

Social Cognitive Theory of Self-Regulation

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In social cognitive theory human behavior is extensively motivated and regulated by the ongoing exercise of self-influence. The major self-regulative mechanism operates through three principal subfunctions. These include self-monitoring of one's behavior, its determinants, and its effects; judgment of one's behavior in relation to personal standards and environmental circumstances; and affective self-reaction. Self-regulation also encompasses the self-efficacy mechanism, which plays a central role in the exercise of personal agency by its strong impact on thought, affect, motivation, and action. The same self-regulative system is involved in moral conduct although compared to the achievement domain, in the moral domain the evaluative standards are more stable, the judgmental factors more varied and complex, and the affective self-reactions more intense. In the interactionist perspective of social cognitive theory, social factors affect the operation of the self-regulative system. © 1991 Academic Press, Inc.

Self-regulatory systems lie at the very heart of causal processes. They not only mediate the effects of most external influences, but provide the very basis for purposeful action. Most human behavior, being purposive, is regulated by forethought. The future time perspective manifests itself in many different ways. People form beliefs about what they can do, they anticipate the likely consequences of prospective actions, they set goals for themselves, and they otherwise plan courses of action that are likely to produce desired outcomes. Through exercise of forethought, people motivate themselves and guide their actions in an anticipatory proactive way.

The capability for intentional and purposive action is rooted in symbolic activity. Future events cannot be causes of present motivation and action. However, by being represented cognitively in the present, conceived future events are converted into current motivators and regulators of behavior. In anticipatory control, behavior is directed by cognized

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goals not pulled by an unrealized future state. The causal agency resides in forethought and the self-regulatory mechanisms by which it is translated into incentives and guides for purposive action. The present article analyzes the structure and mechanisms of self-regulation.

If human behavior were regulated solely by external outcomes, people would behave like weathervanes, constantly shifting direction to conform to whatever momentary social influence happened to impinge upon them. In actuality, people possess self-reflective and self-reactive capabilities that enable them to exercise some control over their thoughts, feelings, motivation, and actions. In the exercise of self-directedness, people adopt certain standards of behavior that serve as guides and motivators and regulate their actions anticipatorily through self-reactive influence. Human functioning is, therefore, regulated by an interplay of self-generated and external sources of influence.

STRUCTURE OF SELF-REGULATORY SYSTEMS

Self-regulation operates through a set of psychological subfunctions that must be developed and mobilized for self-directed change (Bandura, 1986). Neither intention nor desire alone has much effect if people lack the capability for exercising influence over their own motivation and behavior (Bandura & Simon, 1977). The constituent subfunctions in the exercise of self-regulation through self-reactive influence are summarized in Fig. 1 and discussed in the sections that follow.

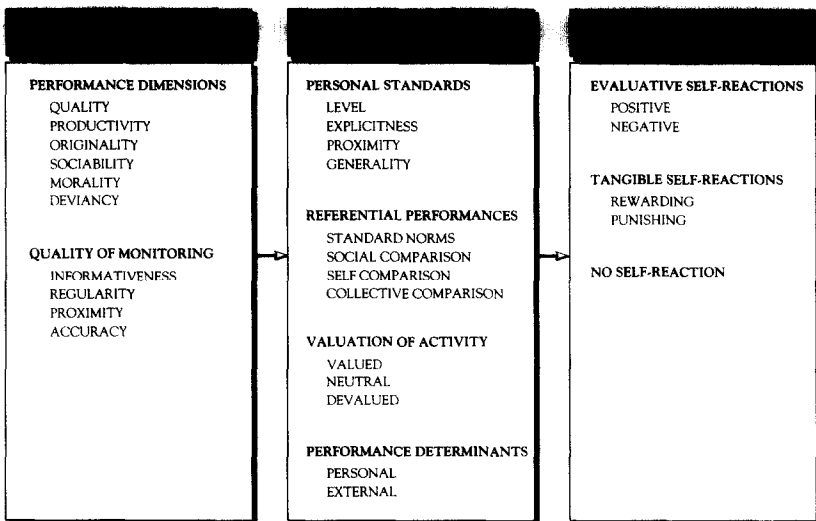


FIG. 1. Structure of the system of self-regulation of motivation and action through internal standards and self-reactive influences.

Self-Monitoring Subfunction

People cannot influence their own motivation and actions very well if they do not pay adequate attention to their own performances, the conditions under which they occur, and the immediate and distal effects they produce. Therefore, success in self-regulation partly depends on the fidelity, consistency, and temporal proximity of self-monitoring. Activities vary on a number of evaluative dimensions, some of which are listed in Fig. 1. Depending on people's values and the functional significance of different activities, they attend selectively to certain aspects of their functioning and ignore those that are of little import to them.

The process of self-monitoring is not simply a mechanical audit of one's performances. Preexisting cognitive structures and self-beliefs exert selective influence on which aspects of one's functioning are given the most attention, how they are perceived, and how performance information is organized for memory representation. Mood states also affect how one's performances are self-monitored and cognitively processed (Kuiper, MacDonald, & Derry, 1983). Self-monitoring of behavior that bears on personal competence and self-esteem, in turn, activates affective reactions that can distort self-perceptions at the time the behavior is occurring, as well as later recollections of it.

Self-observation serves at least two important functions in the process of self-regulation. It provides the information needed for setting realistic goals and for evaluating one's progress toward them. But there are additional dynamic ways in which paying close attention to one's thought patterns and actions in different social contexts can contribute to self-directed change.

Self-diagnostic function. Systematic self-observation can provide important self-diagnostic information. When people observe their thought patterns, emotional reactions, and behavior and the conditions under which these reactions occur, they begin to notice recurrent patterns. By analyzing regularities in the covariation between situations and their thought and actions, people can identify the psychologically significant features of their social environment that lead them to behave in certain ways. For those who know how to alter their behavior and modifiable aspects of their environment, the self-insights so gained can set in motion a process of corrective change.

Diagnostic self-monitoring need not be confined to observing naturally occurring covariations in one's everyday experiences or to retrospective analyses. Significant determinants of psychosocial functioning can be identified more effectively through personal experimentation (Neuringer, 1981). By systematically varying things in their daily lives and noting the accompanying personal changes, people can discover what factors influ-

ence their psychosocial functioning and sense of well-being. Similarly, by altering their habitual thought patterns and observing the accompanying effects, people can gain understanding of how their thinking affects their emotional states, level of motivation, and performance. Self-knowledge provides direction for self-regulatory control.

Self-motivating function. When people attend closely to their performances they are inclined to set themselves goals of progressive improvement, even though they have not been encouraged to do so. Goal setting enlists evaluative self-reactions that mobilize efforts toward goal attainment. The directive and motivational effects of self-monitoring have been found to be quite variable. It sometimes increases the behavior being observed, sometimes reduces it, and oftentimes has no effect. One can bring some order to this variability by considering the intervening mechanism of self-directedness. Knowledge of how one is doing alters one's subsequent behavior to the extent that it activates self-reactive influences in the form of personal goal setting and self-evaluative reactions.

Thus, when people engage in an ongoing activity and are informed of their performance attainments, some set goals for themselves spontaneously (Bandura & Cervone, 1983). Variations in personal goal setting are reflected in diversity in motivation (Fig. 2). Those who set no goals for themselves achieve no change in effort and are surpassed by those who aim to match their previous level of effort who, in turn, are outperformed by those who set themselves the more challenging goal of bettering their past endeavor.

A number of factors, some relating to the attributes of individuals, others to the behavior, and still others to the nature and type of self-monitoring, can affect the likelihood that observing how one behaves will enlist self-reactive influences. One such factor is the *temporal proximity* of self-monitoring to the changeworthy behavior (Bandura, 1986; Kazdin, 1974; Nelson, 1977). Self-directed change is more readily achieved by bringing consequences to bear on present behavior than on its distal effects. Self-observation close in time provides continuing information and, thus, the best opportunity to bring self-influence to bear on the strategies one is using and on one's behavior while it is in progress. Focusing on the more distal effects of courses of action cannot correct the past and may provide little guidance for the future. Intermittent self-monitoring, because it is only partially informative, also produces less effective self-regulation than does regular attention to one's own performances.

A second factor is the *informativeness of performance feedback*. Evaluative self-reactions cannot be much aroused if one does not have a clear idea of how one is doing. Self-observation enhances performance when there is clear evidence of progress, but it has little effect when there is considerable ambiguity about the effects of one's courses of action. *Mo-*

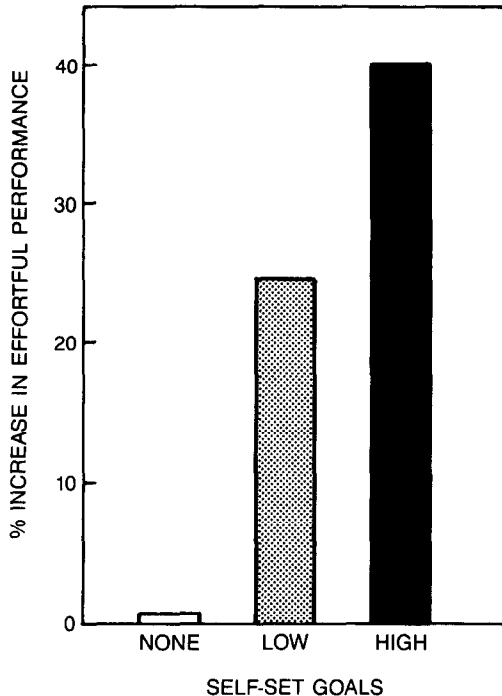


FIG. 2. Mean increases in motivational level under conditions of performance feedback alone depending on whether people continue to perform the activity without goals or spontaneously set low or high goals for themselves. Plotted from data of Bandura & Cervone (1983).

tivational level is still another factor mediating the effects of self-observation. People who desire to change the activities they are monitoring are prone to set goals for themselves and to react self-evaluatively to the progress they are making. Low motivation is accompanied by unreactive self-observation.

Valence of the behavior will affect the type and strength of evaluative self-reactions that self-observation is apt to elicit. Behavioral attainments in valued domains produce self-satisfactions and raise aspirations that can augment change; devalued behaviors are apt to be reduced by activating self-displeasure; and neutral behaviors are likely to undergo little alteration because they do not arouse much in the way of self-reactions (Kanfer, 1970). Self-observation has similar differential effects regardless of whether the valence of the activity has been established naturally or the activity is arbitrarily invested with positive and negative value (Cavior & Marabotto, 1976; Sieck & McFall, 1976).

