

THE GROWING PRIMACY OF PERCEIVED EFFICACY IN HUMAN SELF-DEVELOPMENT, ADAPTATION AND CHANGE²

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ALBERT BANDURA, Stanford University

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1. INTRODUCTION

People's search for predictability and some measure of control over events that affect their lives is of growing social import. The extraordinary advances in information technologies and global human interconnectedness are changing our world in fundamental ways. Life in the rapidly evolving cyberworld transcends time, distance, place, and national borders and alters our conceptions of them. Instant communicative access worldwide is also transforming the nature, reach, speed, and locus of human influence. It alters how people communicate, educate, work, relate to each other, and conduct their business and daily affairs.

Wrenching changes that dislocate and restructure lives are not new in history. What is new is the boundless scope and accelerated pace of human transactions and the growing globalization of human interconnectedness. These rapidly evolving realities present new adaptational challenges and expanded opportunities for people to influence the course of their personal development and to shape their national life.

Transformational social changes give primacy to personal and collective agency in this electronic era. Among the mechanisms of agency none is more central or pervasive than beliefs of personal efficacy. This belief system is the foundation of human agency. Unless people believe they can produce desired outcomes and forestall undesired ones by their actions, they have little incentive to act or to persevere in the face of difficulties. Whatever other factors serve as guides and motivators, they are rooted in the core belief that one has the power to produce changes by one's actions.

This chapter addresses the application of self-efficacy theory to diverse domains of human functioning. It does so from the agentic perspective of social cognitive theory (Bandura, 2001a). To be an agent is to influence intentionally one's own functioning and the course of events that affect one's life. In this view,

people are self-organizing, proactive, self-regulating, and self-reflecting. They are producers of their life circumstances, not just products of them. By developing enabling capabilities and resilient self-beliefs they contribute to the courses their lives take.

There are four core features of human agency. One feature involves *intentionality*. People form intentions that include action plans and strategies for realizing them. A second feature is *forethought*. The temporal extension of agency involves more than future-directed plans. People set themselves goals and anticipate likely outcomes of prospective actions to guide and motivate their efforts. The third feature is *self-reactiveness*. Agents are not only planners and forethinkers. They are self-regulators as well. 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 avoid actions that bring self-censure. The fourth feature is *self-reflectiveness*. People are not only agents of actions. They are self-examiners of their own functioning. They reflect on their efficacy, the soundness of their thoughts and actions, the meaning of their pursuits, and make corrective adjustments, if necessary.

Human well-being and attainments require an optimistic and resilient efficacy. This is because the usual daily realities are strewn with difficulties. They are full of frustrations, conflicts, impediments, adversities, failures, setbacks, and inequities. To succeed, one cannot afford to be a realist. Realists forego the endeavor, are easily discouraged by failures should they try, or they become cynics about the prospect of effecting changes. The functional belief system in difficult undertakings combines realism about tough odds, but optimism that one can beat those odds through self-development and perseverant effort.

In his book titled, *Rejection*, John White (1982) reports 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. Resilient efficacy provides the needed staying power. The people who are successful, innovative, nonanxious, nondespondent, and tenacious social reformers take an optimistic view of their efficacy to influence events that affect their lives. George Bernard Shaw put it well when he said: "Reasonable people adapt to the world. Unreasonable ones try to change it. Human progress depends on the unreasonable ones". We study extensively the risks of overconfidence, but ignore the pervasive self-limiting costs of underconfidence. This risk-averse bias reflects the cautious orientation of our theorizing.

Efficacy beliefs regulate human functioning through four major processes: cognitive, motivational, emotional, and choice processes (Bandura, 1997). They affect whether individuals think pessimistically or optimistically, in self-enhancing or self-debilitating ways. How well they motivate themselves and persevere in the face of difficulties. The quality of their emotional well-being and their vul-

nerability to stress and depression. And the life choices we make which set the course of life paths.

Perceived efficacy plays a key role in causal structures because it affects performance not only directly, but through its impact on other classes of determinants (figure 1). Efficacy beliefs affect self-motivation through their impact on goals and aspirations. It is partly on the basis of efficacy beliefs that people choose which challenges to undertake, how much effort to invest in the pursuits, how long to persevere in the face of difficulties, and whether failures are motivating or demoralizing.

