would have altered and this intersect would not have occurred. A marital partnership was thus fortuitously formed at a talk devoted to fortuitous determinants of life paths!

Fortuitous influences are ignored in the causal structure of the social sciences even though they play an important role in life courses. Most fortuitous events leave people untouched, others have some lasting effects, and still others branch people into new trajectories of life. A science of psychology does not have much to say about the occurrence of fortuitous intersects, except that personal proclivities, the nature of the settings in which one moves, and the types of people who populate those settings make some types of intersects more probable than others. Fortuitous influences may be unforeseeable, but having occurred, they enter as contributing factors in causal chains in the same way as prearranged ones do. Psychology can gain the knowledge for predicting the nature, scope, and strength of the impact these encounters will have on human lives. I took the fortuitous character of life seriously, provided a preliminary conceptual scheme for predicting the psychosocial impact of such events, and specified ways in which people can capitalize agentically on fortuitous opportunities (Bandura, 1982, 1998).

Fortuity does not mean uncontrollability of its effects. People can make chance happen by pursuing an active life that increases the number and type of fortuitous encounters they will experience. Chance favors the inquisitive and venturesome, who go places, do things, and explore new activities. People also make chance work for them by cultivating their interests, enabling beliefs and competencies. These personal resources enable them to make the most of opportunities that arise unexpectedly. Pasteur put it well when he noted that, "Chance favors only the prepared mind." Self-development gives people a hand in shaping their life circumstances. These various proactive activities illustrate the agentic management of fortuity.

In our excursion into the nature of self-management, our laboratory studies explored the mechanisms of self-regulation. Our social applications translated theory into practice (Bandura, 1986, 1997). To exercise self-influence, individuals have to monitor their behavior, judge it in relation to a personal standard of merit, and react self-evaluatively to it. Some of the studies clarified how personal standards are constructed from the myriad of social influences. Others documented the regulatory power of self-reactive influences. Rational models of human behavior embraced the centrality of agency but they too, provided a truncated view of self-regulation rooted in the market metaphor. Behavior was said to be regulated by self-interest construed almost entirely in terms of material costs and benefits. We demonstrated that human motivation and performance attainments are governed not only by material incentives, but also by social incentives, and self-evaluative incentives linked to personal standards. People often settle for alternatives of marginal utility or even sacrifice material gain to preserve their positive self-regard. Some of our studies examined self-regulation under conflictual conditions where individuals are rewarded for behavior they devalue, or are punished for activities they personally value. Principled dissenters often find themselves in the latter predicament. Their sense of self-worth is so strongly invested in certain convictions that they will submit to maltreatment rather than accede to what they regard as unjust or immoral.

Operant conditioners defined self-regulation out of existence by rechristening it as "stimulus control" and locating it in the external environment (Catania, 1975). In rejoinders I relocated self-management in the sentient agent and reviewed the growing body of evidence on the means by which individuals exercise self-directedness (Bandura, 1976).

This was not a hospitable time to present an agentic theory of human behavior. Psychodynamicists depicted behavior as driven unconsciously by impulses and complexes. Behaviorists depicted behavior as shaped and shepherded by environmental forces. The cognitive revolution was ushered in on a computer metaphor. This conception stripped humans of agentic capabilities, a functional consciousness, and a self-identity. The mind as a symbol manipulator in the likeness of a linear computer became the conceptual model for the times. It was not individuals, but their subpersonal parts that were orchestrating activities nonconsciously.

Control theories of motivation and self-regulation focused heavily on error correction driven by negative feedback loops in a machine metaphor of human functioning. However, self-regulation by negative discrepancy tells only half the story and not the more interesting half. Social cognitive theory posited dual control systems in self-regulation—a proactive discrepancy production system working in concert with a reactive discrepancy reduction system (Bandura, 1991*c*). In a series of studies we demonstrated that people are aspiring and proactive organisms not just reactive ones. Their capacity to exercise forethought enables them to wield adoptive control anticipatorily rather than being simply reactive to the effects of their efforts. They are motivated and guided by foresight of goals not just hindsight of shortfalls.

In these studies people motivated and guided themselves through proactive control by setting themselves challenging goals and performance standards that create negative discrepancies to be mastered. They then mobilized their effort and personal resources based on their anticipatory estimation of what it would take to fulfill those standards. Reactive feedback control came into play in subsequent adjustments of effort to achieve desired outcomes. After people attained the goals they have been pursuing, those of high perceived efficacy set a higher standard for themselves (Bandura and Cervone, 1986). The adoption of further challenges created new motivating discrepancies to be mastered.

A theory of self-regulation governed by forethought and affective self-reactions did not sit well with Powers (1991), the foremost advocate of control theory. In his view, the human organism is "nothing more than a connection between one set of physical quantities in the environment (input quantities) and another set of physical quantities in the environment (output quantities)" (Powers, 1978: 421). Cognitive and affective processes were dismissed as irrelevant because "we are not modeling the interior of the subject" (p. 432). We evaluated the adequacy of this austere mechanistic model, as well as the many control theories that take different forms depending on the mix of sociocognitive factors grafted on the negative feedback loop (Bandura, 1991*b*; Bandura and Locke, 2003).