Attending to one's accomplishments is encouraging, whereas dwelling

on failures can be discouraging and undermine one's sense of efficacy. Therefore, the degree and direction of change accompanying self-monitoring will partly depend on whether attention is predominantly focused on one's *successes or failures*. Self-monitoring successes increases desired behavior, attending only to one's failures causes little change or lowers performance accomplishments (Gottman & McFall, 1972). Although heavy focus on one's failure is dispiriting, it can have beneficial effects if it identifies possible causes and suggests corrective changes. Behavior also varies greatly in its *amenability to voluntary control*. Self-monitoring alone can produce lasting changes in activities that are relatively easy to modify by deliberate effort. But self-observation alone has, at best, only transient effects on behavior that is highly resistant to change.

It is evident from the foregoing discussion that self-monitoring is not simply a mechanical tracking and registry process. It operates through self-referent processes that can bias what is observed and it can activate self-reactive influences that alter the course of action. Moreover, people differ in their *self-monitoring orientations* in the extent to which they guide their actions in terms of personal standards or social standards of behavior (Snyder, 1987). Those who have a firm sense of identity and are strongly oriented toward fulfilling their personal standards display a high level of self-directedness. Those who are not much committed to personal standards adopt a pragmatic orientation, tailoring their behavior to fit whatever the situation seems to call for. They become adept at reading social cues, remembering those that have predictive value and varying their self-presentation accordingly.

Judgmental Subfunction

Observing one's pattern of behavior is the first step toward doing something to affect it, but, in itself, such information provides little basis for self-directed reactions. Actions give rise to self-reactions through a judgmental function that includes several subsidiary processes. Personal standards for judging and guiding one's actions play a major role in the exercise of self-directedness. Whether a given performance is regarded favorably or negatively will depend upon the personal standards against which it is evaluated.

Development of personal standards. Personal standards are developed from information conveyed by three principal modes of influence (Bandura, 1986). People form personal standards partly on the basis of how significant persons in their lives have reacted to their behavior. Eventually they may come to judge themselves by the evaluative standards reflected in the social sanctions of others. Sociological perspectives on the self have tended to emphasize this particular mode of acquisition

(Cooley, 1902; McCall, 1977). Standards can be acquired through direct tuition as well as through the evaluative reactions of others toward one's behavior. In this form of transmission, standards are drawn from the tutelage of influential persons in one's social environment or from the standards prescribed by them. As in other forms of influence, direct tuition is most effective in fostering development of standards when it is based on shared values and mutual support. People not only teach and prescribe standards for others, they also exemplify them in their reactions to their own behavior. They respond with self-satisfaction and self-approval when they fulfill their personal standards but negatively when they fall short of, or violate, their standards. The power of social modeling in transmitting standards is well documented empirically (Bandura, 1986).

It should be noted that people do not passively absorb ready-made standards from whatever social influences happen to impinge upon them. Rather, they construct for themselves their own standards through reflective processing of multiple sources of direct and vicarious influence. The self-construction of standards is complicated when there is much diversity and inconsistency in the standards by which people judge their own efforts and actions or those of others. People differ to some extent, not only in the standards they favor, but they often display inconsistencies between what they practice and what they prescribe, and even the same person may promote different standards in different settings and domains of activity. Therefore, the standards people fashion for themselves are not merely facsimiles of what they have been taught or prescribed, or have seen modeled.

Social referential comparisons. Behavior is easier to regulate when it produces independent objective indicants of adequacy. There is little ambiguity about whether one can swim, fly an aircraft, or balance a checkbook. However, for most activities there are no absolute measures of adequacy. People must, therefore, evaluate their performances in relation to the attainments of others. For example, a student who achieves a score of 115 points on an examination, and whose aspiration is to be in the upper 10% of a certain group, would have no basis for meaningful self-appraisal without knowing how others have performed. When adequacy is defined relationally, appraisals of one's own performance require comparisons among three major information sources: the attained performance level, one's personal standards, and the performances of others.

The referential comparisons with others may take different forms for different tasks for our purposes. For some regular activities, standard norms based on representative groups are used to determine one's relative standing. More often people compare themselves to particular associates in similar situations. This may involve certain classmates, work

associates, or people in other settings engaged in similar endeavors. Performance judgments will, therefore, vary substantially depending upon those chosen for *social comparison* (Bandura & Jourden, 1991; Goethals & Darley, 1987; Wood, 1989).

One's previous behavior is continuously used as a reference against which ongoing performance is judged. In this referential process, *self-comparison* supplies the measure of adequacy. Past attainments affect self-appraisal mainly through their effects on goal setting. People generally try to surpass their past accomplishments. After a given level of performance has been attained, it is no longer challenging and people seek new self-satisfactions by striving for progressive improvements (Bandura, 1989).

The referential performances against which people partly judge their own behavior take the form of *collective comparison* in social systems organized around collective principles. In such systems, group performance rather than individual accomplishment is evaluated and publicly acclaimed (Bronfenbrenner, 1970; Tannenbaum, Kavcic, Rosner, Jianello, & Wieser, 1974). Comparison processes still operate under collective arrangements, but self-appraisal is primarily based on one's relative contribution to the group accomplishment and how well it measures up to the standard adopted by the group.

Valuation of activities. Another important factor in the judgmental component of self-regulation concerns the valuation of activities. People do not care much how they do in activities that have little or no significance for them. They expend little effort on devalued activities. It is mainly in areas affecting their welfare and self-esteem that performance appraisals activate self-reactions. Thus, the more relevant performances are to one's value preferences and sense of personal adequacy, the more likely self-evaluative reactions are to be elicited in that activity (Simon, 1979). In everyday life, people imbue remarkably varied activities, many seemingly trivial in character, with high evaluative significance, as when they invest their self-esteem in how far they can toss a shot-put ball.

Perceived performance determinants. Self-reactions also vary depending on how people perceive the determinants of their behavior. They are most likely to take pride in their accomplishments when they ascribe their successes to their own abilities and efforts. But they do not derive much self-satisfaction when they view their performances as heavily dependent on external aid or special situational supports. Self-reactions to faulty and blameworthy conduct similarly depend on causal judgments. People respond self-critically to faulty performances for which they hold themselves responsible, but not to those they perceive as due to unusual circumstances, to insufficient capabilities, or to unrealistic demands

(Weiner, 1986). In the latter instances, external conditions are considered to be at fault.

Self-Reactive Influences

Performance judgments set the occasion for self-reactive influence. Self-reactions provide the mechanism by which standards regulate courses of action. The self-regulatory control is achieved by creating incentives for one's own actions and by anticipative affective reactions to one's own behavior depending on how it measures up to an internal standard. Thus, people pursue courses of action that produce positive self-reactions and refrain from behaving in ways that result in self-censure. The self-motivating incentives may be either tangible outcomes or self-evaluative reactions.

Self-incentives affect behavior mainly through their motivational function. When people make self-satisfaction or tangible benefits conditional upon certain accomplishments, they motivate themselves to expend the effort needed to attain the requisite performances. Both the anticipated satisfactions of desired accomplishments and the dissatisfactions with insufficient ones provide incentives for actions that increase the likelihood of performance attainments. In the case of tangible self-motivators, people get themselves to do things they would otherwise put off or avoid altogether by making tangible rewards dependent upon performance attainments. By making free time, relaxing breaks, recreational activities, and other types of tangible self-reward contingent upon a certain amount of progress in an activity, they mobilize the effort necessary to get things done. People who reward their own attainments usually accomplish more than those who perform the same activities under instruction but without self-incentives, are rewarded noncontingently, or monitor their own behavior and set goals for themselves without rewarding their attainments (Bandura, 1986).

One of the factors that differentiates people who succeed in regulating their motivation and behavior to achieve what they seek from those who are unsuccessful in their self-regulatory efforts is the effective use of self-incentives (Perri & Richards, 1977; Zimmerman, 1989). This is nowhere better illustrated than in the writing habits of successful novelists. They must depend on their own self-discipline because they have no resident supervisors issuing directives and overseeing daily writing activities. As Wallace (1977) clearly documents, novelists influence how much they write by making the pursuit of other activities contingent on either completing a certain amount of writing each day or writing for a designated length of time. Even in activities that are externally prescribed,

self-regulatory skills partly determine how effectively people can mobilize their efforts and resources to do them.

Most people value their self-respect and the self-satisfaction derived from a job well done more highly than they do material rewards. The self-regulation of behavior by self-evaluative reactions is a uniquely human capability. Self-evaluation gives direction to behavior and creates motivators for it. Evaluative self-incentives are, therefore, repeatedly recruited in the service of behavior that reflects on personal competence. By making self-satisfaction conditional on performances that match a personal index of merit, people get themselves to put forth the effort necessary to accomplish what they value (Bandura & Cervone, 1983; Bandura & Jourden, 1991).

In addition to serving as guides and incentives for behavior, self-evaluative reactions are of considerable interest in their own right. They affect how much satisfaction people derive from what they do. We shall return to these affective outcomes later in the analysis of dysfunctions in the self-regulatory system. In most instances, people exert influence on their own motivation and behavior by enlisting both evaluative and tangible self incentives.

FUNCTIONING OF SELF-REGULATORY SYSTEMS

In the preceding sections we have examined the general structure of self-regulatory systems. Now we turn our attention to the functional operation of the self system. A social cognitive theory of self-regulation encompasses another major mechanism of self-directedness that exerts strong impact on human thought, affect, motivation, and action. This is the self-efficacy mechanism, which plays a central role in the exercise of personal agency (Bandura, 1986, 1989).

Self-Efficacy Mechanism

Among the mechanisms of personal agency, none is more central or pervasive than people's beliefs about their capabilities to exercise control over their own level of functioning and over events that affect their lives. Self-efficacy beliefs function as an important set of proximal determinants of human self-regulation. People's beliefs in their efficacy influence the choices they make, their aspirations, how much effort they mobilize in a given endeavor, how long they persevere in the face of difficulties and setbacks, whether their thought patterns are self-hindering or self-aiding, the amount of stress they experience in coping with taxing environmental demands, and their vulnerability to depression.

Self-beliefs of efficacy partly determine how the various subfunctions of a self-regulatory system operate. Such beliefs affect the self-monitoring and cognitive processing of different aspects of one's performances and

the outcomes that flow from them (Bandura, 1991a). They influence the perceived causes of successes and failures. Thus, people who regard themselves as highly efficacious tend to ascribe their failures to insufficient effort, whereas those who regard themselves as inefficacious view the cause of their failures as stemming from low ability (Collins, 1982; Silver, Mitchell, & Gist, 1989). The effects of causal attributions on motivation and performance attainments are mediated almost entirely through changes in self-efficacy beliefs (Relich, Debus, & Walker, 1986; Schunk & Gunn, 1986). As will be shown shortly, the impact of social comparison on performance attainments is similarly mediated through its effects on self-efficacy beliefs (Bandura & Jourden, 1991).