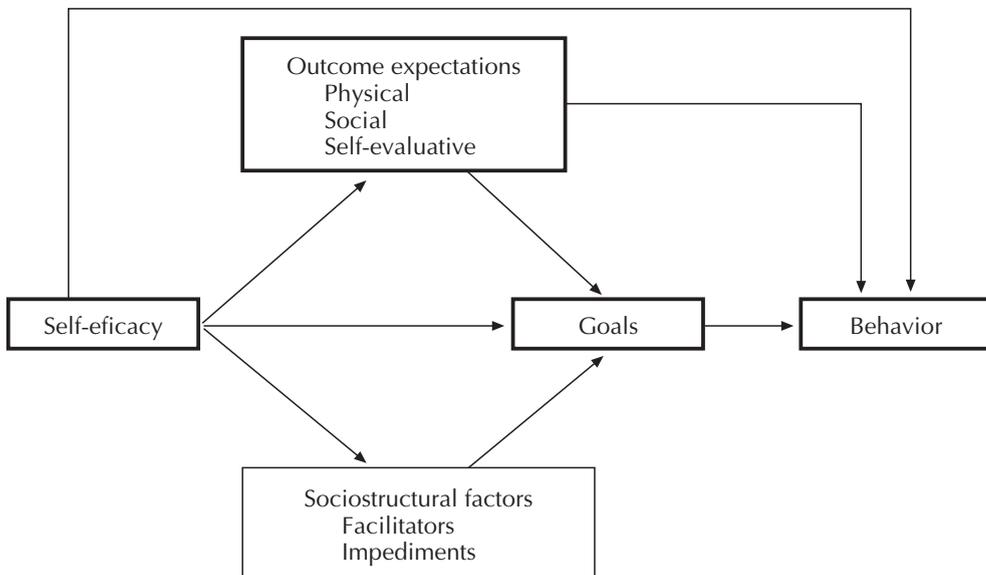


Figure 1. Paths of influence through which perceived self-efficacy and other key

Efficacy beliefs also shape people’s outcome expectations. People of high efficacy expect their efforts to produce favorable outcomes. Those who doubt their capabilities do not expect their efforts to produce much. Efficacy beliefs also affect how people view their life circumstances. Those of high efficacy focus on the opportunities their life conditions present. Even in environments containing limited opportunities and many constraints they believe that, through ingenuity and perseverance, the odds can be surmounted. Those beset with self-doubts dwell on impediments and easily convince themselves of the futility of their efforts. They achieve limited success even in environments that provide many opportunities.

The functional role of efficacy beliefs in human self-development, adaptation, and change has been investigated extensively with diverse methodologies and analytic procedures across wide ranging domains of functioning. The evidence from nine large meta-analyses shows that efficacy beliefs contribute to level of motivation and performance accomplishments (Bandura, 2002). The sections that follow review applications of self-efficacy theory to major spheres of functioning.

2. HEALTH PROMOTION AND DISEASE PREVENTION

Basic knowledge of self-regulatory mechanisms, rooted in self-efficacy belief, is altering conceptions and practices of health promotion and disease prevention. The field of health is moving from a biomedical disease model to a biopsychosocial health model. It is just as meaningful to speak of levels of vitality and healthfulness as of degrees of impairment and debility. The development of health promotion programs should start with goals not means (Nordin, 1999). If health is the goal, biomedical interventions are not the only means to it. A broadened perspective expands the range of health promoting practices and types of practitioners.

There are two levels at which perceived personal efficacy affects health. At the more basic level, people's beliefs in their ability to cope with the stressors in their lives affect biological systems that mediate health and disease. It is not stressful life conditions per se, but the perceived helplessness to manage them that produces detrimental biological effects and impairs immune function. These changes increase susceptibility to infection, contribute to the development of physical disorders and accelerate the progression of disease.

The other major way in which efficacy beliefs enable people to exert influence over their vitality and quality of health is by their direct impact on habits that promote health and those that impair it. Perceived self-efficacy affects every phase of personal change—whether people even consider changing their health habits; whether they enlist the motivation and perseverance needed to succeed should they choose to do so; and how well they maintain the habit changes they have achieved.

The quality of health is heavily influenced by lifestyle habits. This enables people to exercise some control over their health. By managing their health habits, people can live longer, healthier, and retard the process of aging. To stay healthy, people should exercise, reduce dietary fat, refrain from smoking, keep blood pressure down, and develop effective ways of managing stressors. If the huge health benefits of these few habits were put into a pill, it would be declared a scientific milestone in the field of medicine. If one is searching for the elixir of health, health habits are a good place to look.

We are witnessing two divergent trends in the field of health. On the one hand, we are heavily medicalizing problems of living and treating the ravages of unhealthful habits with drugs and other palliative means. On the other hand, people are taking control over their own health by adopting habits that promote health and eliminating those that impair it.

Nations face soaring health costs. There are two ways of managing this growing challenge. Current health practices focus heavily on the medical *supply side*. Health care systems structure and regulate health services to contain health costs. They are being forced to impose increasing delays in health care service and rationing of costly medical interventions. The days for this health system are limited. People are living longer. For example, in the United States the percent who live beyond age 65 rose from 19% in 1900 to 72% in 1998. Psychosocial factors largely determine whether this extended life is lived efficaciously or with debility, pain and dependence.

Social cognitive approaches focus on the *demand side*. They promote effective self-management of health habits that keep people healthy so they do not require costly medical services. Health economists show that, beyond basic medical care, it is increases in behavioral self-management that helps to keep people healthy (Fuchs, 1974).

The weight of disease is shifting from acute to chronic maladies. Aging populations will force nations to redirect their effects from supply-side remedies to demand-side remedies. Otherwise, nations will be swamped with staggering health costs that consume valuable resources needed for national programs. The goal is to forestall the development of chronic disease and debility by behavioral health promotion (Fries & Crapo, 1981). This compresses the health problems of old age to a brief period at the very end of life.

Social cognitive theory provides new models of health promotion. This is illustrated in the self-management model for health promotion and disease risk reduction founded on self-regulatory mechanisms (DeBusk *et al.*, 1994). This self-management model combines self-regulatory principles with computer-assisted implementation. It includes exercise programs to build cardiovascular capacity, nutrition programs to reduce dietary fat to lower risk of heart disease and cancer, weight reduction programs, and smoking cessation programs. For each risk factor, people are provided detailed guides on how to improve their health functioning. They monitor their health habits, set themselves short-term goals, and report the changes they are making. The computer mails personalized reports that include feedback of progress toward subgoals. The feedback also provides guides on how to manage troublesome situations and new subgoals to realize. Efficacy ratings identify areas in which self-regulatory skills must be developed, if beneficial changes are to be achieved and maintained. A single implementer, assisted with a computerized implementation system, provides

intensive, individualized guidance in self-management to large numbers of people.

Computer-assisted implementation enables a single implementator to build personal efficacy and self-management skills in an individualized way in large numbers of people simultaneously. In tests of the preventive value of this system, employees in the workplace lowered elevated cholesterol by altering eating habits high in saturated fats (Bandura, in press). A single nutritionist implemented the entire program at minimal cost for large numbers of employees.

Nonadherence to drug therapies is a pervasive serious problem. It worsens health conditions and raises medical costs. It may lead physicians to prescribe stronger medications or more drastic interventions in response to the seeming failure of the prescribed treatment. A major public health nightmare is that excessive use of drugs and erratic compliance will breed tougher strains of pathogens that render existing medications ineffective. We are currently testing the success of the self-management system to promote adherence to medication.

Haskell and his colleagues used the self-management system to promote lifestyle changes in patients suffering from coronary artery disease, which places them at high risk of heart attacks (Haskell *et al.*, 1994). At the end of four years, those receiving medical care by their physicians showed no change or they got worse. Those aided in self-management of health habits by nurse implementers achieved big reductions in risk factors. They lowered their intake of saturated fat, lost weight, lowered their bad cholesterol and raised their good cholesterol, exercised more, and increased their cardiovascular capacity. The program also altered the physical progression of the disease. Those receiving the self-management program had 47% less build-up of plaque on artery walls. They also had fewer coronary events, fewer hospitalizations for coronary heart problems and fewer deaths.

This self-management model combines the high individualization of the clinical approach with the large-scale applicability of the public health approach. It provides valuable health-promotion services at low cost. By linking the interactive aspects of the self-management model to the Internet, one can vastly expand its availability to people wherever they may live, at whatever time they may choose to use it.

Efforts to get people to adopt healthful practices rely heavily on health communications in public health campaigns. Meyerowitz and Chaiken (1987) found that health communications foster adoption of healthful practices to the extent that they raise beliefs in personal efficacy. We need to change emphasis in health communications from trying to scare people into health to empowering them with the self-management skills and self-beliefs needed to control their health habits. Maibach, Flora, and Nash (1998) found that people's preexisting beliefs

that they can exercise control over their health habits and efficacy beliefs instilled by a community health campaign both contributed to adoptions of healthy eating habits and regular exercise.

In longitudinal analyses of community-based health campaigns, Rimal (2000, 2001) found that perceived self-efficacy governs whether individuals translate perceived risk into search for health information, and whether they translate acquired health knowledge into healthful behavioral practices. Those of low self-efficacy take no action even though they are knowledgeable about lifestyle contributors to health and perceive themselves to be vulnerable to disease.

The absence of personal guidance limits the power of one-way mass communication. The extraordinary advances in interactive technology can increase the scope and impact of health promotion programs. On the input side, health communications can now be personally tailored to factors that affect health behavior. These factors may include efficacy beliefs, goals, outcome expectations, and perceived environmental and facilitators impediments. Tailored communications are more effective in influencing health behavior than general health messages. On the output side, individualized interactivity permits behavioral guidance that strengthens health promotion programs. Social support and guidance during early periods of personal change increase long-term success.

There is another way in which the power of population-based approaches to health promotion can be strengthened. There is only so much that large-scale health campaigns can do on their own. There are two pathways through which health communication can alter health habits (Bandura, 2001b). In the direct pathway, media communications promote changes by informing, modeling, motivating, and guiding personal changes. In the socially-mediated pathway, media influences are used to connect people to informal social networks and community settings. These places provide continued personalized guidance and incentives and social supports for desired changes. The major share of behavioral changes is promoted within these social milieus.

Psychosocial programs for health promotion will be increasingly implemented by linking people to Internet-based systems. These interactive systems provide personalized guidance on how to adopt habits conducive to health and to eliminate detrimental ones. People at risk for health problems usually ignore preventive or remedial health services. For example, school-based health promotion programs generally produce weak results. They try to do too much with too little in too short a time. But individuals will use interactive Internet-delivered guidance because it is readily accessible, convenient, and provides a feeling of anonymity. Adolescents and young women at risk of eating disorders resist seeking help. In a web-based model developed by Taylor, Winzelberg, and Celio (2001) schools informed adolescents about eating problems and the

self-management program on the Internet. The students who took advantage of it reduced dissatisfaction with their weight and body shape, altered dysfunctional attitudes, and eliminated disordered eating behavior.

3. EDUCATIONAL DEVELOPMENT AND SELF-RENEWAL

Increasing complexities in technologies, social systems, and the international economy now place heavy demands on development of higher-order cognitive competencies. As a result, educational deficiencies have increasingly serious personal and societal consequences. In the past, youth with little schooling could get industrial and manufacturing jobs requiring minimal cognitive skills. Such options are rapidly shrinking. In the modern workplace, automation of production and electronic information management systems now perform most of the routine work that was formerly done manually. The emerging opportunity structures require cognitive competencies to fulfill complex occupational roles and to manage the demands of contemporary life.

The hope and future of people in a knowledge-based global society that is rapidly changing reside in their capacities for continual self-development and self-renewal. Educational systems must change their emphasis from mainly imparting knowledge to teaching students how to educate themselves throughout their lifetime. They have to be adaptable and proficient self-directed learners. Education for self-directedness is now vital for a productive and innovative society.

There are three main pathways through which efficacy beliefs play a key role in cognitive development and accomplishments. They include students' beliefs in their efficacy to regulate their learning activities and to master academic subjects; teachers' beliefs in their personal efficacy to motivate and promote learning in their students; the faculties' collective efficacy that their schools can accomplish significant academic progress.

Considerable progress has been achieved in clarifying the role of efficacy beliefs in children's growth of cognitive competencies. Efficacy beliefs contribute independently to intellectual performance rather than simply reflecting cognitive skills. For example, Collins (1982) has shown that at each level of math ability children with higher efficacy outperform their counterparts of lower perceived efficacy. Among children matched on ability, those whose belief in their efficacy is raised experimentally are more aspiring, more persistent in their efforts, manage their time better, show greater strategic flexibility, and are less likely to discard good solutions prematurely (Bouffard-Bouchard, 1990).

A major goal of education is to equip students with the intellectual tools, self-beliefs, and self-regulatory capabilities to educate themselves throughout their

lifetime. The accelerated pace of social, informational, and technological change is placing a premium on capability for self-directed learning and self-renewal. Metacognitive theorists have addressed the pragmatics of self-regulation in terms of selecting appropriate strategies, testing one's comprehension and state of knowledge, and correcting one's deficiencies. Metacognitive training aids academic learning. But students often do not transfer the metacognitive skills to other pursuits or use them regularly.

In social cognitive theory, people must develop skills in regulating the motivational, affective, and social determinants of their intellectual functioning as well as the cognitive aspects. Self-management is exercised through interlinked processes including self-monitoring, efficacy appraisal, goal setting, outcome expectations, and affective self-incentives. Zimmerman (1990) has been the leading proponent of this expanded model of academic self-regulation. He has shown that efficacious self-regulators gain knowledge, skills, and intrinsic interest in intellectual matters. Weak self-regulators do not achieve much progress in self-development.

Self-regulatory skills will not contribute much, if students cannot get themselves to apply them persistently in the face of difficulties, stressors and competing attractions. Children's belief that they can regulate their own learning raises their efficacy for academic activities (Zimmerman, Bandura, & Martínez-Pons, 1992). Their academic efficacy increases their achievement both directly and by raising their academic aspirations. Children base their academic aspirations on their efficacy beliefs, as well as the standards the parents set for them.

Information technologies are globalizing knowledge and altering educational systems. Students can now exercise personal control over their own learning. In the past, their educational development was dependent on the quality of their schools. Students now have the best libraries, museums, and multimedia instruction at their fingertips through the global Internet for educating themselves independently of time and place. This change requires a major reorientation in students' conception of education. They are agents of their own learning, not just recipients of information.

Much of the world's information is available only in electronic form. Before long most information will be available only in this form. We are entering a new era in which construction of knowledge will rely increasingly on electronic inquiry. Knowing how to access, process, and evaluate this avalanche of information is vital for knowledge construction and cognitive functioning. This is a complex activity. People who doubt their efficacy to conduct productive searches and to manage the computer technology can quickly become overwhelmed. Students who are taught how to construct knowledge via the Internet gain high efficacy, satisfaction and interest in knowledge construction. They spend less time in errors and redundancies, use good strategies, learn more, and are more

successful in gaining sound knowledge than those using a computer tutorial (Debouski, Wood, & Bandura, 2001). Interactive computer tutorials are now becoming a prevalent form of instruction. Putting a human face on electronic instruction boosts its power.

Information technologies are a tool not a panacea for intellectual development. They are only useful to those who choose to use them productively. Students must develop the self-regulatory skills to motivate themselves to take advantage of what these systems have to offer. Research by Joo, Bong and Choi (2000) on Internet self-efficacy underscores the importance of children's beliefs in their efficacy to regulate their learning activities in their intellectual development. High efficacy for self-regulated learning raised students' beliefs in their efficacy both to master academic subjects and to use the Internet for Web-based instruction. The higher the Internet self-efficacy, the more successful they were in gaining necessary information from websites.

Electronic media do more than just increase access to vast bodies of information. They also serve as a convenient vehicle for creating instructive social networks for achieving shared knowledge through collaborative learning. Through interactive electronic networking, people link together in dispersed locales, exchange information, share new ideas, and work collaboratively on projects (Staples, Hulland, & Higgins, 1998). People can now link together in widely dispersed locales, expand their membership, extend the interconnections geographically, even worldwide, and disband them when they have outlived their usefulness.

The task of creating productive learning environments rests heavily on the talents, and efficacy of teachers. Teachers' beliefs in their instructional efficacy partly determine how they conduct their academic activities. This affects students' efficacy and academic development (Bandura, 1997). Teachers' efficacy beliefs affect their orientation toward the educational process as well as their instructional practices (Woolfolk, Rosoff, & Hoy, 1990). Those who believe strongly in their efficacy support development of academic self-directedness and intrinsic interest. They view difficult students as reachable and teachable, and regard their learning problems as surmountable by ingenuity and extra effort. Teachers of low efficacy take a custodial view of their job. They are pessimistic about their students' educability, resort to restrictive and punitive modes of discipline, and use low student ability as an explanation for why they cannot be taught. Ashton and Webb (1986) document the cumulative impact of teachers' perceived efficacy. Students learn much more from teachers imbued with a sense of efficacy than from those beset with self-doubts.

Teachers operate collectively rather than in isolation. The belief systems of academic staffs create school cultures that can be enabling or demoralizing. Much research has been conducted on the characteristics of high-achieving

schools (Bandura, 1997). The findings are quite consistent in what makes schools academically effective. In efficacious schools, principals are academic leaders rather than mainly administrators and disciplinarians. Academic leadership builds teachers' beliefs in their instructional efficacy. High expectations and standards for achievement pervade the environment of efficacious schools. However, high standards without enabling instruction are demoralizing. In efficacious schools, challenging standards are backed up with enabling instruction, close monitoring of academic progress, and timely reinstruction, if necessary, that helps students succeed.

The family plays a key role in children's success in school. Active involvement of parents as partners in their children's education is another distinguishing feature of efficacious schools. Teachers' efficacy partly determines how much parents' participate in children's scholastic activities (Hoover-Dempsey, Bassler, & Brissie, 1987, 1992). These findings underscore the interplay of social, familial, and educational contributions to the development of efficacious educational systems.

People seek quick fixes through cosmetic changes that leave existing educational practices intact. Building schools with a strong collective efficacy requires a socio-structural approach, rather than tinkering with curricula and instructional methods.

4. SELF-EFFICACY IN ORGANIZATIONAL FUNCTIONING

People spend a major part of their lives in occupational activities. A vocation does more than simply supply income for one's livelihood. The work people do determines their personal identity and whether a substantial part of our lives is repetitively boring, distressing, or challenging and self-fulfilling. Perceived efficacy plays a key role in what people choose as their life's work, how well they prepare themselves for their chosen pursuits, and the success they achieve in their everyday work (Hackett, 1995; Lent, Brown, & Hackett, 1994). People eliminate from consideration entire classes of occupations on the basis of perceived efficacy, whatever benefits they may hold.

New employees receive training to prepare them for the roles they will be performing. The efficacy that newcomers bring and develop during their occupational training contributes to the success of this socialization process (Jones, 1986). Those of low efficacy prefer prescriptive training that tells them how to perform as traditionally structured. Those of high efficacy prefer training that enables them to restructure their roles innovatively by adding new elements and functions to the customary duties. Organizations that provide their new employees with guided mastery experiences, effective co-workers as models, and ena-

bling performance feedback enhance employees' efficacy, emotional well-being, satisfaction, and level of productivity.

Self-directedness is becoming a key factor in occupational life. In the past, employees learned a given trade and performed it much the same way during their lifetime in the same organization. The modern workplace requires a highly skilled and flexible workforce to meet rapidly changing job demands. With the fast pace of change, knowledge and technical skills are quickly outmoded, unless they are updated to fit the new technologies. Employees have to take charge of their self-development for different positions and careers over the course of their worklife. Speier and Frese (1997) studied how East German employees managed the transition from State run to private run factories as a function of level of perceived efficacy. Compared to those of low efficacy, employees of higher efficacy were more active in upgrading their knowledge and occupational skills on their own, and taking initiative to change the workplace to make it more productive.

Worklife is increasingly structured on a team-based model in which operational and management functions are assigned to the workers themselves. A self-management work structure changes the model of supervisory managership from hierarchical control to facilitative guidance that provides the resources and support that teams need to do their work effectively. Enabling organizational structures build managers' efficacy to operate as facilitators of productive team work. The higher the collective efficacy of self-managing teams the more satisfied they are with their work and the greater their productivity (Little & Madigan, 1994).

Occupational stress is a pervasive problem that has both personal and organizational sources. Heavy workloads, computerized work places with automated forms of surveillance, limited opportunities for personal development to prevent technical obsolescence, poor prospects for occupational advancement, and an unsatisfying imbalance between one's work like and one's personal life takes an emotional toll. Perceived efficacy to fulfill occupational demands affects level of stress and physical health of employees. Those of low efficacy are stressed by perceived overload in which tasks demands exceed their perceived coping capabilities, whereas those of high efficacy are stressed by perceived underload in which they feel frustrated by organizational constraints in developing and using their potentialities (Matsui & Onglatco, 1992).

According to the *demands-control model* of occupational stress, the opportunity to exercise control over work activities reduces the stressfulness of workloads. However, being given control over work demands alone is insufficient to diminish the level of occupational stress. Perceived self-efficacy moderates this relation. Bestowed control with high perceived self-efficacy to manage the worklife diminishes stress. But being given control over the demands of the worklife with low perceived efficacy to manage them is stressful and demoralizing (Grau,

Salanova, & Peiró, 2001; Jex & Bliese, 1999; Schaubroeck & Merritt, 1997). Perceived self-efficacy must, therefore, be added to the demands-control model of occupational stress to improve its predictability. Efforts to reduce occupational stressfulness by increasing job control without raising efficacy to manage the increased responsibilities will do more harm than good.

Exposure to chronic occupational stressors and with a low sense of efficacy to fulfill job demands increases vulnerability to burnout (Leiter, 1992; Salanova, Grau, Cifre, & Llorens, 2000; Salanova, Peiró, & Schaufeli, 2002). This syndrome is characterized by physical and emotional exhaustion, depersonalization of clients, lack of any sense of personal accomplishment, and occupational disengagement through cynicism about one's work.

There are three ways in which a sense of inefficacy can contribute to burnout. One route is through low perceived self-efficacy to manage job demands (Brouwers & Tomic, 1999). A low sense of collective efficacy of the social system operating as a whole is similarly conducive to burnout (Schwarzer & Schmitz, 1999). Social support reduces stress, depression, and promotes health. A second route to burnout is through a low perceived efficacy to enlist social support, especially in times of difficulty (Brouwers, Evers, & Tomic, 2001). Social support, of course, is not a self-forming entity waiting around to buffer harried people against stressors. Rather, they have to create supportive relationships for themselves and be able to maintain them. Individuals of high perceived social efficacy create more supportive environments for themselves than those who distrust their social capabilities. Social support produces beneficial effects only to the extent it raises perceived coping efficacy (Bandura, 2002). People live in a psychic environment largely of their own making. All too often they bring work-related problems home either in the form of homework or perturbing ruminations about negative work experiences. Perceived inefficacy to exercise control over thought-produced distress is still another route to burnout.

Efficacious adaptability has become a premium at the organizational level. Organizations must be continuously innovative to survive and prosper in the rapidly changing global marketplace. They face the paradox of preparing for change at the height of success. Many fall victim to the inertia of success. They get locked into the technologies and products that produced their successes, and fail to change fast enough to the technologies and marketplaces of the future.

The development of new business ventures and the renewal of established ones depends heavily on innovativeness and entrepreneurship. Such pursuits are strewn with obstacles and uncertainties. Turning visions into realities is an arduous process with uncertain outcomes. Entrepreneurship, therefore, requires a robust efficacy to sustain one through the stresses and discouragements inherent in innovative pursuits. Individuals of high efficacy focus on opportunities worth pursuing; those of low efficacy dwell on risks to be avoided. Venturers of

high efficacy judge themselves better able at beating the odds than venturers of lower efficacy. Among patent inventors, those of high efficacy are the ones who go on to become entrepreneurs. (Chen, Greene, & Crick, 1998; Markman & Baron, 1999). Venturers who achieve high growth in companies they have founded or bought and transformed have a vision of what they wish to achieve, a firm belief in their efficacy to realize it, set challenging organizational growth goals, and come up with innovative production and marketing strategies (Baum, 1994).

There has been a phenomenal growth of digital technologies. Silicon Valley is a prime example. It is not a place. It is a flourishing entrepreneurial subculture distributed around the San Francisco area. In this milieu there is extensive cross-pollination of ideas through an open regional network. Individuals with diverse expertise exchange ideas freely. They celebrate risk taking, and accept failure as a natural part of innovative success. Close ties to universities that generate creative ideas, and ready venture capital create the climate for innovation and reinforce the entrepreneurial spirit (Lee, Miller, Hancock, & Rowen, 2000).

5. MODES OF HUMAN AGENCY

Social cognitive theory distinguishes among three modes of agency-individual, proxy, and collective. In personal agency exercised individually, people bring their influence to bear on their own functioning and on environmental events. In many human affairs people do not have direct control over conditions that affect their lives. They exercise socially-mediated agency by influencing others who have the resources, knowledge and means to act on their behalf to secure the outcomes they desire. People do not live in isolation. They have to work together to manage and improve their lives. They do so by acting on their shared belief in their collective efficacy. They pool their knowledge, skills, and resources, and act in concert to shape their future. Successful functioning requires an agentic blend of individual, proxy, and collective efficacy.

A contentious dualism pervades cross-cultural psychology, pitting individualism against collectivism and communality, autonomy against interdependence, and personal agency against social structure. The relative contribution of individual, proxy, and collective modes to the agentic blend may vary cross-culturally. But all forms of agency are needed to make it through the day, regardless where one lives.

Some authors inappropriately equate self-efficacy with individualism and pit it against collectivism. Self-efficacy does not come with a built-in individualistic value system. If self-efficacy is put to social purposes, it fosters a communal life rather than erodes it. Indeed, efficacious people who are prosocially oriented

often subordinate self-interest to the benefits of others. Personal efficacy is valued not because of reverence for individualism, but because personal efficacy is vital for success regardless of whether it is achieved individually or by people working together.

Perceived collective efficacy is not simply the sum of the efficacy beliefs of individual members. Rather, it is an emergent group-level property that embodies the coordinative and interactive dynamics of group functioning. A group operates through the behavior of its members. Perceived collective efficacy resides in the minds of group members. It is people acting in concert on a shared belief not a disembodied group mind that is doing the cognizing, aspiring, motivating, and regulating. There is no emergent entity that operates independently of the beliefs and actions of the individuals who make up a social system.

Collective efficacy is rooted in the efficacy beliefs of its members. A group whose members are consumed by self-doubts would achieve little. Fernández-Ballesteros and her colleagues examined the relation between personal and group efficacy and their socioeconomic determinants in a national sample in Spain (Fernández-Ballesteros, Díez-Nicolás, Caprara, Barbaranelli, & Bandura, 2002). Socioeconomic status raises personal efficacy to manage the demands of one's everyday life and to help bring about social changes by one's actions. Both forms of individual efficacy contribute to people's beliefs that, through their collective voice, their society can accomplish desired social changes.

A growing body of research underscores the importance of beliefs of collective efficacy in how well social systems function. These include families, educational systems, business organizations, athletic teams, and combat teams. The findings of two meta-analyses show that the stronger people believe in their collective efficacy the higher their accomplishments (Gully, Incalcaterra, Joshi, & Beaubien, 2002; Stojkovic & Lee, 2001).

Self-efficacy theory is being increasingly examined in diverse cultural contexts (Bandura, 2002). The evidence shows that belief in one's capabilities has the same functional value and works in much the same way in different cultures. But culture shapes how efficacy beliefs are developed, the forms in which they are exercised and the purposes to which they are put. Kim and Park (1999) further extend the cross-cultural applicability of self-efficacy theory by adding belief in one's relational efficacy to promote positive communal relations. This facet of self-efficacy is well suited to capture the communal aspect of life, especially in the more collectivistic cultures. These lines of research illustrate how social cognitive theory is enriching cross-cultural research and is, in turn, extended and enriched by it.

Some people live in individualistic societies. Others in collectivistic systems. Early's (1994) cross-cultural research on organizational productivity in the United States, Hong Kong, and Mainland China confirms the generalized functional value of efficacy belief. In each of these settings, the organizations are manufacturing the same telecommunications equipment and offering the same service. In each place, half the managers were trained on an individual management system, the other half were trained on group management systems. Managers from the individualistic United States culture achieve the highest efficacy and organizational productivity under the individually-oriented system. Those from collectivistic cultures, Hong Kong and China, judge themselves most efficacious and achieve the highest organizational productivity under the group-oriented system.

There are collectivists in individualistic cultures and individualists in collective cultures. Regardless of cultural background, managers achieved the highest personal efficacy and productivity when their psychological orientation matches the organizational system. Thus, Early found that American collectivists achieve higher efficacy and productivity under a group-oriented system. Chinese individualists had higher efficacy and productivity under an individually-oriented system. The personal orientation rather than the cultural locale is a major carrier of the effects. Both at the social and individual level of analysis strong efficacy fosters high group effort and performance.

6. INTRACULTURAL DIVERSITY AND TERRITORIAL CULTURALISM

Cultures are diverse and dynamic social systems not static monoliths. There is much diversity among people living in the same culture. Human behavior is socially situated, richly contextualised, and conditionally expressed. For example, within the same collectivistically-oriented culture, members vary in their communal behavior depending on their education, socioeconomic status, whether the reference group is familial, peer, academic, or traditional, whether the participants are of ingroup or outgroup status, and the incentives for behaving communally (Freeman, & Bordia, 2001; Matsumoto, Kudoh, & Takeuchi, 1996, Yamagishi, 1988). Indeed, intracultural-diversity swamps intercultural differences.

In most cross-cultural research, nations are used as proxies for culture. For example, residents of Japan are characterized as collectivists; those in the United States as individualists. Different aspects of human agency get partitioned dichotomously into individual and collective forms by geographic locale. This is culturalism by territory rather than by psychosocial orientation and processes. Small statistical mean difference in attributes in bicultural contrasts is often ascribed to

the national residents as though they behaved alike as dichotomously classified. General measures of psychosocial attributes stripped of context and conditional determinants mask the substantial intracultural and intraindividual diversity.

The new global realities call for a more dynamic approach to cultural effects than the categorical one that has been in vogue. Cultures are no longer insular. Ideas, values and styles of behavior are being shaped transnationally in symbolic cultures transmitted electronically. People worldwide are becoming increasingly immersed in a cyberworld that transcends time, distance, place, and national borders. Global connectivity is shrinking cross-cultural uniqueness. Global market forces are restructuring national economies, eroding cultural practices that lack marketability and shaping the political and social life of societies. In addition, mass transnational migrations of people and high global mobility of entertainers, athletes, journalists, academics, and employees of multinational corporations with more cosmopolitan orientations are changing cultural landscapes.

The transnational intermixing is creating new hybrid cultural forms blending elements from different ethnicities. In short, the revolutionary advances in communication technologies and the force of globalization are homogenizing some aspects of life, polarizing other aspects, and fostering a lot of cultural hybridization worldwide (Holton, 2000). Much of our cross-cultural theorizing and research are discordant with these new realities of global reach and connectivity.

Social cognitive theory adopts a transactional view of self and society. Human adaptation and change are rooted in social systems. But social systems are created by human activity. In this agentic interplay, people are producers of their life circumstances, not just reactor to them. Given the agentic features of social cognitive theory, it is especially well suited to address the exercise of human agency in its diverse forms for personal and social change in this rapidly evolving electronic era.