The goal in theory building is to identify a small number of explanatory principles that can account for a wide range of phenomena. In the interest of comprehensive generality, social cognitive theory focuses on integrative principles that operate across differing spheres of functioning. The generality of the self-regulatory constituent in social cognitive theory was corroborated in the varied applications of this knowledge in educational development, health promotion, regulation, athletic performance, organizational functioning, and social change (Bandura, 1997; 2002*a*, 2004*c*; Frayne and Latham, 1987; Zimmerman, 1989).

The component subfunctions governing performance productivity were shown to operate similarly in the exercise of moral agency (Bandura, 1991*a*). After people adopt a standard of morality, their self-sanctions for actions that match or violate their personal standards serve as the regulatory self-influences. People do things that

give them self-satisfaction and a sense of self-worth. They refrain from behaving in ways that violate their moral standards because it will bring self-disapproval.

Moral standards do not operate as fixed internal regulators of conduct, however. There are a number of psychosocial mechanisms by which moral self-sanctions are selectively disengaged from inhumane conduct. The disengagement may center on making harmful practices personally and socially acceptable by portraying them as serving worthy purposes, and by exonerating social comparison and sanitizing language. It may focus on obscuring personal agency by diffusion and displacement of responsibility so that perpetrators do not hold themselves accountable for the harm they cause. It may involve minimizing, distorting, or even disputing the harm that flows from detrimental actions. And the disengagement may include dehumanizing, and blaming the victims for bringing the maltreatment on themselves.

Our analyses of moral agency showed that selective moral disengagement operates at a social systems level, not just individually. Organizations often find themselves in moral predicaments where its members perform activities or produce products that bring them profits and other benefits at injurious costs to others. Self-exonerations are needed to neutralize self-censure and to preserve a sense of self-worth. We examined the form that moral disengagement takes and the justificatory exonerations and social arrangements that facilitate their use in different detrimental corporate practices (Bandura, 1999*a*, 2004a; Bandura, Caprara, and Zsolnai, 2002).

The generality of the self-regulatory aspect of social cognitive theory was further illustrated in applications of this knowledge to the psychosocial effects of dysfunctions in self-regulation. Depending on the sphere of coping, self-regulatory dysfunctions can give rise to transgressive conduct, substance abuse, eating disorders, and chronic depression (Bandura, 1976, 1997).

## 2.6 Theoretical Extension With the Component Self-Efficacy

Psychodynamic theory, especially the psychoanalytic form, reigned over the fields of personality, psychotherapy, and the pop culture when I entered the field of psychology. The mid-1950s witnessed growing disillusionment with this line of theorizing and its mode of treatment. The theory lacked predictive power, nor did it fare well in therapeutic effectiveness. During this time I was examining the self-regulatory mechanisms by which people exercise control over their motivation,

styles of thinking, and emotional life. As part of this line of research on the development and exercise of personal agency, we were devising new modes of treatment using mastery experiences as the principal vehicle of change. Talk alone will not cure intractable problems. Through guided mastery we cultivated competences, coping skills, and self-beliefs that enabled people to exercise control over their perceived threats.

We initially tested the effectiveness of this enabling approach with severe snake phobics. When people avoid what they dread, they lose touch with the reality they shun. Guided mastery quickly restores reality testing in two ways. It provides disconfirming tests of phobic beliefs by convincing demonstrations that what the phobics dread are safe. Even more important, it provides confirmatory tests that phobics can exercise control over what they find threatening.

Intractable phobics, of course, are not about to do what they dread. We therefore, created environmental conditions that enabled phobics to succeed despite themselves. This was achieved by enlisting a variety of performance mastery aids (Bandura, Blanchard, and Ritter, 1969; Bandura, Jeffery, and Gajdos, 1975). Threatening activities were repeatedly modeled to demonstrate coping strategies and to disconfirm people's worst fears. Intimidating tasks were reduced to graduated subtasks of easily mastered steps. Treatment was conducted in this stepwise fashion until the most intimidating activities were mastered. Joint performance with the therapist enabled frightened people to do things they would refuse to do on their own. Another method for overcoming resistance was to have phobics perform the feared activity for only a short time. As they became bolder the length of engagement was extended. After bold functioning was fully restored, self-directed mastery activities were arranged in which clients manage different versions of the threat on their own under varying conditions.

This proved to be a powerful treatment. It instilled a robust sense of coping efficacy, transformed attitudes toward the phobic objects from abhorrence to liking, wiped out anxiety, biological stress reactions, and phobic behavior. The phobics were plagued by recurrent nightmares for some twenty or thirty years. Guided mastery transformed dream activity and wiped out chronic nightmares. As one woman gained mastery over her snake phobia, she dreamt that the boa constrictor befriended her and was helping her to wash the dishes. Reptiles soon faded from her dreams. The changes endured. Phobics who achieved only partial improvement with alternative modes of treatment achieved full recovery with the benefit of the guided mastery treatment regardless of the severity of their phobic dysfunctions (Bandura, Blanchard, and Ritter, 1969; Biran and Wilson, 1981; Thase and Moss, 1976).