Self-beliefs of efficacy also affect the goal-setting subfunction of self-regulation. The more capable people judge themselves to be, the higher the goals they set for themselves and the more firmly committed they remain to them (Bandura, 1991a; Locke & Latham, 1990; Wood & Bandura, 1989b). Whether negative discrepancies between personal standards and attainments are motivating or discouraging is partly determined by people's beliefs that they can attain the goals they set for themselves. Those who harbor self-doubts about their capabilities are easily dissuaded by obstacles or failures. Those who are assured of their capabilities intensify their efforts when they fail to achieve what they seek and they persist until they succeed (Bandura & Cervone, 1986).

And finally, perceived self-efficacy contributes to the valuation of activities. People display enduring interest in activities at which they judge themselves to be self-efficacious and from which they derive satisfaction by mastering challenges (Bandura & Schunk, 1981). Indeed, intrinsic interest is better predicted by perceived self-efficacy than by actual ability (Collins, 1982). Biographical studies similarly reveal that deep engrossment in, and enjoyment of, different types of life pursuits are best fostered by selecting personal changes that match one's perceived capabilities and seeing evidence of progress toward one's aspirations (Csikszentmihalyi, 1979).

Self-Regulation and the Negative Feedback Model

Many theories of self-regulation are founded on a negative feedback control system. This is the basic regulator in control theory (Carver & Scheier, 1981; Lord & Hanges, 1987), in psychobiologic homeostatic theories (Appley, 1991), and in the cybernetic TOTE model presented by Miller, Galanter, and Pribram (1960). Equilibration is also the sole motivational mechanism in Piaget's theory (1960). This type of system functions as a motivator and regulator of action through a discrepancy reduction mechanism. Perceived discrepancy between performance and an internal standard triggers action to reduce the incongruity. In negative

feedback control, if performance matches the internal standard the person does nothing. A regulatory process in which matching a standard begets inertness does not characterize human self-motivation. Such a feedback control system would produce circular action that leads nowhere. Nor could people be stirred to action until they receive feedback of a shortcoming. Although comparative feedback is essential in the ongoing regulation of motivation, people initially raise their level of motivation by adopting goals before they receive any feedback regarding their beginning effort (Bandura & Cervone, 1983). The exercise of forethought enables them to wield adaptive control anticipatorily rather than being simply reactive to the effects of their efforts. As can be seen in Fig. 3, anticipative or proactive control operates as the primary system in the mobilization of motivation and reactive feedback specifies the further adjustments in effort needed to accomplish desired goals. Negative feedback may help to keep people going on a preset course, but from time to time they must transcend the feedback loop to initiate new challenging courses for themselves.

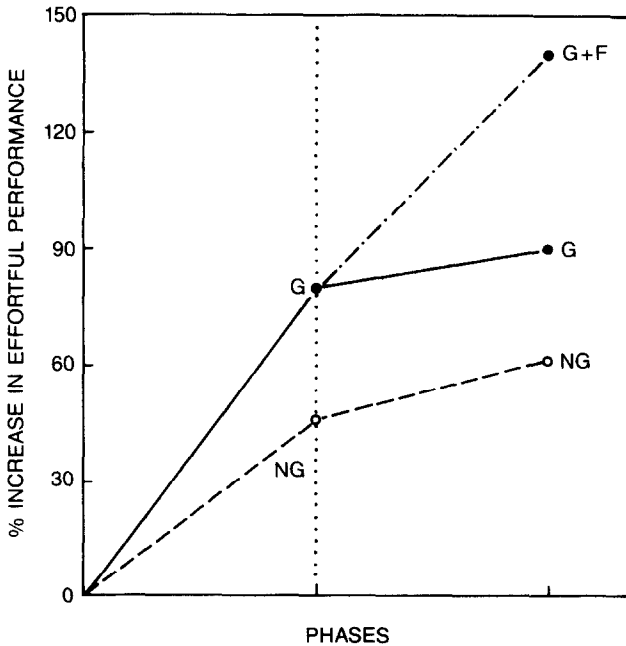


FIG. 3. Portrayal of how proactive systems and reactive feedback systems operate in the initiation and continued regulation of motivation. In the initial proactive phase, subjects performed with goals (G) or no goals (NG). In the next phase, combining proactive and reactive self-influence, subjects continued to perform with either goals only (G) or with goals and performance feedback (G + F). Plotted from data of Bandura & Cervone, 1983.

Human self-motivation relies on both *discrepancy production* and *discrepancy reduction*. It requires *proactive control* as well as *reactive control*. People initially motivate themselves through proactive control by setting themselves valued performance standards that create a state of disequilibrium and then mobilizing their effort on the basis of anticipatory estimation of what it would take to reach them. Feedback control comes into play in subsequent adjustments of effort expenditure to achieve desired results. After people attain the standard they have been pursuing, those who have a strong sense of efficacy generally set a higher standard for themselves. The adoption of further challenges creates new motivating discrepancies to be mastered. Similarly, surpassing a standard is more likely to raise aspiration than to lower subsequent performance to reduce disequilibrium by conforming to the surpassed standard. Self-motivation thus involves a dual control process of disequilibrating discrepancy production followed by equilibrating discrepancy reduction.

An evaluative executive control system with a proactive component can, of course, be superimposed on a negative feedback operation that keeps changing aspirational standards either upward or downward depending on how performance attainments are construed. To capture the complexity of human self-regulation, such an executive control system must be invested with the evaluative agentive properties previously shown to play an important role in self-directedness. These include (1) predictive anticipatory control of effort expenditure, (2) affective self-evaluative reactions to one's performances rooted in a value system, (3) self-appraisal of personal efficacy for goal attainment, and (4) self-reflective metacognitive activity concerning the adequacy of one's efficacy appraisals and the suitability of one's standard setting. Evaluation of perceived self-efficacy relative to task demands indicates whether the standards being pursued are within attainable bounds or beyond one's reach.

Self-Reactive Influences in the Self-Regulation of Motivation

The capacity to exercise self-influence by personal challenge and evaluative reaction to one's own attainments provides a major cognitive mechanism of motivation and self-directedness. Innumerable studies yield strong consistent evidence that explicit challenging goals enhance motivation and performance attainments (Locke & Latham, 1990). As previously noted, motivation based on standards involves a cognitive comparison process. The motivational effects do not stem from the goals themselves, but rather from the fact that people respond evaluatively to their own behavior. Goals specify the conditional requirements for positive self-evaluation.

Activation of self-reactive influences through internal comparison re-

quires both comparative factors—a personal standard and knowledge of one's performance level. Neither performance knowledge without standards nor standards without performance knowledge provides a basis for self-evaluative reactions. Studies in which goals and performance feedback are systematically varied yield results consistent with this formulation, whatever the nature of the pursuit (Bandura & Cervone, 1983; Becker, 1978; Strang, Lawrence, & Fowler, 1978). Simply adopting a goal, whether an easy or challenging one, without knowing how one is doing, or knowing how one is doing in the absence of a goal, has no lasting motivational impact. But the combined influence of goals with performance feedback heightens motivation substantially. This is shown in Fig. 4, which summarizes the level of self-motivation when both, only one, or none of the comparative factors was present.

Cognitive motivation based on goal intentions is mediated by three types of self-influences. The first includes affective self-evaluation. People seek self-satisfactions from fulfilling valued standards and are prompted to intensify their efforts by discontent with substandard performances. We have already seen that perceived self-efficacy is another

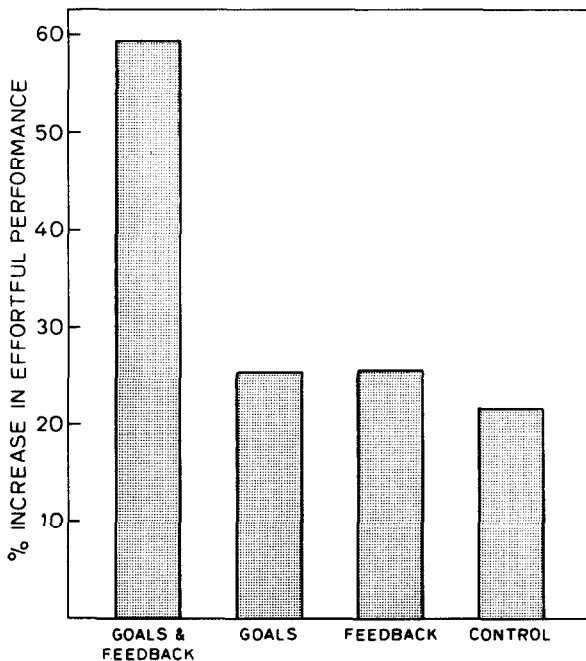


FIG. 4. Mean percentage change in level of motivation under conditions combining goals with performance feedback, goals alone, feedback alone, or with none of these factors (Bandura & Cervone, 1983).

self-referent factor that plays an influential role in the self-regulation of motivation. The goals people set for themselves at the outset of an endeavor are subject to change, depending on the pattern and level of progress they are making (Campion & Lord, 1982). They may maintain their original goal, lower their sights, or adopt an even more challenging goal. Thus, the third constituent self-influence in the ongoing regulation of motivation concerns the readjustment of internal standards in light of one's attainments.

The contribution of these self-reactive influences to motivation is strikingly revealed in a study that systematically varied the direction and magnitude of discrepancy between performance and a difficult assigned standard (Bandura & Cervone, 1986). Inspection of Fig. 5 shows that the more sources of self-influence individuals brought to bear on themselves, the higher the effort they exerted and sustained to attain what they sought. Taken together this set of self-reactive influences accounts for the major share of variation in motivation.

Affective self-reactions provide a dual source of incentive motivation—the anticipated self-satisfaction for personal accomplishment operates as a positive motivator, and discontent with deficient performance functions

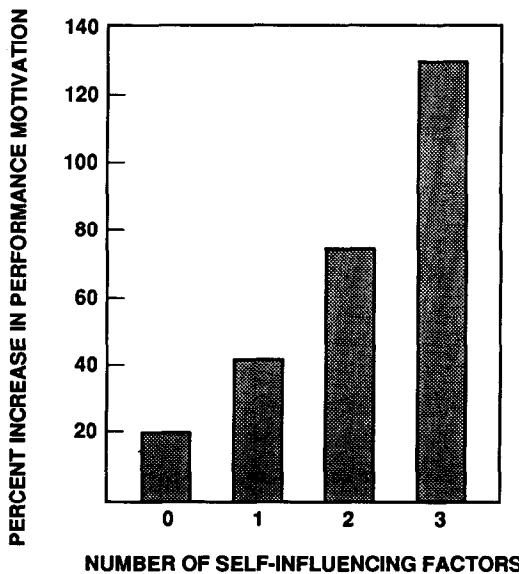


FIG. 5. Mean percentage change in motivational level as a function of the number of self-reactive influences operating in given individuals. The three self-reactive factors included strong perceived self-efficacy for goal attainment; self-dissatisfaction with substandard performance; and adoption of challenging standards. Plotted from data of Bandura & Cervone (1986).

as a negative motivator. These two forms of self-motivators may contribute differentially to performance accomplishments depending on the complexity of the activity. On simpler tasks, where success is attainable solely by increased level of effort, self-discontent with substandard attainments is a major regulator of performance motivation (Bandura & Cervone, 1983, 1986). In contrast, on complex tasks that make heavy attentional and cognitive demands, self-satisfaction with personal progress toward challenging standards provides a positive motivational orientation for performance accomplishments. Strong negative self-reactions can impair level of functioning by interfering with the intricate task of generating and testing alternative strategies of action (Bandura & Jourden, 1991; Cervone, Jiwani, & Wood, 1990).

Hierarchical Structure of Goal Systems

Thus far, the discussion has centered on goal systems as directive and motivational devices, and the self-referent mechanisms through which they exert their effects. Goal systems, of course, usually involve a hierarchical structure in which the goals that operate as the proximal regulators of motivation and action subserve broader goals reflecting matters of personal import and value. However, proximal goals are not simply subordinate servitors of valued loftier ones as commonly depicted in machinelike hierarchical control systems. Through engagement of the self-system, subgoals invest activities with personal significance. As previously shown, proximal goals generate self-satisfaction from personal accomplishments that operates as its own reward during the pursuit of higher level goals. When the reward of personal accomplishment is linked to indicants of progress, individuals contribute a continuing source of interest and self-motivation quite apart from the incentive of the loftier goal. Indeed, subgoal challenges often outweigh the lure of superordinate goals as ongoing motivators (Bandura & Schunk, 1981). In this motivational process, people gain their satisfaction from progressive mastery of an activity rather than suspend any sense of success in their endeavors until the superordinate goal is attained. In short, the reward is in the ongoing process of mastery rather than solely in the attainment of the end goal. The model of self-motivation as a process of recurrent proximal self-challenge and evaluative reward differs from one in which a linear series of subordinate goals is powered entirely by a superordinate one. Self-motivation through proximal self-influence does not imply any restriction in the future time perspective of aspirations. Progress toward valued futures is best achieved by combining distal aspirations with proximal self-guidance.

Aspirational Standards, Achievement Motives, and External Incentives

Self-motivation through self-reactive influence is a significant ingredi-

ent in a variety of motivational phenomena that come under different names. Achievement motivation is one such instance. High achievers tend to invest their self-satisfaction in attainment of challenging goals; low achievers adopt easy goals as sufficing. The higher the aspirational standards people set for themselves, the harder they strive to fulfill them and the more likely they are to excel in their attainments.

Personality theories often portray human strivings and accomplishments as products of achievement needs or motives. The achievement motive is usually inferred from responses to items containing cues relevant to achievement. Theories in which motives are inferred from the types of behavior they supposedly cause create problems of circularity (Bandura, 1986). The motive is inferred from a given class of behavior and is then used to explain the activation of that class of behavior. Response-inferred motives present fewer conceptual problems when they are assessed through means other than performance. The functional properties ascribed to the achievement motive are much the same as those that characterize aspirational standards. Both are said to direct and activate courses of action that lead to desired accomplishments. However, there is a major conceptual difference between a motive force and self-generated incentives arising from internal standards and self-reactive influence. Motives impel behavior; self-incentives motivate and direct behavior through cognitive anticipatory mechanisms.

Research in which achievement motive and aspirational standards are measured sheds some light on these alternative motivational mechanisms. High need for achievement is associated with high goal setting. However, need for achievement has no influence on performance independently of personal goals. The relationship between need for achievement and performance disappears when level of self-set goals is controlled (Dossett, Latham, & Mitchell, 1979; Latham & Marshall, 1982; Matsui, Okada, & Kakuyama, 1982). The goals people set for themselves predict their performance level and self-satisfaction better than do the traditional personality measures of need for achievement (Arvey & Dewhirst, 1976; Ostrow, 1976; Yukl & Latham, 1978).

The inclination of high need achievers to select higher goals than those who score low on need achievement tests does not necessarily mean that performance standards are the products of an underlying motive as is commonly assumed. Personal standards of excellence may lead people to endorse achievement statements or to produce achievement imagery on personality tests rather than such endorsements verifying an achievement motive fueling aspiring standards. Evidence that standard setting is a better predictor of ongoing level of performance than are indices of achievement motives lends causal priority to standard setting. Moreover, goal theory can explain rapid shifts in motivational level through fluctu-

ations in mediating self-processes, whereas quick changes pose explanatory difficulties for a dispositional motive determinant.

Self-influence through internal standards also contributes to the motivational effects of extrinsic feedback and incentives. Extrinsic incentives can motivate partly by activating personal goals for progressive improvement. Indeed, a series of studies conducted by Locke and his associates shows that incentives increase performance to the extent that they encourage people to set motivating goals for themselves (Locke, Bryan, & Kendall, 1968). In research reporting mixed results on whether incentives influence performance partly by their effect on personal goals, performers were given no information about their level of performance (Pritchard & Curtis, 1973). Self-evaluative motivators are not effectively activated in the absence of knowledge of how one is doing (Bandura & Cervone, 1983). People are certainly motivated by the prospect of valued extrinsic outcomes. But by applying evaluative standards to their ongoing performances, they create motivating challenges and fulfill them to please themselves as well. Even simple feedback of progress of trivial extrinsic incentives can enhance performance motivation once self-satisfaction becomes invested in the activity. Satisfaction in personal accomplishment becomes the reward.

Self-Regulatory Dynamics in Collective Endeavors

Virtually all of the research on cognitive motivators has been concerned with how self-regulatory dynamics operate in personal accomplishments. Many human endeavors are directed at group goals that are achieved in organizational structures through socially mediated effort. In exercising control over collective outcomes, decision makers have to rely on the concerted efforts of others, whereas at the individual level, they need regulate only their own efforts. Socially mediated regulation of a group endeavor involves considerably more complex paths of influence than does direct self-regulation (Wood & Bandura, 1989a). Therefore, functional relationships established at the individual level may require qualifications at the group level.

Much of the research on human decision making examines discrete judgments in static environments under nontaxing conditions (Beach, Barnes, & Christensen-Szalanski, 1986; Hogarth, 1981). By contrast, in naturalistic environments decisions must be made from a wide array of information within a continuing flow of activity under time constraints and significant social and evaluative consequences. Actions taken at one point affect the options and effects of later decisions. Moreover, many of the decisional rules for exercising control over dynamic environments must be learned through exploratory experiences in the course of managing the ongoing organizational activities. Under these more complex

transactional conditions, self-regulative, affective, and motivational factors can exert substantial impact on quality of sociocognitive functioning.

Because organizational outcomes must be achieved through the coordinated efforts of others, some of the most important managerial decisions are concerned with how best to use human talent and how to guide and motivate human effort. In executing this role, managers have to cope with numerous obstacles, failures, and setbacks, which often carry perturbing self-evaluative implications, as well as social consequences. These affective factors can undermine self-conceptions and motivation in ways that impair good use of decision-making skills. Effective decision making thus involves more than applying a set of cognitive operators to existing knowledge for desired solutions. Self-regulatory influences have considerable impact on how well cognitive-processing systems operate (Bandura, 1986).

The mechanisms and outcomes of managerial decision making do not lend themselves readily to experimental analysis in actual organizational settings. The governing processes are usually influenced by a multiplicity of interacting factors that are difficult to identify let alone exercise experimental control over them. Advances in this complex field can be achieved by experimental analyses of decision making in simulated organizational environments. One such computer simulation encompasses the types of decisional activities required in complex dynamic environments (Wood & Bailey, 1985). It permits experimental variation of organizational properties and belief systems that can enhance or undermine self-regulatory determinants of motivation and action. People serve as managerial decision makers in which they have to match employee attributes to organizational subfunctions and to learn a complex set of decision rules on how best to guide and motivate those they oversee. The managerial rules concern the optimal use of goals, supervisory feedback, and social incentives to enhance the level of organizational performance. Some of the factors involve nonlinear and compound decision rules combining incentive and social equity elements, making them especially difficult to discern (Brehmer, Hagafors, & Johansson, 1980). The set of rules has to be integrated into a cognitive model of organizational functioning that could serve as a guide for decisions regarding different group members. Knowing rules does not ensure optimal implementation of them. The managers also have to gain proficiency in tailoring the applications of the rules to individual members of the group and to apply them in concert to achieve desired group results. The self-regulatory factors are measured at periodic intervals as the managerial task is performed over a series of trials.

The multifaceted nature of managerial activities and their mazy linkage to organizational accomplishments introduces complexities in the relation

between personal goals and group attainment. Personal goals are readily translatable into performance attainments when people possess the knowledge and means to exercise control. Goals can affect performance directly by channeling attention and by mobilizing effort and sustaining it in the face of obstacles (Locke & Latham, 1990). In most of the research demonstrating enhancement of accomplishments through goal setting, the performers already possess the means of control and need only to intensify their efforts. Even on tasks that are directly controllable by effort alone, goal effects are weaker for more complex activities (Wood, Mento, & Locke, 1987). Sheer managerial effort alone does not ensure attainment of group goals. Until the optimal managerial rules are identified, goals can produce more effortful and discerning cognitive processing of outcome information, but not necessarily immediate improvements in organizational performance. To complicate further the effects of goals on group performance, efforts to enhance the level of organizational functioning often require constituent changes in particular aspects of the social structure and the way in which social resources are allocated. If grounded in sound judgment, such fractional changes would eventually raise organizational attainments without necessarily producing sizable gains in the short run. Learning in an ambiguous probabilistic environment is made even more difficult when the effectiveness of decisional actions is reflected in distal rather than in proximal outcomes.

Social cognitive theory explains psychosocial functioning in terms of triadic reciprocal causation (Bandura, 1986). In this model of reciprocal determinism, (1) cognitive and other personal factors, (2) behavior, and (3) environmental events all operate as interacting determinants that influence each other bidirectionally. Each of the major interactants in the triadic causal structure—cognitive, behavioral, and environmental—functions as an important constituent in the dynamic environment. The cognitive determinant is indexed by self-beliefs of efficacy, personal goal setting, and quality of analytic thinking. The managerial choices that are actually executed constitute the behavioral determinant. The properties of the organizational environment, the level of challenge it prescribes, and its responsiveness to managerial interventions represent the environmental determinant. Analyses of ongoing processes clarify how the interactional causal structure operates and changes over time.

Impact of Belief Systems on Self-Regulatory Mechanisms

The interactional causal structure was tested in conjunction with experimentally varied organizational properties and belief systems that can enhance or undermine the operation of self-regulatory determinants. One important belief system is concerned with the conception of ability (M. Bandura & Dweck, 1990; Dweck & Elliott, 1983; Nicholls, 1984). Some

people regard ability as an *acquirable skill* that can be increased by gaining knowledge and perfecting competencies. They adopt a functional learning goal. They seek challenges that provide opportunities to expand their knowledge and competencies. They regard errors as a natural part of an acquisition process. One learns from mistakes. They judge their capabilities more in terms of personal improvement than by comparison against the achievement of others. For people who view ability as a more or less *inherent capacity*, performance level is regarded as diagnostic of underlying aptitude. Errors and deficient performances carry high evaluative threat. Therefore, they prefer tasks that minimize errors and permit ready display of intellectual proficiency at the expense of expanding their knowledge and competencies. High effort is also threatening because it presumably reveals low ability. The successes of others belittle their own perceived ability.

We instilled these different conceptions of ability and then examined their effects on the self-regulatory mechanisms governing the utilization of skills and performance accomplishments (Wood & Bandura, 1989b). Managers who viewed decision-making ability as reflecting basic cognitive aptitude were beset by increasing self-doubts about their managerial efficacy as they encountered problems (Fig. 6). They became more and more erratic in their analytic thinking, they lowered their organizational aspirations, and they achieved progressively less with the organization they were managing. In contrast, construal of ability as an acquirable skill fostered a highly resilient sense of personal efficacy. Under this belief system, the managers remained steadfast in their perceived managerial self-efficacy even when performance standards were difficult to fulfill, they continued to set themselves challenging organizational goals, and

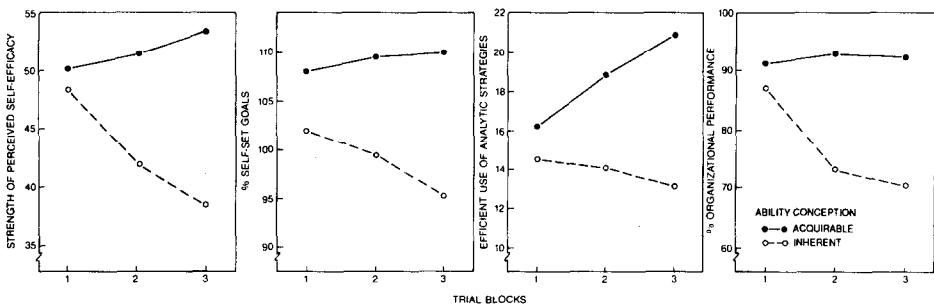


FIG. 6. Changes in perceived managerial self-efficacy, self-set organizational goals relative to a preset standard, effective analytic strategies, and achieved level of organizational performance across blocks of trials under conceptions of ability as an acquirable skill or an inherent capacity. Each trial block comprises six different production orders (Wood & Bandura, 1989b).

they used analytic strategies in efficient ways that aided discovery of optimal managerial decision rules. Such a self-efficacious orientation paid off in high organizational attainments.

It is noteworthy that conceptions of ability bias how similar substandard performances are cognitively processed at the outset. This is because substandard performances carry markedly different diagnostic implications depending on whether ability is construed as an acquirable skill or as an inherent aptitude. Construal of insufficient attainments as indicators of inherent deficiencies gradually creates an inefficacious self-schema in the particular domain of functioning, whereas construal of substandard attainments as instructive guides for enhancing personal competencies fosters an efficacious self-schema. Such evolving self-beliefs further bias cognitive processing of outcome information and promote actions that create confirmatory behavioral evidence for them. This produces an exacerbation cycle of motivational and performance impairment under the inherent capacity set, and highly proficient functioning under the acquirable skill set.

Another important belief system that affects how efficacy-relevant information is cognitively processed is concerned with people's beliefs about the extent to which their environment is influenceable or controllable. Two aspects to the exercise of control are especially relevant to the management of organizational functioning (Bandura, 1986; Gurin & Brim, 1984). The first concerns the level of personal efficacy to effect changes by productive use of capabilities and enlistment of effort. This constitutes the personal side of the transactional control process. The second aspect concerns the changeability or controllability of the environment. This facet represents the level of system constraints, the opportunity structures to exercise personal efficacy, and the ease of access to those opportunity structures. Human behavior is, of course, governed by perceptions of personal efficacy and social environments rather than simply by their objective properties. Thus, individuals who believe themselves to be inefficacious are likely to effect little change even in environments that provide many potential opportunities and are highly responsive to the exercise of personal competence. Conversely, those who have a strong sense of efficacy, through ingenuity and perseverance, figure out ways of exercising some measure of control in environments containing limited opportunities and many constraints.

In the transactions of everyday life, beliefs regarding self-efficacy and environmental controllability are not divorced from experiential realities. Rather, they are products of reciprocal causation (Bandura, 1986). Thus, when people believe the environment is controllable on matters of import to them, they are motivated to exercise fully their personal efficacy, which enhances the likelihood of success. Experiences of success, in

turn, provide behavioral validation of personal efficacy and environmental controllability. Repeated affirmation of personal effectiveness under difficult conditions produces unshakeable persisters. If people approach situations as largely uncontrollable, they are likely to exercise their efficacy weakly and abortively, which breeds failure experiences. Over time, failures take an increasing toll on perceived self-efficacy and beliefs about how much environmental control is possible.

Our organizational simulation research underscores the strong impact of perceived controllability on the self-regulatory factors governing decision making that can enhance or impede performance (Bandura & Wood, 1989). People who managed the simulated organization under a cognitive set that organizations are not easily changeable quickly lost faith in their decision-making capabilities even when performance standards were within easy reach (Fig. 7). They lowered their aspirations. Those who operated under a cognitive set that organizations are controllable displayed a strong sense of managerial efficacy. They set themselves increasingly challenging goals and used good analytic thinking for discovering effective managerial rules. They exhibited high resiliency of self-efficacy even in the face of numerous difficulties. The divergent changes in the self-regulatory factors are accompanied by large differences in organizational attainments.

Path analyses confirm the postulated causal ordering of self-regulatory determinants. When initially faced with managing a complex unfamiliar environment, people relied heavily on their past performance in judging their efficacy and setting their personal goals. But as they began to form

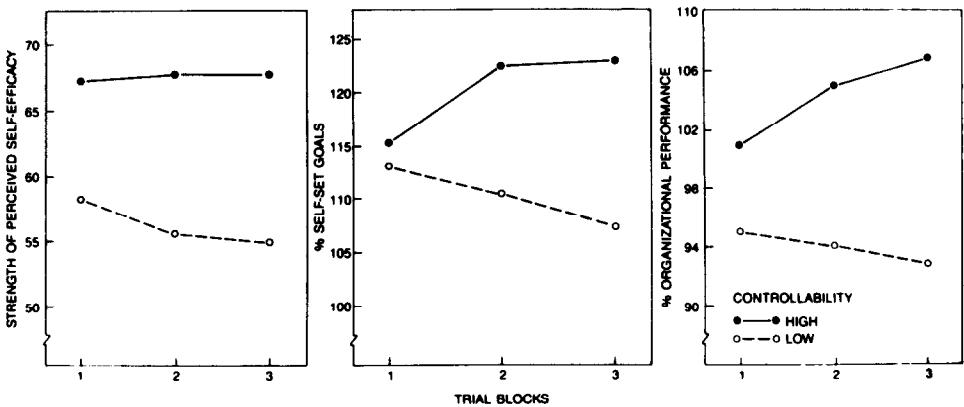


FIG. 7. Changes in perceived managerial self-efficacy, the performance goals set for the organization, and level of organizational attainment for managers who operated under a cognitive set that organizations are controllable or difficult to control (Bandura & Wood, 1989).

a self-schema concerning their efficacy through further experience, the performance system was powered more strongly and intricately by self-perceptions of efficacy (Fig. 8). Perceived self-efficacy influences performance both directly and through its strong effects on personal goal setting and proficient analytic thinking. Personal goals, in turn, enhance performance attainments through the mediation of analytic strategies.

We have previously noted that social comparison influences can affect self-regulation through their impact on self-appraisal of capabilities and affective self-reactions. The research on self-appraisal of capability via social standards had centered mainly on why people engage in social comparison, whom they choose to compare themselves with, the role of performance and attribute similarity in the selection of social referents, and the self-evaluative consequences of such choices (Suls & Miller, 1977; Suls & Mullen, 1982; Wood, 1989). Results of these studies have helped to clarify some important aspects of comparative self-appraisal. However, the laboratory situations generally differ in several respects from how socially comparative influences operate under naturally occurring conditions. In the former case, people can choose from a set of social referents whose accomplishments they want to hear about to determine whether they prefer upward or downward comparisons. The comparative self-appraisal typically involves a single evaluative instance. By contrast, under ordinary conditions, people are continually confronted with comparative information with social consequences whether they seek it or not. Moreover, comparative evaluation is an ongoing process often involving changes in the level, rate, and direction of performance discrepancies. Comparative self-appraisal, therefore, entails interpreting the ability implications of changing patterns of comparative information over time.

The research on organizational management corroborates the influential role played by self-regulatory factors in mediating the impact of social-comparative influences on motivation and collective attainments

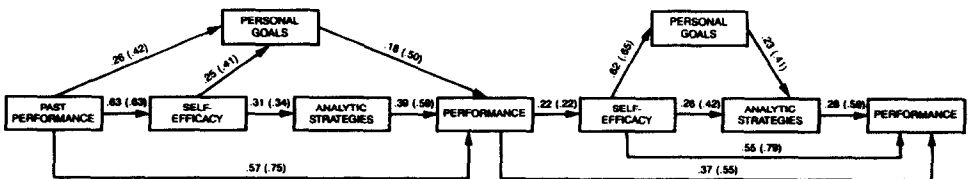


FIG. 8. Path analysis of causal structures. The initial numbers on the paths of influence are the significant standardized path coefficients ($p < .05$); the numbers in parentheses are the zero-order correlations. The network of relations on the left half of the figure are for the initial managerial efforts, and those on the right half are for later managerial efforts (Wood & Bandura, 1989a).

(Bandura & Jourden, 1991). Decision makers managed the simulated organization during which they received accurate feedback about their own performance attainments but preset information on how well other decision makers performed. The individuals received social-comparative information suggesting that they performed either as well as their managerial comparators, consistently surpassed them, performed below the comparison group at the outset but gradually closed the gap and eventually surpassed them, or performed as well as their comparators but began to fall behind and ended up well below them.

Feedback that one is as able or superior to one's comparators sustained an efficacious self-regulatory orientation, although easy comparative triumphs incurred some demotivating effects. Compared to those who had to struggle to gain mastery, those who were led to believe they had achieved relative superiority easily set lower goal challenges for themselves and were highly self-satisfied with mediocre performance attainments because they happened to surpass the performances of their comparators. Complacent self-assurance creates little incentive to expend the increased effort needed to attain high levels of performance. Of special psychological interest are the comparative patterns of progressive mastery and progressive decline, which had striking contrasting effects on self-regulatory factors and organizational performance attainments (Figure 9).

Seeing oneself increasingly surpassed by similar social referents undermined perceived self-efficacy, disrupted analytic thinking, created unremitting self-discontent, and produced a sharp decline in organizational performance. By contrast, seeing oneself gain progressive mastery enhanced a sense of personal efficacy, fostered efficient analytic thinking,

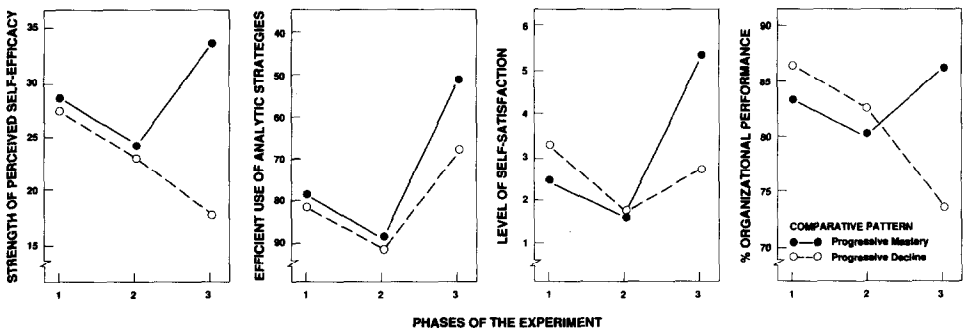


FIG. 9. Changes in perceived managerial self-efficacy, effective use of analytic strategies, affective self-evaluation, and achieved level of organizational performance across blocks of production orders for individuals who received social-comparative information indicating progressive mastery or progressive decline relative to their comparators. Each trial block comprises six different production orders (Bandura & Jourden, 1991).

and transformed self-evaluation from self-discontent to self-satisfaction with accelerating progress. These positive self-regulatory changes were accompanied by a large rise in organizational attainments. Path analysis confirms that the contrasting performance trajectories are mediated by the changes in self-regulatory factors.

The findings reveal that social comparison can have both beneficial and detrimental effects. The adverse consequences are not easily avoidable in competitively structured systems because of the prevalence of forced social comparisons. Indeed, comparison with agetates is well entrenched even by the early years of development (Morris & Nemcek, 1982). Given that people are not about to forsake achievement pursuits and cooperatively structured systems are hard to come by, it remains a challenge on how to minimize the demoralizing effects of unfavorable social comparison. Construal of ability as an acquirable attribute, rather than an inherent fixed aptitude, and beliefs in controllability can help to sustain a sense of self-efficacy, motivation for self-development, and positive self-evaluation in the face of repeated failure and setbacks (Bandura & Wood, 1989; Wood & Bandura, 1989b). Placing greater weight on self-comparative standards and indicants of personal improvement can also lessen the detrimental effects of inimical social comparison (Frey & Ruble, 1990; Nicholls, 1990). It is a fruitful extension of research on social comparison to articulate the ways in which its demoralizing effects can be attenuated.

Affective Consequences of Dysfunctions in Self-Regulation

Analyses of the structure and mechanisms of self-regulation operating through personal standards, conditional self-evaluations and motivation of effort, may make the process sound like self-infliction of encumbrances. In actuality, self-directedness provides an important and continuing source of personal satisfaction, interest, and self-esteem (Bandura, 1986). Success in goal attainments builds a sense of personal efficacy. Without aspirations and evaluative involvement in activities, people remain unmotivated, bored, uncertain about their capabilities, and dependent upon momentary external stimulation for their satisfactions. Life without any elements of challenge can be rather dull. However, internalization of dysfunctional standards of self-evaluation can serve as a source of chronic misery.

Self-regulatory processes produce emotional effects that can undermine performance motivation and psychological well-being. Indeed, many of the miseries people inflict upon themselves and others arise from dysfunctions in the self-regulatory system. They drive themselves relentlessly with stringent performance standards so their achievements rarely give them a sense of fulfillment. They judge others harshly by the same

demanding standards. And they experience a great deal of self-inflicted stress, despondency, and self-devaluation. A growing body of evidence reveals that negative cognitive biases in the constituent processes of self-regulation are especially conducive to depression (Kanfer & Hagerman, 1981; Rehm, 1982).

In the self-monitoring domain, people who are prone to depression misperceive their performance attainments or distort their recollections of them in self-slighting directions. In contrast, the nondepressed display a self-enhancing bias, remembering their successes well but recall fewer failures than they have actually experienced (DeMonbreun & Craighead, 1977; Nelson & Craighead, 1977; Wener & Rehm, 1975). Minimizing one's successes while accenting one's failures can give rise to despondency. The satisfactions people derive from what they do are determined to a large degree by their self-evaluative standards. A sure way of inducing self-discouragement and a sense of personal inadequacy is to judge one's attainments against lofty, global, or distal goals. Evidence indicates that faulty goal setting is, indeed, conducive to despondency and performance debilitation. Compared to nondepressed persons, the depressed tend to set higher standards for themselves relative to their attainments. (Golin & Terrill, 1977; Loeb, Beck, Diggory, & Tuthill, 1967; Schwartz, 1974; Simon, 1979). Goal difficulty is a relational characteristic reflecting the match between personal capabilities and goals, not a matter of absolute level. Depression is most likely to arise when personal standards of merit are set well above one's perceived self-efficacy to attain them (Kanfer & Zeiss, 1983).

The likelihood of depressive reactions is heightened when lofty standards are combined with a penchant for processing performance information in self-belittling ways. Depressed persons are not especially charitable to themselves in how they judge their performance determinants. In causal appraisals of their performances, the nondepressed credit successes to themselves and failures to situational factors. Such favorable causal appraisals serve to heighten positive affect. The depressed, while not always discounting their contributions to successes, nevertheless, are quick to blame themselves for their failures (Kuiper, 1978; Peterson & Seligman, 1984; Rizley, 1978).

Depression-prone individuals also tend to use social comparative information in self-depreciating ways. When exposed to the high attainments of others, the depressed judge their own accomplishments as less praiseworthy than do the nondepressed (Ciminero & Steingarten, 1978). The various self-devaluation cognitive biases tend to be more pronounced in depressed women than in depressed men.

People who judge themselves unfavorably are not inclined to treat themselves positively. Not surprisingly, the negative bias extends to the

affective self-reaction component of self-regulation. Compared to nondepressed persons, those who are prone to depression react less self-rewardingly for similar successes but more self-critically for similar failures (Gotlib, 1981; Lobitz & Post, 1979; Nelson & Craighead, 1977; Rehm, 1982). Self-devaluation and despondent mood feed on each other. Repeated self-devaluation creates a depressive mood which, in turn, further diminishes self-rewarding reactions and enhances self-critical ones. It is difficult to maintain interest and involvement in activities in which one's performances produce mainly self-devaluation.

Successful treatment of despondency stemming from dysfunctional self-evaluation rectifies each of the self-regulatory subfunctions—how people monitor and interpret their experiences, the standards by which they judge themselves, and their self-evaluative reactions to their performances (Heiby, 1986; Rehm, 1981).

Self-regulatory theories of motivation and of depression make seemingly contradictory predictions regarding the effects of negative discrepancies between attainments and standards. Standards that exceed attainments are said to enhance motivation through goal challenges, but negative discrepancies are also invoked as activators of despondent mood. Moreover, when negative discrepancies do have adverse effects, they may give rise to apathy rather than to despondency. A conceptual scheme that differentiates the conditions under which negative discrepancies will motivate, depress, or induce apathy is needed.

In accord with social cognitive theory, the directional effects of negative goal discrepancies are predictable from the relationship between perceived self-efficacy for goal attainment and level of self-set goals (Bandura & Abrams, 1986). Negative disparities give rise to high motivation and low despondent mood for people who believe they have the efficacy to fulfill difficult goals and continue to strive for them (Fig. 10). Negative disparities diminish motivation and generate despondent mood for people who judge themselves as inefficacious to attain difficult goals but continue to demand them of themselves for any sense of satisfaction or success. People who judge they lack the efficacy for goal attainment and abandon the difficult goals as unrealistic for themselves display the apathetic reaction.

SELF-REGULATORY MECHANISMS IN MORAL AGENCY

The preceding discussion analyzed the mechanisms through which aspirational standards regulate motivation, personal accomplishments, and affective states. In areas of functioning involving achievement strivings and cultivation of competencies, the personal standards that are selected

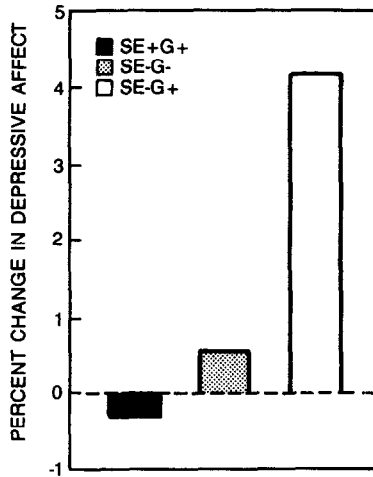


FIG. 10. Percentage change in depressive mood for people combining strong perceived self-efficacy with goal adherence (SE + G+); weak perceived self-efficacy with goal adherence (SE - G+); and weak perceived self-efficacy with goal abandonment (SE - G-) (Bandura & Abrams, 1986).

as a mark of adequacy are progressively altered as skills and knowledge are acquired and challenges are met. In many areas of social and moral behavior, the internal standards that serve as the basis for regulating one's conduct are relatively stable. That is, people do not change from week to week in what they regard as right or wrong or as good or bad. Moreover, violation of moral standards usually generates much stronger affective self-reactions to transgressive conduct than performances that may fall short of achievement standards.

Space limitation does not permit a detailed exposition of moral motivation and action. The social-cognitive conception of the exercise of moral agency through self-regulatory mechanisms has been presented elsewhere in some detail (Bandura, 1991b). In this theory, transgressive conduct is regulated by two major sources of sanctions: social sanctions and internalized self-sanctions. Both mechanisms operate anticipatorily. In motivators arising from social sanctions, people refrain from transgressing because they anticipate that such conduct will bring them social censure and other adverse consequences. In motivators rooted in self-reactive control, people behave in prosocial ways that give them a sense of self-satisfaction and self-respect and they refrain from transgressing because such conduct will give rise to self-reproach. Societal codes and sanctions articulate collective moral imperatives as well as influence social conduct. However, external sanctions are limited in their deterrent

power because most transgressive acts go socially undetected. But people continuously preside over their own behavior in countless situations presenting little or no threat of external sanctions. So the exercise of self-sanction must play a central role in the regulation of moral conduct.

Moral conduct is regulated mainly via mechanisms of self-reactive influence. Moral agency operates through the same basic set of psychological subfunctions. However, the evaluative standards differ from those in the achievement domain in content and stability, the judgmental factors are more varied and complex, and affective self-reactions to moral conduct are often more intense. To exert influence over their own conduct people have to monitor what they do. Actions give rise to self-reactions through a judgmental function in which conduct is evaluated in relation to personal standards and environmental circumstances. Situations with moral implications contain many judgmental ingredients that not only vary in importance but may be given lesser or greater weight depending upon the particular constellation of events in a given moral predicament. Among the many factors that enter into judging conduct are the nature of the transgression and its base rate of occurrence and degree of norm variation; the contexts in which it is performed and the perceived situational and personal motivators for it; the immediate and long-range consequences of the actions; whether it produces personal injury or property damage; whether it is directed at faceless agencies and organizations or at individuals; the characteristics of the wrongdoers, such as their age, sex, and ethnic and social status; and the characteristics of the victims and their perceived blameworthiness.

The integrative rules of moral decision making have been studied most extensively by researchers who analyze moral thinking as a process of information integration (Kaplan, 1989; Lane & Anderson, 1976; Leon, 1982; Surber, 1985). In dealing with moral dilemmas, people must extract, weight, and integrate the morally relevant information in the situations confronting them. Factors that are weighted heavily under some combinations of conditions may be disregarded or considered of lesser import under a different set of conditions. This process of moral reasoning is guided by multidimensional rules for judging conduct.

Self-regulation of moral conduct involves more than moral thought. Moral judgment sets the occasion for self-reactive influence. Evaluative self-reactions provide the mechanism by which standards regulate conduct. The anticipatory self-pride and self-censure for actions that correspond to or violate personal standards serve as the regulatory influences. People do things that give them self-satisfaction and a sense of self-worth. They ordinarily refrain from behaving in ways that violate their moral standards because it will bring self-condemnation. Anticipatory self-sanctions thus keep conduct in line with internal standards.

Interplay between Personal and Social Sanctions

The self-regulation of conduct is not entirely an intrapsychic affair, nor do people operate as autonomous moral agents impervious to the social realities in which they are enmeshed. In the interactionist perspective of social cognitive theory, moral conduct is regulated by a reciprocity of influence between thought and self-sanctions, conduct, and a network of social influences. Social factors affect the operation of the self system in at least three major ways (Bandura, 1986). They contribute importantly to the development of each of the self-regulatory functions. Social influences shape the rules of moral judgment and the nature of moral standards. Analyses of regulation of moral action through affective self-reaction distinguish between two sources of incentive motivation operating in the process. There are the conditional evaluative self-incentives that provide guides and proximal motivators for moral courses of action. Then there are the more distal social incentives for holding to a moral system. Thus, the second way in which social influences contribute to morality is by providing collective support for adherence to moral standards. The third way in which social realities affect moral functioning is by facilitating selective activation and disengagement of moral self-regulation. We shall return to this issue later.

After standards and self-reactive functions are developed, behavior usually produces two sets of consequences: self-evaluative reactions and social effects. These two sources of consequences may operate as complementary or opposing influences on behavior. Conduct is most congruent with moral standards when transgressive behavior is not easily self-excusable and the evaluative reactions of significant others are compatible with personal standards. Under conditions of shared moral standards, socially approvable acts are a source of self-pride and socially punishable ones are self-censured. To enhance the compatibility between personal and social sanctions, people generally select associates who share similar standards of conduct and thus ensure social support for their own system of self-evaluation (Bandura & Walters, 1959; Emmons & Diener, 1986). Diversity of standards in a society, therefore, does not necessarily create personal conflict. Selective association can forge consistency out of diversity. Behavior is especially susceptible to external influences in the absence of strong countervailing internal standards (Snyder, 1987).

One type of conflict between social and self-produced consequences arises when individuals are socially punished for behavior they highly value (Bandura, 1973). Principled dissenters and nonconformists often find themselves in this predicament. Here, the relative strength of self-approval and social censure determine whether the behavior will be restrained or expressed. Should the threatened social consequences be se-

vere, people hold in check self-praiseworthy acts in risky situations but perform them readily in relatively safe settings. There are individuals, however, whose sense of self-worth is so strongly invested in certain convictions that they will submit to prolonged maltreatment, rather than accede to what they regard as unjust or immoral.

People commonly experience conflicts in which they are socially pressured to engage in behavior that violates their moral standards. When self-devaluative consequences outweigh the benefits for socially accommodating behavior, the social influences do not have much sway. However, the self-regulation of conduct operates through conditional application of moral standards. Self-sanctions can, therefore, be weakened or nullified by exonerative moral reasoning and social circumstances. People display different levels of detrimental behavior and offer different types of moral reasons for it, depending on whether they find themselves in social situations that are conducive to humane or to transgressive conduct (Bandura, Underwood, & Fromson, 1975).

Selective Activation and Disengagement of Internal Standards

Development of self-regulatory functions operating through moral standards does not create a fixed internal regulator of conduct, as suggested by theories of internalization incorporating entities such as conscience or superego as continuous overseers of actions. Self-regulatory mechanisms do not operate unless they are activated, and there are many processes by which self-sanctions can be disengaged from inhumane conduct (Bandura, 1986, 1991b). Selective activation and disengagement of internal control permits different types of conduct with the same moral standards. Figure 11 shows the points in the self-regulatory process at which

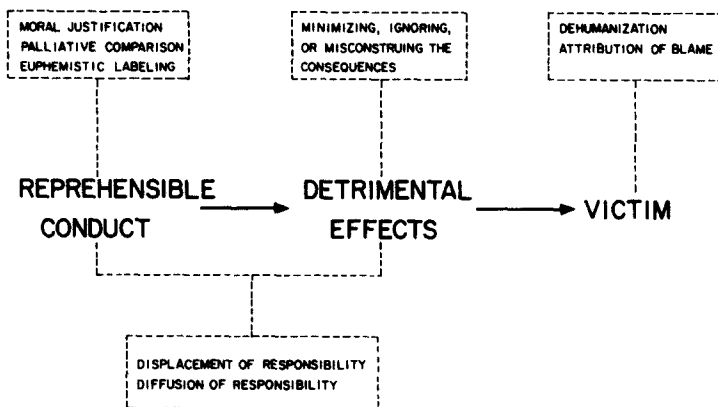


FIG. 11. Mechanisms through which moral control is selectively activated or disengaged from detrimental conduct at different points in the self-regulatory process (Bandura, 1986).

internal moral control can be disengaged from detrimental conduct.

People repeatedly experience conflicts in which behavior they themselves devalue or consider reprehensible can serve as the means for securing valued benefits. As long as self-sanctions override the force of external inducements behavior is kept in line with personal standards. However, in the face of strong external inducements, such conflicts are often resolved by selective disengagement of self-sanctions. This enables otherwise considerate people to perform self-serving activities that have detrimental social effects.

One set of disengagement practices operates on the construal of the behavior itself. People do not ordinarily engage in reprehensible conduct until they have justified to themselves the morality of their actions. What is culpable can be made righteous through cognitive reconstrual. In this process of *moral justification*, detrimental conduct is made personally and socially acceptable by portraying it in the service of moral purposes (Bandura, 1991b; Sanford & Comstock, 1971). People then act on a moral imperative.

Language shapes people's thought patterns on which they base many of their actions. Activities can take on a very different appearance depending on what they are called. *Euphemistic labeling* thus provides a convenient device for masking reprehensible activities or even conferring a respectable status upon them. Through convoluted and sanitizing verbiage, detrimental conduct is made benign, and those who engage in it are relieved of a sense of personal agency. In an insightful analysis of the language of nonresponsibility, Gambino (1973) identifies the different varieties of euphemisms. Palliative expressions, the agentless passive form, and the specialized jargon of legitimate enterprises are widely used to make the reprehensible respectable.

Whenever events occur or are presented contiguously, the first one colors how the second one is perceived and judged. By exploiting the contrast principle, moral judgments of conduct can be influenced by expedient structuring of what it is compared against (Bandura, 1991b). Acts that would ordinarily be self-deplored can be made righteous by *advantageous comparison* with flagrant transgressions. The more outrageous the comparison practices, the more likely it is that one's own reprehensible conduct will appear trifling or even benevolent. Advantageous historical comparisons are also often invoked in the reconstrual and justification or reprehensible conduct.

Cognitive restructuring of behavior through moral and social justifications and palliative characterizations is the most effective psychological mechanism for promoting conduct that violates personal standards. This is because moral restructuring not only eliminates self-deterrents but engages self-approval in the service of deleterious conduct. What was once

morally condemnable becomes a source of self-valuation. After harmful practices become invested with high moral purpose, people work hard to become proficient at them and take pride in accomplishments achieved deleteriously.

Self-sanctions are activated most strongly when personal agency for detrimental effects is unambiguous. Another set of dissociative practices operates by obscuring or distorting the relationship between actions and the effects they cause. People will behave in ways they normally repudiate if a legitimate authority accepts responsibility for the consequences of the conduct (Diener, Dineen, Endresen, Beaman, & Fraser, 1975; Milgram, 1974). Under *displacement of responsibility*, people view their actions as springing from the dictates of authorities rather than their being personally responsible for them. Since they do not regard themselves as the actual agent of their actions, they are spared self-prohibiting reactions. Displacement of responsibility not only weakens restraints over one's own deleterious actions but diminishes social concern over the well-being of those mistreated by others (Milgram, 1974; Tilker, 1970).

The deterrent power of self-sanctions is weakened when the link between conduct and its consequences is obscured by *diffusion of responsibility* for deleterious behavior. This is achieved in several ways. Responsibility can be diffused by division of labor, group decision making, and group action. As a result, no single individual feels responsible for what is done collectively. Where everyone is responsible no one really feels responsible. People, therefore, behave more reprehensibly when responsibility is obfuscated by a collective instrumentality than when they hold themselves personally accountable for what they do (Bandura *et al.*, 1975; Diener, 1977; Zimbardo, 1969).

Additional ways of weakening self-detering reactions operate through *disregard or distortion of consequences of action*. When people chose to pursue activities harmful to others for personal gain, or because of social inducements, they avoid facing the harm they cause or they minimize it. They readily recall prior information about the potential benefits of the behavior but are less able to remember its harmful effects (Brock & Buss 1962, 1964). In addition to selective inattention and cognitive distortion of effects, the misrepresentation may involve active efforts to discredit evidence of harmful effects. As long as the detrimental results of one's conduct are ignored, minimized, distorted, or disbelieved, there is little reason for self-censure to be activated.

The final set of disengagement practices operates on the recipients of deleterious acts through *dehumanization* and *attribution of blame*. The strength of self-evaluative reactions to harmful conduct partly depends on how the perpetrators view the people toward whom the behavior is directed. To perceive another as human enhances empathetic or vicarious

reactions through perceived similarity (Bandura, 1991b). The joys and suffering of similar persons are more vicariously arousing than are those of strangers or individuals who have been divested of human qualities. As a result, it is difficult to mistreat humanized persons without risking self-censure.

Self-sanctions against harmful conduct can be disengaged or blunted by divesting people of human qualities. Once dehumanized, they are no longer viewed as persons with feelings, hopes, and concerns but rather as subhuman objects. People treat dehumanized individuals much more harshly than those who have been invested with human qualities (Bandura *et al.*, 1975). Imputing blame to one's antagonists is still another expedient that can serve self-exonerative purposes. In this process, people regard themselves as faultless self-defenders compelled to harmful action by forcible provocation. Such conduct thus becomes a justifiable defensive reaction to willful or foolish provocations. Self-exoneration is similarly achievable by viewing one's injurious conduct as forced by circumstances rather than as a personal decision. By blaming others or circumstances, not only are one's own actions excusable but one can even feel self-righteous in the process.

CONCLUDING COMMENT

The converging lines of evidence reviewed in this article testify to the paramount role played by self-regulatory mechanisms in human motivation and action across diverse realms of functioning. Self-regulation is a multifaceted phenomenon operating through a number of subsidiary cognitive processes including self-monitoring, standard setting, evaluative judgment, self-appraisal, and affective self-reaction. Cognitive regulation of motivation and action relies extensively on an anticipatory proactive system rather than simply on a reactive negative feedback system. The human capacity for forethought, reflective self-appraisal, and self-reaction gives prominence to cognitively based motivators in the exercise of personal agency.

REFERENCES

- Appley, M. H. (1991, in press). Motivation, equilibration, and stress. In R. A. Dienstbier (Ed.), *Perspectives on motivation: Nebraska symposium on motivation* (Vol. 38). Lincoln: Univ. of Nebraska Press.
- Arvey, R. D., & Dewhirst, H. D. (1976). Goal-setting attributes, personality variables, and job satisfaction. *Journal of Vocational Behavior*, 9, 179-190.
- Bandura, A. (1973). *Aggression: A social learning analysis*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, *44*, 1175–1184.
- Bandura, A. (1991a). Self-regulation of motivation through anticipatory and self-regulatory mechanisms. In R. A. Dienstbier (Ed.), *Perspectives on motivation: Nebraska symposium on motivation* (Vol. 38, pp. 69–164). Lincoln: Univ. of Nebraska Press.
- Bandura, A. (1991b). Social cognitive theory of moral thought and action. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Handbook of moral behavior and development* (Vol. 1, pp. 45–103). Hillsdale, NJ: Erlbaum.
- Bandura, A., & Abrams, K. (1986). *Self-regulatory mechanisms in motivating, apathetic, and despondent reactions to unfulfilled standards*. unpublished manuscript, Stanford University, Stanford.
- Bandura, A., & Cervone, D. (1983). Self-evaluative and self-efficacy mechanisms governing the motivational effects of goal systems. *Journal of Personality and Social Psychology*, *45*, 1017–1028.
- Bandura, A., & Cervone, D. (1986). Differential engagement of self-reactive influences in cognitive motivation. *Organizational Behavior and Human Decision Processes*, *38*, 92–113.
- Bandura, A., & Jourden, F. J. (1991). Self-regulatory mechanisms governing social-comparison effects on complex decision making. *Journal of Personality and Social Psychology*, *60*, 941–951.
- Bandura, A., & Schunk, D. H. (1981). Cultivating competence, self-efficacy and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology*, *41*, 586–598.
- Bandura, A., & Simon, K. M. (1977). The role of proximal intentions in self-regulation of refractory behavior. *Cognitive Therapy and Research*, *1*, 177–193.
- Bandura, A., Underwood, B., & Fromson, M. E. (1975). Disinhibition of aggression through diffusion of responsibility and dehumanization of victims. *Journal of Research in Personality*, *9*, 253–269.
- Bandura, A., & Walters, R. H. (1959). *Adolescent aggression*. New York: Ronald Press.
- Bandura, A., & Wood, R. E. (1989). Effect of perceived controllability and performance standards on self-regulation of complex decision-making. *Journal of Personality and Social Psychology*, *56*, 805–814.
- Bandura, M. M., & Dweck, C. S. (1990). *The relationship of conceptions of intelligence and achievement goals to achievement-related cognition, affect and behavior*. Submitted for publication.
- Beach, L. R., Barnes, V. E., & Christensen-Szalanski, J. J. J. (1986). Beyond heuristics and biases: A contingency model of judgmental forecasting. *Journal of Forecasting*, *5*, 143–157.
- Becker, L. J. (1978). Joint effect of feedback and goal setting on performance: A field study of residential energy conservation. *Journal of Applied Psychology*, *63*, 428–433.
- Brehmer, B., Hagafors, R., & Johansson, R. (1980). Cognitive skills in judgment: Subject's ability to use information about weights, function forms, and organizing principles. *Organizational Behavior and Human Performance*, *26*, 373–385.
- Brock, T. C., & Buss, A. H. (1962). Dissonance, aggression, and evaluation of pain. *Journal of Abnormal and Social Psychology*, *65*, 197–202.
- Brock, T. C., & Buss, A. H. (1964). Effects of justification for aggression and communication with the victim on postaggression dissonance. *Journal of Abnormal and Social Psychology*, *68*, 403–412.
- Bronfenbrenner, U. (1970). *Two worlds of childhood: U.S. and U.S.S.R.* New York: Russell Sage Foundation.
- Campion, M. A., & Lord, R. G. (1982). A control systems conceptualization of the goal-

- setting and changing process. *Organizational Behavior and Human Performance*, **30**, 265–287.
- Carver, C. S., & Scheier, M. F. (1981). *Attention and self-regulation: A control-theory approach to human behavior*. New York: Springer-Verlag.
- Cavior, N., & Marabotto, C. M. (1976). Monitoring verbal behaviors in a dyadic interaction. *Journal of Consulting and Clinical Psychology*, **44**, 68–76.
- Cervone, D., Jiwani, N., & Wood, R. (1990). *Goal-setting and the differential influence of self-regulatory processes on complex decision-making performance*. Submitted for publication.
- Ciminero, A. R., & Steingarten, K. A. (1978). The effects of performance standards on self-evaluation and self-reinforcement in depressed and nondepressed individuals. *Cognitive Therapy and Research*, **2**, 179–182.
- Collins, J. L. (1982, March). *Self-efficacy and ability in achievement behavior*. Paper presented at the annual meeting of the American Educational Research Association, New York.
- Cooley, C. H. (1902). *Human nature and the social order*. New York: Scribner's.
- Csikszentmihalyi, M. (1979). Intrinsic rewards and emergent motivation. In M. R. Lepper & D. Greene (Eds.), *The hidden costs of reward* (pp. 205–216). Morristown, NJ: Erlbaum.
- DeMonbreun, B. G., & Craighead, W. E. (1977). Distortion of perception and recall of positive and neutral feedback in depression. *Cognitive Therapy and Research*, **4**, 311–329.
- Diener, E. (1977). Deindividuation: Causes and consequences. *Social Behavior and Personality*, **5**, 143–156.
- Diener, E., Dineen, J., Endresen, K., Beaman, A. L., & Fraser, S. C. (1975). Effects of altered responsibility, cognitive set, and modeling on physical aggression and deindividuation. *Journal of Personality and Social Psychology*, **31**, 328–337.
- Dossett, D. L., Latham, G. P., & Mitchell, T. R. (1979). Effects of assigned versus participatively set goals, knowledge of results, and individual differences on employee behavior when goal difficulty is held constant. *Journal of Applied Psychology*, **64**, 291–298.
- Dweck, C. S., & Elliott, E. S. (1983). Achievement motivation. In P. H. Mussen (General Ed.) & E. M. Heatherington (Vol. Eds.), *Handbook of child psychology: Socialization, personality & social development* (4th ed., Vol. 4, pp. 644–691). New York: Wiley.
- Emmons, R. A., & Diener, E. (1986). Situation selection as a moderator of response consistency and stability. *Journal of Personality and Social Psychology*, **51**, 1013–1019.
- Frey, K. S., & Ruble, D. N. (1990). Strategies for comparative evaluation: Maintaining a sense of competence across the lifespan. In R. J. Sternberg & J. Kolligan, Jr. (Eds.), *Competence considered* (pp. 167–189). New Haven, CT: Yale Univ. Press.
- Gambino, R. (1973, November–December). Watergate lingo: A language of non-responsibility. *Freedom on Issue*, (No. 22), 7–9, 15–17.
- Goethals, G. R., & Darley, J. M. (1987). Social comparison theory: Self-evaluation and group life. In B. Mullen & G. R. Goethals (Eds.), *Theories of group behavior* (pp. 21–47). New York: Springer-Verlag.
- Golin, S., & Terrill, F. (1977). Motivational and associative aspects of mild depression in skill and chance tasks. *Journal of Abnormal Psychology*, **86**, 389–401.
- Gotlib, I. H. (1981). Self-reinforcement and recall: Differential deficits in depressed and nondepressed psychiatric inpatients. *Journal of Abnormal Psychology*, **90**, 521–530.
- Gottman, J. M., & McFall, R. M. (1972). Self-monitoring effects in a program for potential high school dropouts: A time-series analysis. *Journal of Consulting and Clinical Psychology*, **39**, 273–281.
- Gurin, P., & Brim, O. G., Jr. (1984). Change in self in adulthood: The example of sense of

- control. In P. B. Baltes & O. G. Brim, Jr. (Eds.), *Life-span development and behavior* (Vol. 6, pp. 281–334). New York: Academic Press.
- Heiby, E. M. (1986). Social versus self-control skills deficits in four cases of depression. *Behavior Therapy, 17*, 158–169.
- Hogarth, R. (1981). Beyond discrete biases: Functional and dysfunctional aspects of judgmental heuristics. *Psychological Bulletin, 90*, 197–217.
- Kanfer, F. H. (1970). Self-regulation: Research, issues, and speculation. In C. Neuringer & J. L. Michael (Eds.), *Behavior modification in clinical psychology* (pp. 178–220). New York: Appleton-Century-Crofts.
- Kanfer, F. H., & Hagerman, S. (1981). The role of self-regulation. In L. P. Rehm (Ed.), *Behavior therapy for depression: Present status and future directions* (pp. 143–180). New York: Academic Press.
- Kanfer, R., & Zeiss, A. M. (1983). Depression, interpersonal standard-setting, and judgments of self-efficacy. *Journal of Abnormal Psychology, 92*, 319–329.
- Kaplan, M. F. (1989). Information integration in moral reasoning: Conceptual and methodological implications. In J. