SELF-EFFICACY

The

Exercise

of

Control

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To: Ginny, Mary, Carol, and my indefatigable pals,
Andy and Timmy

Preface

THE SOCIETIES OF TODAY are undergoing extraordinary informational, social, and technological transformations. Wrenching social changes are not new over the course of history, but what is new is their magnitude and accelerated pace. Rapid cycles of drastic changes require continuous personal and social renewals. These challenging realities place a premium on people's sense of efficacy to shape their future. Much contemporary theorizing depicts people as onlooking hosts of internal mechanisms orchestrated by environmental events. They are stripped of any sense of agency. People are proactive, aspiring organisms who have a hand in shaping their own lives and the social systems that organize, guide, and regulate the affairs of their society.

This book explores the exercise of human agency through people's beliefs in their capabilities to produce desired effects by their actions. It reviews in considerable detail the origins of efficacy beliefs, their structure, the processes through which they affect human well-being and accomplishments, and how these processes can be developed and enlisted for human betterment. Perceived self-efficacy plays a pivotal role in a multifaceted social cognitive theory, but it is not the sole determinant of action. This book documents the many ways in which efficacy beliefs operate in concert with other sociocognitive determinants in governing human adaptation and change.

The drastic changes taking place in societies are creating new paradoxes. On the one hand, people have greater knowledge, means, and social entitlements to exercise increased control, both individually and collectively, over their own development and the conditions that affect their lives. On the other hand, with growing transnational interdependencies, the social and economic life in the societies of today is now largely shaped by events in distant places. The globalization of human interconnectedness presents new challenges for people to exercise some control over their personal destinies and national life. These transnational realities are creating a new world culture that places increasing demands on collective efficacy to shape the quality of lives and the social future.

In the conception of human agency presented in this book, perceived self-efficacy operates within a broad network of sociostructural influences. However, this analysis goes beyond the contextualist perspective in which people adapt their actions to suit the social contexts in which they happen to find themselves. People are producers as well as products of social environments. In short, they have a hand in selecting and shaping their environmental contexts. This reciprocal causation of the characteristics of persons and their environments is better captured by a transactionalist perspective than by a

contextualist perspective. In this view, sociostructural influences work largely through self-systems rather than represent rival conceptions of human behavior. Because influence flows bidirectionally, social cognitive theory rejects a dualistic view of the relationship between self and society, and between social structure and personal agency.

Human lives are highly interdependent. What they do individually affects the well-being of others, and in turn what others do affects their personal well-being. People must increasingly work together to make a better life for themselves. Social cognitive theory, therefore, extends the analysis of human agency to the exercise of collective agency. It operates through the shared efficacy beliefs and aspirations of families, communities, organizations, social institutions, and even nations so that people can solve the problems they face and improve their lives through unified effort. This volume examines the contemporary conditions of life that undermine the development of collective efficacy and the new social arrangements through which people are striving to regain some measure of control over their lives.

Theories are judged by their explanatory and predictive power. In the final analysis, the value of a psychological theory must also be judged by the power to change people's lives for the better. Self-efficacy theory provides a rich body of knowledge for social applications to varied spheres of life. The broad scope and variety of applications attests to the explanatory and operative generality of this approach. It is my hope that a better understanding of personal and collective enablement can help chart optimistic courses of human development and change.

Growth of knowledge and the technologies it spawned have vastly enhanced the human power to transform environments. People are increasingly adapting the environment to themselves rather than just adapting themselves to the environment. By their transforming actions they are exerting a stronger hand in this bidirectional evolutionary process. The impact of enhanced efficacy on the nature and quality of life depends on the purposes to which it is put. There is growing public concern over where our incentive systems and some of the

technologies we create are leading us. If we continue to destroy the interdependent ecosystems that sustain life through incentive systems founded on a foreshortened perspective, it is a theory of "unnatural cultural selection" that should command our attention. The growing human domination of the environment creates interesting paradoxical effects. The very technologies that people create to alter and control their environment can, paradoxically, become a constraining force that in turn controls how they think and behave. The final chapter of this book addresses these more global issues and efficacy-based approaches to them.

not have been achieved without their informative contributions.

Self-efficacy theory is applied to strikingly diverse spheres of human functioning. Surveying this diversity has been a protracted, tortuous journey through many disciplinary terrains. I am deeply grateful to David Atkins for the countless hours he spent in the murky catacombs of those untold libraries in resilient pursuit of all too often missing and obscure periodicals. I owe an especially heavy debt of gratitude to Lisa Hellrich, who not only made my work life manageable but bettered it through her invaluable assistance. We lived through it all with our sense of humor intact.

Writing a book takes possession not only of the author but of the household as well. To my family goes the credit and my deep gratitude for their forbearance, especially when the end of this lengthy journey seemed nowhere in sight. It is to them that I dedicate this book.

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Theoretical Perspectives

PEOPLE HAVE ALWAYS STRIVEN TO control the events that affect their lives. By exerting influence in spheres over which they can command some control, they are better able to realize desired futures and to forestall undesired ones. In primitive times, when people had a limited understanding of the world around them and few ways to alter its workings, they appealed to supernatural agents who were believed to wield control over their lives. People practiced elaborate rituals and codes of conduct in an attempt to gain favor from, or protection against, supernatural powers. Even in contemporary life, when faced with weighty matters of much uncertainty, many people employ superstitious rituals to sway outcomes in their favor. A few instances in which an irrelevant ritual happened to be accompanied by a successful outcome can easily make people believe that the ritual affected the outcome.

The growth of knowledge over the course of human history greatly enhanced people's ability to predict events and to exercise control over them. Belief in supernatural systems of control gave way to conceptions that acknowledged people's power to shape their own destiny. This change in human self-conception and the view of life from supernatural control to personal control ushered in a major shift in causal thinking, and the new enlightenment rapidly expanded the exercise of human power over more and more domains. Human ingenuity and endeavor supplanted conciliating rituals to deities as the way to change the conditions of life. By drawing on their knowledge, people built physical technologies that drastically altered how they lived their daily lives. They developed biological technologies to alter the genetic makeup of animals and plants. They created medical and psychosocial technologies to improve the quality of their physical and emotional lives. They devised social systems that placed constraints on the types of beliefs and conduct that could be subjected to coercive or punitive institutional control. These entitlements and institutional protections expanded freedom of belief and action.

The striving for control over life circumstances permeates almost everything people do throughout

the life course because it provides innumerable personal and social benefits. Uncertainty in important matters is highly unsettling. To the extent that people help to bring about significant outcomes, they are better able to predict them. Predictability fosters adaptive preparedness. The inability to exert influence over things that adversely affect one's life breeds apprehension, apathy, or despair. The ability to secure desired outcomes and to prevent undesired ones, therefore, provides a powerful incentive for the development and exercise of personal control. The more people bring their influence to bear on events in their lives, the more they can shape them to their liking. By selecting and creating environmental supports for what they want to become, they contribute to the direction their lives take. Human functioning is, of course, embedded in social conditions. The environmental supports for valued life paths, therefore, are created both individually and in concert with others. Through collective action, people can improve their lives by modifying the character and practices of their social systems.

The human capacity to exercise control is a mixed blessing. The impact of personal efficacy on the quality of life depends on the purposes to which it is put. For example, the lives of innovators and social reformers driven by unshakable efficacy are not easy ones. They are often the objects of derision, condemnation, and persecution, even though societies eventually benefit from their persevering efforts. Many people who gain recognition and fame shape their lives by overcoming seemingly insurmountable obstacles, only to be catapulted into new social realities over which they have less control and manage badly. Indeed, the annals of the famous and infamous are strewn with individuals who were both architects and victims of their life courses.

The vastly enhanced human power to transform the environment can have pervasive effects not only on current life but also on future generations. Many technologies that provide current benefits also entail hazards that can take a heavy toll on the environment. Our technical capability to destroy or render uninhabitable much of the planet attests to the growing magnitude of human power. There is much public concern over where some of the technologies we create are leading us. Voracious pursuit of self-interest produces effects that collectively can be harmful to society in the long run. The exercise of social power that places individual interest above the common good creates special interest gridlock that immobilizes efforts to solve the broader problems of society. Without commitment to common purposes that transcend narrow self-interests, the exercise of control can degenerate into personal and factional power conflicts. People must work together if they are to realize the shared destiny they desire and preserve a habitable environment for generations to come. In short, the capacity for human control can be exercised for good or ill.

Because control is central in human lives, many theories about it have been proposed over the years. People's level of motivation, affective states, and actions are based more on what they believe than on what is objectively true. Hence, it is people's belief in their causative capabilities that is the major focus of inquiry. Most theories are couched in terms of an inborn drive for control. Any capability that is widely beneficial — and, thus, highly prevalent — is quickly interpreted as an inborn drive for self-determination or mastery. Theories that contend that striving for personal control is an expression of an innate drive discourage interest in how human efficacy is developed, because people allegedly come fully equipped with it. Instead, such theories dwell heavily on how the drive is socially thwarted and weakened. The fact that virtually all people try to bring at least some influence to bear on some of the things that affect them does not necessarily indicate the presence of an innate motivator. Nor is control sought as an end in itself. Exercise of control that secures desired outcomes and wards off undesired ones has immense functional value and provides a strong source of incentive motivation. The issue of whether the exercise of control is pushed by an inborn drive or pulled by anticipated benefits will be given considerable attention later.

People make causal contributions to their own psychosocial functioning through mechanisms of personal agency. Among the mechanisms of agency, none is more central or pervasive than beliefs of personal efficacy. Unless people believe they

can produce desired effects by their actions, they have little incentive to act. Efficacy belief, therefore, is a major basis of action. People guide their lives by their beliefs of personal efficacy. *Perceived self-efficacy refers to beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments.* The events over which personal influence is exercised vary widely, however. Influence may entail regulating one's own motivation, thought processes, affective states, and actions, or it may involve changing environmental conditions, depending on what one seeks to manage.

People's beliefs in their efficacy have diverse effects. Such beliefs influence the courses of action people choose to pursue, how much effort they put forth in given endeavors, how long they will persevere in the face of obstacles and failures, their resilience to adversity, whether their thought patterns are self-hindering or self-aiding, how much stress and depression they experience in coping with taxing environmental demands, and the level of accomplishments they realize. This chapter examines the nature of human agency and alternative conceptions of personal causation.

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THE NATURE OF HUMAN AGENCY

People can exercise influence over what they do. Most human behavior, of course, is determined by many interacting factors, and so people are contributors to, rather than the sole determiners of, what happens to them. The power to make things happen should be distinguished from the mechanics of how things are made to happen. For example, in pursuing a particular strategy in an athletic contest, the players do not tell their nervous system to get the motor neurons to move their skeletal musculature in designated patterns. Based on their understanding of what is within the power of humans to do and beliefs about their own capabilities, people try to generate courses of action to suit given purposes without having the foggiest notion of how

their choices orchestrate the neurophysiological events subserving the endeavor.

In evaluating the role of intentionality in human agency, one must distinguish between the personal production of action for an intended outcome and the effects that carrying out that course of action actually produce. Agency refers to acts done intentionally. Thus, a person who smashed a set of precariously displayed dishes in a china shop upon being tripped by another shopper would not be considered the agent of the event. Davidson (1971) reminds us, however, that actions intended to serve a certain purpose can cause quite different things to happen. He cites the example of the melancholic Hamlet, who intentionally stabbed the man behind a tapestry who he believed to be the king, only to discover, much to his horror, that he had killed Polonius, the wrong person. The killing of the hidden person was intentional, but the wrong victim was done in. Effects are not the characteristics of agentive acts; they are the consequences of them. Many actions are performed in the belief that they will bring about a desired outcome, but they actually produce outcomes that were neither intended nor wanted. For example, it is not uncommon for people to contribute to their own misery through intentional transgressive acts spawned by gross miscalculation of consequences. Some of the social practices and policies that cause harm were originally designed and implemented with well-meaning intent; their harmful effects were unforeseen. In short, the power to originate actions for given purposes is the key feature of personal agency. Whether the exercise of that agency has beneficial or detrimental effects or produces unintended consequences is another matter.

Beliefs of personal efficacy constitute the key factor of human agency. If people believe they have no power to produce results, they will not attempt to make things happen. In social cognitive theory, a sense of personal efficacy is represented as propositional beliefs. We will see later that these beliefs are embedded in a network of functional relationships with other factors that operate together in the management of different realities. The fact that beliefs are described in the language of mind raises

the philosophical issues of ontological reduction-ism and the plurality of regulatory systems. Mental events are brain activities, not immaterial entities existing apart from neural systems. Were one to per-form Bunge's (1980) hypothetical brain transplant, the donor's unique psychic life would undoubtedly accompany the brain to the new host, rather than remain behind with the donor as a mental entity in a separate realm. Physicality does not imply reduc-tionism, however. Thought processes are emergent brain activities that are not ontologically reducible. In his treatise on the paradigmatic shift to cogni-tivism, Sperry (1993) spells out some of the charac-teristics of a nondualistic mentalism. Mental states are emergent properties of generating brain processes. Emergent properties differ in novel ways from the elements of which they are created, rather than simply representing increased complexity of the same properties. To use Bunge's (1977) analogy, the emergent properties of water, such as fluidity, viscosity, and transparency, are not simply the ag-gregate properties of its microcomponents, oxygen and hydrogen.

Thought processes are not only emergent brain activities; they also exert determinative influence. There are many neural systems that subserve hu-man functioning. They operate interactively at dif-ferent sites and levels to produce coherent experi-ences out of the multitude of information processing. With regard to this ontological plurality, certain brain structures are specialized for menta-tion. The thought processes generated by the higher cerebral system are involved in the regula-tion of visceral, motoric, and other lower level sub-systems. For example, a host of microsensory, per-ceptual, and information processing activities gives rise to a judgment of personal efficacy. Once formed, however, efficacy beliefs regulate aspira-tions, choice of behavioral courses, mobilization and maintenance of effort, and affective reactions. The influence between microevents and emergent macroevents operates both upwardly and down-wardly. Thus, an emergent interactive agency as-sumes ontological nonreductionism of complex events to simpler ones and plurality of regulatory physical subsystems that function interconnectedly in a hierarchically structured system in which higher neural centers control lower ones.

The fact that cognition is a cerebral occurrence does not mean that the laws expressing functional relations in psychological theory are reducible to those in neurophysiological theory. One must distin-guish between how cerebral systems function and the personal and social means by which they can be orchestrated to produce courses of action that serve different purposes. Much of psychology is con-cerned with discovering principles about how to structure environmental influences and enlist cog-nitive activities to promote human adaptation and change. Most of the subject matter of psychological theory with regard to psychosocial factors does not have a counterpart in neurobiological theory and, therefore, is not derivable from it. These factors do not appear in neurophysiological theory because many of them involve the construction and organi-zation of events external to the organism. For exam-ple, knowledge of the brain circuitry involved in learning does not tell one much about how best to devise conditions of learning in terms of levels of ab-stractness, novelty, and challenge; how to provide incentives to get people to attend to, process, and or-ganize relevant information; in what modes to pre-sent information; and whether learning is better achieved independently, cooperatively, or competi-tively. The optimal conditions must be specified by psychological principles. Nor does understanding how the brain works furnish rules on how to create efficacious parents, teachers, or politicians. Al-though psychological principles cannot violate the neurophysiological capabilities of the systems that subserve them, the psychological principles need to be pursued in their own right. Were one to embark on the road to reductionism, the journey would tra-verse biology and chemistry and would eventually end in atomic particles, with neither the intermedi-ate locales nor the final stop supplying the psycho-logical laws of human behavior.

A major challenge for a physicalistic account of the mind is to specify the mechanisms through which the brain creates mental events and ex-plain how these events exert determinative influ-ence. The human mind is generative, creative,

and proactive, not just reactive. Hence, an even more formidable challenge is to explain how people come to be producers of thoughts that may be novel, inventive, or visionary or that take complete leave of reality, as in flights of fancy. One can intentionally originate novel coherent thoughts; for example, visualizing hippopotami attired in chartreuse tuxedos gracefully navigating hang gliders over lunar craters. Similarly, one can conceive of several novel acts and choose to execute one of them. People bring cognitive productions into being by the intentional exercise of personal agency. Intentionality and agency raise the fundamental question of how people actuate the cerebral processes that characterize the exercise of agency and lead to the realization of particular intentions. This question goes beyond the cerebral correlates of sensory input and motor output to the intentional production of cerebral events in thinking of future courses of action, evaluating their likely functional value under differing circumstances, and organizing and guiding the execution of the chosen options. Cognitive production, with its purposive, creative, and evaluative properties, defies explanation of novel thoughts in terms of external cueing of preformed cognitions. In addition to the question of how people bring about thoughts and actions is the intriguing question of how people generate self-perceiving, self-reflecting, and self-correcting activities.

Rottschaefer (1985) presents a thoughtful analysis of human agency operating through intentional and generative cognition as it bears on the nonintentionalistic views of human behavior favored by eliminative materialists. People are agentic operators in their life course not just onlooking hosts of brain mechanisms orchestrated by environmental events. The sensory, motor and cerebral systems are tools people use to accomplish the tasks and goals that give meaning and direction to their lives (Harré & Gillet, 1994). Through their intentional acts, people shape the functional structure of their neurobiological systems. By regulating their own motivation and the activities they pursue, they produce the experiences that form the neurobiological substrate of symbolic, psychomotor, and other skills. Should people

experience any loss or decline in any of their bodily systems, they devise alternative ways of engaging and managing the world around them.

The duality of self as agent and self as object pervades much of the theorizing in the field of personality. The double nature of the self merges in the case of self-influence. In their daily transactions, people analyze the situations that confront them, consider alternative courses of action, judge their abilities to carry them out successfully, and estimate the results the actions are likely to produce. They act on their judgments, later reflect on how well their thoughts have served them in managing the events at hand, and change their thinking and strategies accordingly. People are said to be agents when they act on the environment but objects when they reflect and act on themselves.

Social cognitive theory rejects the dualistic view of the self. Reflecting on one's own functioning entails shifting the perspective of the same agent rather than converting the self from agent to object or reifying different internal agents or selves that regulate one another. It is one and the same person who does the strategic thinking about how to manage the environment and later evaluates the adequacy of his or her knowledge, thinking skills, capabilities, and action strategies. The shift in perspective does not transform the person from an agent to an object, as the dualist view of the self would lead one to believe. One is just as much an agent when one is reflecting on one's experiences and exerting self-influence as when one is executing courses of action. In social cognitive theory, the self is not split into object and agent; rather, in self-reflection and self-influence, individuals are simultaneously agent and object.

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HUMAN AGENCY IN TRIADIC RECIPROCAL CAUSATION

The term *causation* is used in the present context to mean functional dependence between events. In social cognitive theory, human agency operates
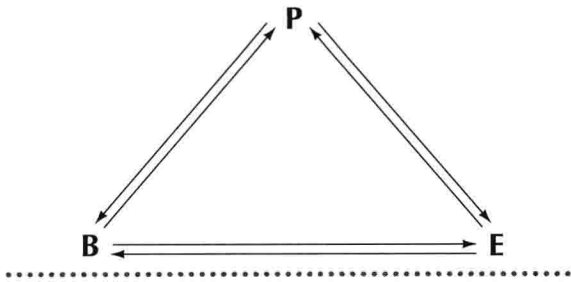
FIGURE 1.1. The relationships between the three major classes of determinants in triadic reciprocal causation. B represents behavior; P the internal personal factors in the form of cognitive, affective, and biological events; and E the external environment. (Bandura, 1986a)

within an interdependent causal structure involving triadic reciprocal causation (Bandura, 1986a). In this transactional view of self and society, internal personal factors in the form of cognitive, affective, and biological events; behavior; and environmental events all operate as interacting determinants that influence one another bidirectionally (Fig. 1.1). Reciprocity does not mean that the three sets of interacting determinants are of equal strength. Their relative influence will vary for different activities and under different circumstances. Nor do the mutual influences and their reciprocal effects all spring forth simultaneously as a holistic entity. It takes time for a causal factor to exert its influence. Because of the time lag in the operation of the three sets of factors, it is possible to gain an understanding of how different segments of reciprocal causation operate without having to mount a Herculean effort to assess every possible interactant at the same time.

Human adaptation and change are rooted in social systems. Therefore, personal agency operates within a broad network of sociostructural influences. In agentic transactions, people are both producers and products of social systems. Social structures — which are devised to organize, guide, and regulate human affairs in given domains by authorized rules and sanctions — do not arise by immaculate conception; they are created by human activity. Social structures, in turn, impose constraints and provide resources for personal development and everyday functioning. But neither structural constraints nor enabling resources foreordain what individuals become and do in given situations. For the most part, social structures represent authorized social practices carried out by human beings occupying designated roles (Giddens, 1984). As such, they do not compel uniform action. Within the rule structures, there is a lot of personal variation in their interpretation, enforcement, adoption, circumvention, or active opposition (Burns & Dietz, in press). Efficacious people are quick to take advantage of opportunity structures and figure out ways to circumvent institutional constraints or change them by collective action. Conversely, inefficacious people are less apt to exploit the enabling opportunities provided by the social system and are easily discouraged by institutional impediments. It is not a dichotomy between a disembodied social structure and a decontextualized personal agency, but a dynamic interplay between individuals and those who preside over the institutionalized operations of social systems. This interplay involves agentic transactions between institutional functionaries and those who seek to accommodate to or change their practices. Agency is just as integral to institutional functionaries as it is to freelancing individuals. Social cognitive theory thus avoids a dualism between individuals and society and between social structure and personal agency.

Sociostructural theories and psychological theories are often regarded as rival conceptions of human behavior or as representing different levels of causation. This perspective, too, is dualistic. Human behavior cannot be fully understood solely in terms of either social structural factors or psychological factors. A full understanding requires an integrated causal perspective in which social influences operate through self-processes that produce the actions. The self system is not merely a conduit for external influences, as structural reductionists might claim. The self is socially constituted, but, by exercising self-influence, individuals are partial contributors to what they become and do. Moreover, human agency operates generatively and proactively rather than just reactively. Thus, in the theory of

triadic reciprocal causation, sociostructural and personal determinants are treated as interacting cofactors within a unified causal structure.

Conceptions of agent causality have been wedded to individual agency. Social cognitive theory adopts a much broader view of agency. People do not live their lives in isolation; they work together to produce results they desire. The growing interdependence of social and economic life further underscores the need to broaden the focus of inquiry beyond the exercise of individual influence to collective action designed to shape the course of events. Social cognitive theory, therefore, extends the analysis of mechanisms of human agency to the exercise of collective agency. People's shared belief in their capabilities to produce effects collectively is a crucial ingredient of collective agency. Collective efficacy is not simply the sum of the efficacy beliefs of individuals. Rather, it is an emergent group-level attribute that is the product of coordinative and interactive dynamics. Later chapters analyze how both individual and collective efficacy beliefs contribute to human adaptation and change. Personal and social change are complementary rather than rival approaches to improving the quality of life.

DETERMINISM AND THE EXERCISE OF SELF-INFLUENCE

The discussion of agent causality raises the fundamental issues of determinism and the freedom to exert some control over one's life. The term *determinism* is used here to signify the production of effects by events rather than in the doctrinal sense meaning that actions are completely determined by a prior sequence of causes independent of the individual. Because most behavior is codetermined by many factors operating interactively, given events produce effects probabilistically rather than inevitably within the reciprocally deterministic system.

Freedom is often considered antithetical to determinism. When viewed from a sociocognitive perspective, there is no incompatibility between freedom and determinism. Freedom is not conceived negatively as exemption from social influences or situational constraints. Rather, it is defined positively as the exercise of self-influence to bring about desired results. This agentic causation relies heavily on cognitive self-regulation. It is achieved through reflective thought, generative use of the knowledge and skills at one's command, and other tools of self-influence, which choice and execution of action require. Self-influences operate deterministically on behavior in the same way external influences do. Given the same environmental conditions, people who have the ability to exercise many options and are adept at regulating their own motivation and behavior will have greater freedom to make things happen than will those who have limited means of personal agency. It is because self-influence operates deterministically on action that some measure of freedom is possible.

The choice of actions from among alternatives is not completely and involuntarily determined by environmental events. Rather, the making of choices is aided by reflective thought, through which self-influence is largely exercised. People exert some influence over what they do by the alternatives they consider; how they foresee and weigh the visualized outcomes, including their own self-evaluative reactions; and how they appraise their abilities to execute the options they consider. To say that thought guides action is an abbreviated statement of convenience rather than a conferral of agency on thought. It is not that individuals generate thoughts that then become the agents of action. The cognitive activities constitute the processes of self-influence that are brought to bear on the courses of action to take. Thus, for example, an individual will behave differently in an efficacious frame of mind than in an inefficacious one. But the individual remains the agent of the thoughts, the effort, and the actions. An elliptical expression should not be misconstrued as a transfer of agency from person to thought.

Agent causation involves the ability to behave differently from what environmental forces dictate rather than inevitably yield to them. In enticing and coercive situations, personal agency is

expressed in the power to refrain. People construct personal standards that they then use to guide, motivate, and regulate their own behavior (Bandura, 1986a; 1991b). The anticipatory self-respect for actions that correspond to personal standards and self-censure for actions that violate them serve as the regulatory influences. People do things that give them self-satisfaction and a sense of self-worth. They refrain from behaving in ways that violate their personal standards because it will bring self-censure. After self-reactive capabilities are developed, behavior usually produces two sets of consequences — external outcomes and self-evaluative reactions — that can operate as complimentary or opposing influences on behavior. It is not uncommon for individuals to invest their self-worth so strongly in certain convictions that they will submit to prolonged mistreatment rather than accede to what they regard as unjust or immoral. Thomas More, who was beheaded for refusing to compromise his resolute convictions, is a notable example from history. In their everyday lives, people repeatedly confront predicaments in which they forgo expediency and material benefit for self-respect.

Self-influence affects not only choices but the success with which chosen courses of action are executed. Psychological analyses of the mechanisms of personal agency show that people contribute to the attainment of desired futures by enlisting cognitive guides and self-incentives and by selecting and constructing environments to suit their purposes (Bandura, 1986a). The greater their foresight, proficiency, and means of self-influence, all of which are acquirable skills, the more successful they are in achieving what they seek. Because of the capacity for self-influence, people are at least partial architects of their own destinies. It is not the principle of determinism that is in dispute, but whether determinism should be treated as a one-sided or a two-way process. Given the reciprocal interplay between people and their environment, determinism does not imply the fatalistic view that people are only pawns of external forces. Reciprocal causation provides people with opportunities to exercise some control over their destinies as well as setting limits on self-direction.

Arguments against the causal efficacy of thought and other means of self-influence usually invoke a selective regression of causes. In the operant view (Skinner, 1974), people are merely repositories for past stimulus inputs and conduits for external stimulation — they can add nothing to their performance. Through a conceptual sleight of hand, the determinants of human action are regressed to an "initiating cause" located in the environment, thus rendering human thought entirely externally implanted, acausal, and completely redundant. A detailed critique of this conceptual scheme is presented elsewhere (Bandura, 1996). Obviously, thought is partly influenced by experience, but thought is not completely shaped by past stimulus inputs. Operant analyses emphasize how people's judgments and actions are determined by the environment but disregard the fact that the environment itself is partly determined by people's actions. Environments have causes, as do actions. People create, alter, and destroy environments by their actions. The sociocognitive analysis of reciprocal causation does not invite an infinite regression of causes, because individuals originate actions from their experiences and reflective thought rather than merely undergo actions as implants of the past. The emergent creations are not reducible to the environmental inputs. For example, Bach's magnificent masterpieces, which fill sixty volumes of prolific originality, are not reducible to his prior instruction in the mechanics of musical composition, his predecessors' musical works, and the ongoing events in his everyday environment. Since Bach was not endowed with fully orchestrated Brandenburg concertos and hundreds of church cantatas, from which repository did the environmental reinforcers select these artistic creations? Reinforcement cannot select what does not exist in a repertoire. One can, of course, create simple new responses by waiting around for random variations to produce some approximate elements to reward. But given Bach's prolific output, one would have to wait around for countless lifetimes to shape such artistic creations by selective reinforcement of random variations, if it could ever be achieved at all by this slow, laborious process. Although human

ingenuity incorporates some aspects of past experience, it transforms it, adds novel features to it, and thereby creates something that is not just a conglomerate or replica of the past. In short, human behavior is determined, but it is determined partly by the individual rather than solely by the environment. One does not explain a unique musical composition by attributing it to causes in the environment further back in time. The composition is an emergent creation.

The long-standing debate over the issue of freedom was enlivened by Skinner's (1971) contention that, apart from genetic contributions, human behavior is shaped and controlled by environmental contingencies. A major problem with this type of analysis is that it depicts two-way causality between people and environments as one-way control by an autonomous environment. In Skinner's view, freedom is an illusion. It is not that the interdependence of personal and environmental influences is never acknowledged by advocates of this point of view. Indeed, Skinner (1971) has often commented on people's capacity for countercontrol. The notion of countercontrol, however, portrays the environment as the instigator to which individuals can react. In fact, people are foreactive, not simply counteractive. Equivocation by the unidirectionalists created further conceptual ambiguities. Having acknowledged the reality of bidirectional influence, Skinner (1971) negated it by reasserting the preeminent control of behavior by the environment: "A person does not act upon the world, the world acts upon him." The environment thus reappears as an autonomous force that automatically selects, shapes, and controls behavior. Whatever allusions are made to two-way influences, environmental rule clearly emerges as the reigning metaphor in this view of reality.

It is the height of irony when people who exercise the liberties guaranteed by institutions of freedom denigrate freedom as an illusion. Over the course of history, countless people have sacrificed their lives to create and preserve institutions of freedom that prohibit rulers from forcing obedience to unauthorized dictates. Struggles for freedom are aimed at creating institutional safeguards that exempt certain forms of behavior from coercive and punitive control. The less social jurisdiction there is over given spheres of activities, the greater is the causal contribution of self-influence to choice of action in those domains. After protective laws are built into social systems, there are certain things that a society may not do to individuals who choose to challenge conventional values or vested interests, however much it might like to. Legal prohibitions against unauthorized societal control create personal freedoms that are realities, not illusory abstractions. Societies differ in their institutions of freedom and in the number and types of activities that are officially exempted from punitive control. For example, social systems that protect journalists from criminal sanctions for criticizing government officials and their practices are freer than those that allow authoritative power to be used to silence critics or their vehicles of expression. Societies that possess a judiciary independent of other government institutions ensure greater social freedom than those that do not.

When it comes to social change, thoroughgoing environmental determinists become fervent advocates of people's power to change their lives for the better by applying the advocate's psychotechnology. For example, Skinner spent much of the later part of his career promoting, with missionary earnestness, operant technology as the remedy for the world's ills. Even the modest applications of operant conditioning fell short of his claims, let alone providing the panacea for growing worldwide problems. A fervent environmental determinist urging people to change their environment is amusingly self-negating because it contradicts the basic premise of the doctrine of environmentalism. If humans were, in fact, incapable of acting as causal agents, they could describe the changes they were undergoing in response to the dictates of their environment, but they could not select actions based on reasoned plans and foresight of consequences, nor could they intentionally make desired things happen. They can be conduits for environmental forces, but they themselves cannot be creators of programs for environmental change. Boring (1957) provided a thoughtful analysis of the "egocentric