The 1960s ushered in remarkable transformative changes in the explanation and modification of human functioning and change (Bandura, 2004*b*). *Causal analysis* shifted from unconscious psychic dynamics to transactional psychosocial dynamics. Human functioning was construed as the product of the dynamic interplay

between personal, behavioral, and environmental influences. *Social labeling practices* regarding problems of living were changed. Problem behavior was viewed as divergent behavior rather than a symptom of a psychic disease. *Functional analysis* of human behavior replaced diagnostic labeling that categorized people into psychopathologic types with stigmatizing consequences. *Laboratory and controlled field studies* of the determinants of human behavior and the mechanisms through which they operate replaced content analyses of interviews. *Action oriented treatments* replaced interpretive interviews. The *modes of treatment* were altered in the content, locus, and agents of change.

Within a decade, the field was transformed by a major paradigm shift (Bandura, 2004*b*). New conceptual models and analytic methodologies were created. New sets of periodicals were launched for the rising stream of interest. New organizations were formed for the advancement of behaviorally oriented approaches. New professional conventions provided a forum for the exchange of ideas.

Psychodynamicists branded these new modes of treatment not only as superficial but dangerous. I was invited to present our program of research at the Langley Porter Clinic in San Francisco, a stronghold of psychodynamic adherents. The session began with a disparaging introduction to the effect that this young upstart will tell us seasoned analysts how to cure phobias! I explained that my host's "generous" introduction reminded me of a football contest between Iowa and Notre Dame in South Bend. Iowa scored a touchdown, which tied the score. As the player ran on the field to kick the extra point, coach Evashevski turned to his assistant coach and remarked, "Now there goes a brave soul, a Protestant attempting a conversion before 50,000 Catholics!"

Not all the critics of the psychodynamic model worshipped at the same theoretical altar. Some went the operant route as providing the best glimpse of the promised land. Others took the sociocognitive route. Vigorous battles were fought over cognitive determinants and their scientific legitimacy (Bandura, 1995; 1996). Operant analysts took the view that the only legitimate scientific enterprise is one that directly links observable environmental events to observable behavioral events (Skinner, 1977).

Scientific advances are promoted by two kinds of theories (Nagel, 1961). One form seeks relations between directly observable events but shies away from the mechanisms subserving the observable events. The second form focuses on the mechanisms that explain the functional relations between observable events. The fight over cognitive determinants was not about the legitimacy of inner causes, but about the types of inner determinants that are favored (Bandura, 1996). For example, operant analysts increasingly place the explanatory burden on determinants inside the organism, namely the implanted history of reinforcement. The implanted history is an inferred inner cause not a directly observable one. The dispute over internal determinants is not exclusively between behaviorists and cognitivists. There is a growing rift among operant analysts about the shift of emphasis

within their own conceptual framework from models of environment-based control to organism-based control (Machado, 1993).

My entry into self-efficacy was serendipitous. In the development and evaluation of the guided mastery treatment, we focused on three fundamental processes: the power of the treatment to promote psychosocial changes; the generality or scope of the effected changes, and their durability or maintenance. Having demonstrated the power of this mode of treatment on each of these evaluative dimensions, I explored the possibility of a further function—the power of a treatment to build resilience to adverse experiences. The process of resiliency enhancement was based on the following rationale. The capacity of an aversive experience to reinstate dysfunctions depends, in large part, on the pattern of experiences in which it is embedded rather than solely on its properties. A lot of neutral or positive experiences can neutralize the negative impact of an aversive event and curtail the spread of negative effects. To test this notion, after functioning was fully restored, former phobics did or did not have the benefit of self-directed mastery experience with different versions of the threat.

In a follow-up assessment, the participants expressed deep gratitude to be rid of their phobia, but then explained that the treatment had a much more profound impact. Their lives had been debilitated socially, recreationally, and occupationally for twenty to thirty years. They were plagued by recurrent nightmares and perturbing ruminations. To overcome, within a few hours, a phobic dread that had constricted and tormented their lives was a transformational experience that radically altered their beliefs in their efficacy to exercise control over their lives. They were acting on their new self-efficacy belief and enjoying their successes, much to their surprise. These preliminary findings pointed to a common mechanism through which personal agency is exercised.

I mounted a multifaceted program of research to gain a deeper understanding of the nature and function of this belief system. To guide this new mission, the theory addressed the key aspects of perceived self-efficacy (Bandura, 1997). These include the origins of efficacy beliefs; their structure and function; their diverse effects; the processes through which they produce these effects, and the modes of influence by which efficacy beliefs can be created and strengthened for personal and social change. Diverse lines of research, conducted by a variety of investigators, provided new insights into the role of perceived self-efficacy in the fields of education, health promotion and disease prevention, clinical dysfunctions such as anxiety disorders, depression, eating disorders, substance abuse, personal and team athletic attainments, organizational functioning, and the efficacy of our social and political systems to make a difference in our lives (Bandura, 1995; 1997; Schwarzer, 1992; Maddux, 1995).

A major question in any theory of cognitive regulation of motivation, affect, and action concerns the issue of causality. A variety of experimental strategies were used to verify that beliefs of personal efficacy function as determinants of actions rather

than being merely secondary reflections of them (Bandura, 1997; Bandura and Locke, 2003).

The field of personality is deeply entrenched in trait thinking that characterizes individuals in terms of clusters of habitual behaviors. These are measured by decontextualized behavioral descriptors in one-size-fits-all global measures. In this approach, behavioral taxonomy replaced self-referrent structure, processes, and functions. Behavioral clusters get reified as personality determinants. In a chapter on a "Social Cognitive Theory of Personality," I argued that personality determinants reside in agentic self processes not in behavioral clusters (Bandura, 1999*b*).

I receive a steady flow of e-mails requesting my all-purpose measure of self-efficacy or a couple of trait-like items that could be inserted in an omnibus questionnaire. Thus, another entry in the research agenda was to differentiate an agentic model of personality from a trait model (Bandura, 1999*b*). It also required purging misconceptions of constructs. *Self-efficacy* as a judgment of personal capability is not *self-esteem*, which is a judgment of self-worth, nor is it *locus of control*, which is a belief about whether outcomes flow from behavior or from extraneous forces.

## 2.7 Triadic Model of Human Agency

The theorizing and research on human agency has centered almost exclusively on personal agency exercised individually. However, this is not the only way in which people bring their influence to bear on events that affect how they live their lives. Social cognitive theory distinguishes among three different modes of human agency: individual, proxy, and collective.

The preceding analyses centered on the nature of the direct personal agency and the cognitive, motivational, affective, and choice processes through which it is exercised to produce given effects. In many spheres of functioning, people do not have direct control over the social conditions and institutional practices that affect their everyday lives. Under these circumstances, they seek their well-being, security, and valued outcomes through the exercise of proxy agency. In this socially mediated mode of agency, people try by one means or another to get those who have access to resources or expertise or wield influence and power to act at their behest to secure the outcomes they desire.

People do not live their lives autonomously. Many of the things they seek are achievable only through socially interdependent effort. I extended the conception of human agency to collective agency rooted in people's shared belief in their joint

capabilities to bring about changes in their lives by collective effort (Bandura, 2000, 2001). This made the theory generalizable to collectivistically-oriented cultures and activities. Self-efficacy theory (Bandura, 1997) distinguishes between the source of the data (i.e., the individual) and the level of the phenomenon being measured (i.e., personal efficacy or group efficacy). There is no group mind that believes. Perceived collective efficacy resides in the minds of members as beliefs in their group capability. All too often, because individual members are the source of the judgment of their group's efficacy, the assessment was misconstrued as the individual level of the measured phenomenon. It required clarification that appraisals of personal and group efficacy represent the different levels of collectivity, not the source of the judgment.

Contentious dualisms pervade outfield pitting autonomy against interdependence, individualism against collectivism, and human agency against social structure reified as an entity disembodied from the behavior of individuals. It is widely claimed that Western theories lack generalizability to non-Western cultures. This prevailing claim had to be addressed empirically.

Most of our cultural psychology is based on territorial culturalism (Gjerde and Onishi, 2000). Nations are used as proxies for psychosocial orientations, which are then ascribed to the nations and its members and though they all thought and behaved alike. Residents of Japan get categorized as collectivists, those in the United States as individualists. Cultures are dynamic and internally diverse systems not static monoliths. There is a substantial diversity among societies placed in the same category (Kim, Triaudis, Kâğitçibasi, Choi, and Yoon, 1994). There are large generational, educational, and socioeconomic differences among members of the same cultures (Matsumoto, Kudoh, and Takeuchi, 1996).

Analyses across activity domains and classes of social relationships revealed that people behave communally in some aspects of their lives and individualistically in many other aspects (Matsumoto, et al., 1996). They express their cultural orientations conditionally rather than invariantly depending on incentive conditions (Yamagishi, 1988). Given the intracultural and interdomain variability, and changeability of cultural orientations as a function of incentive conditions, the categorical approach masks this extensive diversity. Much of the cross-cultural research relies on bi-cultural contrasts. Members of a single collectivist culture are typically compared to those of a single individual one. Given the notable diversity, the dichotomizing approach can spawn a lot of misleading generalizations.

Not only are cultures not monolithic entities, but they are no longer insular. Global connectivity is shrinking cross-cultural uniqueness. Moreover, people worldwide are becoming increasingly enmeshed in a cyberworld that transcends time, distance, place, and national borders. In addition, mass transnational influences are homogenizing some aspects of like, polarizing other aspects, and creating a lot of cultural hybridizations fusing elements from diverse cultures. These new realities call for a more dynamic approach to cultural effects and for

broadening the scope of cross-cultural analyses. This is another area in which strongly held views placed a damper on research to test the scope of theoretical generalizability.

Social cognitive theory distinguishes between basic human capacities and how culture shapes these potentialities into diverse forms appropriate to different cultural milieus. For example, humans have evolved an advanced capacity for observational learning. It is essential for their self-development and functioning regardless of the culture in which people reside. Indeed, in many cultures, the word for "*teach*" is the same as the word for "*show*" (Reichard, 1938). Modeling is a universalized human capacity. But what is modeled, how modeling influences are socially structured, and the purposes they serve vary in different cultural milieus (Bandura and Walters, 1963).

I reviewed the findings of a growing number of studies that tested the structure and functional role of efficacy beliefs in diverse cultural milieus across a wide range of age levels, gender, and different spheres of functioning (Bandura, 2002*b*). The findings show that a strong sense of efficacy has generalized functional value regardless of the cultural conditions (Early, 1993; 1994; Matsui and Onglatco, 1992; Park, et al., 2000). Being immobilized by self-doubt and perceived futility of effort has little evolutionary value. But how efficacy beliefs are developed and structured, the forms they take, the ways in which they are exercised, and the purposes to which they are put vary cross-culturally. In short, there is a commonality in basic agentic capabilities and mechanisms of operation, but diversity in the culturing of these inherent capacities.

## 2.8 Process of Theory Building

I would like to conclude with a few general remarks regarding the process of theory building and the advancement of knowledge. Theorists would have to be omniscient to provide an ultimate account of human behavior at the outset. They necessarily begin with an incomplete theory regarding the determinants of selected phenomena and the mechanisms through which those determinants operate. There are few, if any, psychosocial factors that produce effects unconditionally. The plurality of determinants of human behavior, their intricate conditionality, and dynamic interactivity add complexity to the identification of functional relations. They are unravelable by intuitive analysis alone. Initial formulations prompt lines of experimentation that help to improve the theory. Successive theoretical refinements bring one closer to understanding the phenomena of interest.

The present chapter traced the evolution of social cognitive theory and the way in which it was expanded in scope, generality, and social application. The full exposition of the theory, which falls beyond the scope of this chapter, specifies how the key determinants and governing mechanisms operate in concert in human self-development, adaptation, and change (Bandura, 1986). Theory building is socially situated rather than proceeds isolatedly. Hence, I added the conceptual contexts within which social cognitive theory evolved as part of the chronicle.

There is a lot of idealization in the pronouncements of how science is conducted. A prominent group of social scientists was once brought to a mountain retreat to prepare a report on how they went about their theory building. After a couple of days of idealized show and tell they began to confess that they did not construct their theories by deductive formalism. A problem sparked their interest. They had some preliminary hunches that suggested experiments to test them. The findings from verification tests led to refinements of their conception that in turn, pointed to further experiments that could provide additional insights into the determinants and mechanisms governing the phenomena of interest. Theory building is a long haul, not for the short winded. The formal version of the theory, that appears in print, is the distilled product of a lengthy interplay of empirically based inductive activity and conceptually based deductive activity.

Verification of deduced effects is central to experimental inquiry. The social sciences face major obstacles to the development of theoretical knowledge. Controlled experimental approaches are informative in verifying functional relations, but their scope is severely limited. They are precluded for phenomena that are not reproducible in laboratory situations because such phenomena require a lengthy period of development, are the products of complex constellations of influences by different social sources operating interactively, or are prohibited ethically.

Controlled field studies that systematically vary psychosocial factors under real-life conditions provide greater ecological validity, but they too are limited in scope. Finite resources, limits imposed by social systems on what types of interventions they permit, hard to control fluctuations in quality of implementation, and ethical considerations place constraints on controlled field interventions. Controlled experimentation must, therefore, be supplemented with investigation of naturally produced variations in psychosocial functioning linked to identifiable determinants (Nagel, 1961). The latter approach is indispensable in the social sciences.

Verification of functional relations requires converging evidence from different research strategies. Therefore, in the development of social cognitive theory, we have employed controlled laboratory studies, controlled field studies, longitudinal studies, behavior modification of human dysfunctions not producible on ethical grounds, and analyses of functional relations in naturally occurring phenomena. These studies have included populations of diverse sociodemographic characteristics, multiple analytic methodologies, applied across diverse spheres of functioning in diverse cultural milieus.

Empirical tests of a theory include the core theory, a set of auxiliary assumptions, operations presumed to create the relevant conditions, and the measures presumed to tap the key factors. Therefore, it is not the core theory alone that is being put to the test. Evidence of discrepancy between the theorized and observed outcomes leaves ambiguity about what is at fault within this complex mix. Considering the causal complexity of human behavior, the severe constraints on controlled experimentation, and the coupling of the core theory with auxiliaries, conditions, and measures, that themselves have to be well founded, the notion that a single counterinstance falsifies the theory is a pretentious illusion. But these inherent difficulties are no cause for investigatory resignation and despondency. Psychological theories differ in their predictive and operative success. A scientific enterprise can improve a theory to predict human behavior and to promote improvements in the human condition. Weak theories are discarded not because they are falsified, but because they are withered by so many limiting conditions that they have little predictive or operative value. When better theoretical alternatives exist, there is little to be gained in pursuing the verity or falsity of a theory that can, at best, explain behavior under only a very narrow range of conditions and has little to say about how to effect psychosocial changes.

It is one thing to generate innovative ideas that hold promise for advancing knowledge, but another to get them published. The publication process, therefore, warrants brief comment from the trenches. Researchers have a lot of psychic scar tissue from inevitable skirmishes with journal reviewers. This presents special problems when there is conceptual inbreeding in editorial boards. The path to innovative accomplishments is strewn with publication hassles and rejections.

It is not uncommon for authors of scientific classics to experience repeated initial rejection of their work, often with hostile embellishments if it is too discordant with what is in vogue (Campanario, 1995). The intellectual contributions later become the mainstays of the field of study. For example, John Garcia, who eventually was honored for his fundamental psychological discoveries, was once told by a reviewer of his often-rejected manuscripts that one is no more likely to find the phenomenon he discovered than bird droppings in a cuckoo clock.

Gaus and Shepherd (1994) asked leading economists, including Nobel Prize winners, to describe their experiences with the publication process. Their request brought a cathartic outpouring of accounts of publication troubles, even with seminal contributions The publication hassles are an unavoidable but frustrating part of a research enterprise. The next time you have one of your ideas, prized projects, or manuscripts rejected, do not despair too much. Take comfort in the fact that those who have gone on to fame have had a rough time. In his delightful book *Rejection*, John White (1982) vividly documents that the prominent characteristic of people who achieve success in challenging pursuits is an unshakable sense of efficacy and a firm belief in the worth of what they are doing. This belief system provides the staying power in the face of failures, setbacks, and unmerciful rejections.

In an effort to raise the odds of making it through the publication gauntlet, authors are increasingly resorting to countless citations and tacking on constructs from different theories. All too often, the eclectic additive approach is passed off as integrative theorizing presumably combining the best of different approaches. It is difficult to find a coherent theory in the conceptual stew. To curb the rising proliferation of citations, a recent incoming editor of a flagship psychology journal has imposed a limit on the number of items that are cited in an article. Scientific progress is better achieved by encompassing more fully higher-order factors within a unified theoretical framework, than by creating conglomerate models with constructs picked from divergent theories with the attendant problems of redundancy, fractionation, and theoretical disconnectedness.

Theory building is not a vocation for the thin-skinned. Theorists must be prepared to see their conceptions and empirical findings challenged, misconstrued, or caricatured, sometimes with ad hominem embellishments. For example, I am often amused to see myself miscast as both an orthodox behaviorist and a dualistic mentalist! (Bandura and Bussey, 2004). Theorists differ in the extent to which they allow such events to intrude on their time. Eysenck rarely let critiques go unanswered. Skinner rarely responded to them. I try to resist the pull to respond unless it can advance understanding of the issues in question. This is difficult to do knowing that an unanswered mistaken critique will be read by many as conceding its correctness.

There is much talk about the validity of theories, but surprisingly little attention is devoted to their social utility. For example, if aeronautical scientists developed principles of aerodynamics in wind tunnel tests but were unable to build an aircraft that could fly the value of their theorizing would be called into question. Theories are predictive and operative tools. In the final analysis, the evaluation of a scientific enterprise in the social sciences will rest heavily on its social utility.

## References

ANDERSON, J. R. (1980). *Cognitive Psychology and its Implications*. San Francisco: Freeman.

AUSTIN, J. H. (1978). Chase, chance, and creativity: The lucky art of novelty. New York: Columbia University Press.

BAER, D. M., PETERSON, R. F., and SHERMAN, J. A. (1967). The development of imitation by reinforcing behavioural similarity to a model. *Journal of the Experimental Analysis of Behaviour*, 10: 405–416.

BANDURA, A. (1965). Vicarious processes: A case of no-trial learning. In L. Berkowitz (ed.), *Advances in Experimental Social Psychology*: 2. 1–55. New York: Academic Press.

—— (1969). *Principles of Behavior Modification*. New York: Holt, Rinehart and Winston.

—— (ed.) (1971*a*). *Psychological Modeling: Conflicting theories*. New York: Aldine-Atherton.

BANDURA, A. (1971*b*). Vicarious and self-reinforcement processes. In R. Glaser (ed.), *The Nature of Reinforcement* 228–278. New York: Academic Press.

—— (1973). Analysis of modeling processes. In A. Bandura (ed.), *Psychological Modeling: Conflicting Theories*. Chicago: Aldine-Atherton.

—— (1976). Self-reinforcement: Theoretical and methodological considerations. *Behaviorism*, 4: 135–155.

—— (1982). The psychology of chance encounters and life paths. *American Psychologist*, 37: 747–755.

—— (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs: Prentice-Hall.

—— (1991*a*). Social cognitive theory of moral thought and action. In W. M. Kurtines and J. L. Gewirtz (eds.), *Handbook of Moral Behavior and Development*, vol. 1. Hillsdale, NJ: Erlbaum.

—— (1991*b*). Human agency: The rhetoric and the reality. *American Psychologist*, 46: 157–162.

—— (1991*c*). Self-regulation of motivation through anticipatory and self-reactive mechanisms. In R. A. Dienstbier (ed.), *Perspectives on Motivation: Nebraska Symposium on Motivation*: 38. 69–164. Lincoln: University of Nebraska Press.

—— (1995). Comments on the crusade against the causal efficacy of human thought. *Journal of Behavior Therapy and Experimental Psychiatry*, 26: 179–190.

—— (1996). Ontological and epistemological terrains revisited. *Journal of Behavior Therapy and Experimental Psychiatry*, 27: 323–345.

—— (1997). *Self-Efficacy: The Exercise of Control*. New York: Freeman.

—— (1998). Exploration of fortuitous determinants of life paths. *Psychological Inquiry*, 9: 95–99.

—— (1999*a*). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, 3: 193–209.

—— (1999*b*). A social cognitive theory of personality. In L. Pervin and O. John (eds.), *Handbook of Personality*: 154–196. New York: Guilford Publications.

—— (2000). Exercise of human agency through collective efficacy. *Current Directions in Psychological Science*, 9: 75–78.

—— (2001). Social cognitive theory: An agentic perspective, *Annual Review of Psychology*, 52: 1–26. Palo Alto: Annual Reviews, Inc.

—— (2002*a*). Growing primacy of human agency in adaptation and change in the electronic era. *European Psychologist*, 7: 2–16.

—— (2002*b*). Social cognitive theory in cultural context. *Journal of Applied Psychology: An International Review*, 51: 269–290.

—— (2004*a*). Selective exercise of moral agency. In T. A. Thorkildsen and H. J. Walberg (eds.), *Nurturing Morality*: 37–57. New York: Kluwer Academic.

—— (2004*b*). Swimming against the mainstream: The early years from chilly tributary to transformative mainstream. *Behavioral Research and Therapy*, 42: 613–630.

—— (2004*c*). Health Promotion by Social Cognitive Means. *Health Education and Behavior*, 31: 143–164.

—— (forthcoming). Going global with social cognitive theory: From prospect to paydirt. In S. I. Donaldson, D. E. Berger, and K. Pezdek (eds.), *The Rise of Applied Psychology: New Frontiers and Rewarding Careers*. Mahwah: Lawrence Erlbaum Associates, Inc.

—— and BARAB, P. G. (1971). Conditions governing nonreinforced imitation. *Developmental Psychology*, 5: 244–2585.

—— Blanchard, E. B., and Ritter, B. (1969). Relative efficacy of desensitization and modeling approaches for inducing behavioral, affective, and attitudinal changes. *Journal of Personality and Social Psychology*, 13: 173–199.

—— Caprara, G. V., and Zsolnai, L. (2002). Corporate transgressions. In L. Zsolnai (ed.), *Ethics in the Economy: Handbook of Business Ethics*: 151–164. Oxford: Peter Lang.

—— and Cervone, D. (1986). Differential engagement of self-reactive influences in cognitive motivation. *Organizational Behavior and Human Decision Processes*, 38: 92–113.

—— Jeffery, R. W., and Gajdos, E. (1975). Generalizing change through participant modeling with self-directed mastery. *Behaviour Research and Therapy*, 13: 141–152.

—— and Locke, E. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology*, 88: 87–99.

—— and Rosenthal, T. L. (1978). Psychological modeling: Theory and practice. In S. L. Garfield and A. E. Bergin (eds.), *Handbook of Psychotherapy and Behavior Change*: 621–658. New York: Wiley.

—— Ross, D., and Ross, S. A. (1963). A comparative test of the status envy, social power, and secondary reinforcement theories of identificatory learning. *Journal of Abnormal and Social Psychology*, 67: 527–534.

—— and Walters, R. H. (1963). *Social learning and personality development*. New York: Holt, Rinehart, and Winston.

Biran, M., and Wilson, G. T. (1981). Treatment of phobic disorders using cognitive and exposure methods: A self-efficacy analysis. *Journal of Counseling and Clinical Psychology*, 49: 886–899.

Bolton, M. K. (1993). Imitation versus innovation: Lessons to be learned from the Japanese. *Organizational Dynamics*: 30–45.

Braithwaite, J. (1994). A sociology of modeling and the politics of empowerment. *British Journal of Sociology*, 45: 445–479.

Carroll, W. R., and Bandura, A. (1982). The role of visual monitoring in observational learning of action patterns: Making the unobservable observable. *Journal of Motor Behavior*, 14: 153–167.

—— —— (1985). Role of timing of visual monitoring and motor rehearsal in observational learning of action patterns. *Journal of Motor Behavior*, 17: 269–281.

—— —— (1987). Translating cognition into action: The role of visual guidance in observational learning. *Journal of Motor Behavior*, 19: 385–398.

—— —— (1990). Representational guidance of action production in observational learning: A causal analysis. *Journal of Motor Behavior*, 22: 85–97.

Catania, C. A. (1975). The myth of self-reinforcement. *Behaviorism*, 3: 192–199.

Debowski, S., Wood, R. E., and Bandura, A. (2001). Impact of guided exploration and enactive exploration on self-regulatory mechanisms and information acquisition through electronic search. *Journal of Applied Psychology*, 86: 1129–1141.

Earley, P. C. (1993). East meets West meets Mideast: Further explorations of collectivistic and individualistic work groups. *Academy of Management Journal*, 36: 319–348.

Earley, P. C. (1994). Self or group? Cultural effects of training on self-efficacy and performance. *Administrative Science Quarterly*, 39: 89–117.

Frayne, C. A., and Latham, G. P. (1987). Application of social learning theory to employee self-management of attendance. *Journal of Applied Psychology*, 72: 387–392.

Gist, M. E. (1989). The influence of training method on self-efficacy and idea generation among managers. *Personnel Psychology*, 42: 787–805.

GIST, M. E., BAVETTA, A. G., and STEVENS, C. K. (1990). Transfer training method: Its influence on skill generalization, skill repetition, and performance level. *Personnel Psychology*, 43: 501–523.

—— SCHWOERER, C., and ROSEN, B. (1989). Effects of alternative training methods on self-efficacy and performance in computer software training. *Journal of Applied Psychology*, 74: 884–891.

GJERDE, P. F., and ONISHI, M. (2000). In search of theory: The study of 'ethnic groups' in developmental psychology. *Journal of Research on Adolescence*, 10: 291–299.

HARRIS, M. B., and EVANS, R. C. (1973). Models and creativity. *Psychological Reports*, 33: 763–769.

KIM, U., TRIANDIS, H. D., KÂĞITÇIBASI, C., CHOI, S., and YOON, G. (1994). *Individualism and Collectivism: Theory, Method, and Applications*. Thousand Oaks, CA: Sage.

MACHADO, A. (1993). Internal states: Necessary but not sufficient. *Journal of Experimental Analysis of Behavior*, 60: 469–472.

MADDUX, J. E. (1995). *Self-Efficacy, Adaptation, and Adjustment: Theory, Research and Application*. New York: Plenum Press.

MATSUI, T., and ONGLATCO, M. L. (1992). Career self-efficacy of the relation between occupational stress and strain. *Journal of Vocational Behavior*, 41: 79–88.

MATSUMOTO, D., KUDOH, T., and TAKEUCHI, S. (1996). Changing patterns of individualism and collectivism in the United States and Japan. *Culture and Psychology*, 2: 77–107.

MEICHENBAUM, D. (1984). Teaching thinking: A cognitive-behavioral perspective. In R. Glaser and S. Chipman and J. Segal (eds.), *Thinking and Learning Skills: Research and Open Questions*: 2. 407–426. Hillsdale, NJ: Erlbaum.

MILLER, N. E., and DOLLARD, J. (1941). *Social Learning and Imitation*. New Haven: Yale University Press.

NAGEL, E. (1961). *The Structure of Science*. New York: Harcourt, Brace and World.

PARK, Y. S., KIM, U., CHUNG, K. S., LEE, S. M., KWON, H. H., and YANG, K. M. (2000). Causes and consequences of life-satisfaction among primary, junior high, and senior high school students. *Korean Journal of Health Psychology*, 5(1): 94–118.

PASTORELLI, C., CAPRARA, G. V., BARBARANELLI, C., ROLA, J., ROZSA, S., and BANDURA, A. (2001). The structure of children's perceived self-efficacy: A cross-national study. *European Journal of Psychological Assessment*, 17: 87–97.

POINDEXTER, D. O. (2004). A history of entertainment-education, 1958–2000. The origins of entertainment-education. In A. Singhal, M. J. Cody, E. M. Rogers, and M. Sabido (eds.), *Entertainment-Education and Social Change: History, Research, and Practice*: 21–38. Mahwah, NJ: Lawrence Erlbaum Associates.

PORRAS, J. I., HARGIS, K., PATTERSON, K. J., MAXFIELD, D. G., ROBERTS, N., and BIES, R. J. (1982). Modeling-based organizational development: A longitudinal assessment. *Journal of Applied Behavioral Science*, 18: 433–446.

POWERS, W. T. (1978). Quantitative analysis of purposive systems: Some spadework at the foundations of scientific psychology. *Psychological Review Monograph Supplements*, 85: 417–435.

—— (1991). Comment on Bandura's "human agency." *American Psychologist*, 46: 151–153.

REICHARD, G. A. (1938). Social Life. In F. Boas (ed.), *General Anthropology*: 409–486. Boston.

ROGERS, E. M. (1995). *Diffusion of Innovations*. New York: Free Press.

ROSENTHAL, T. L., and ZIMMERMAN, B. J. (1978). *Social Learning and Cognition.* New York: Academic Press.

SABIDO, M. (1981). *Towards the Social use of Soap Operas.* Paper presented at the Institute for Communication Research, Mexico City, Mexico.

SCHWARZER, R. (1992). *Self-Efficacy: Thought Control of Action.* Washington, DC: Hemisphere.

SKINNER, B. F. (1977). Why I am not a cognitive psychologist. *Behaviorism,* 5: 1–10.

THASE, M. E., and Moss, M. K. (1976). The relative efficacy of covert modeling procedures and guided participant modeling on the reduction of avoidance behavior. *Journal of Behavior Therapy and Experimental Psychiatry,* 7: 7–12.

THORNDIKE, E. L. (1898). Animal intelligence: An experimental study of the associative processes in animals. *Psychological Review Monograph Supplements,* 2(4), Whole No. 8.

WATSON, J. B. (1908). Imitation in monkeys. *Psychological Bulletin,* 5: 169–178.

YAMAGISHI, T. (1988). The provision of a sanctioning system in the United States and Japan. *Social Psychology Quarterly,* 51: 265–271.

ZIMMERMAN, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology,* 81: 329–339.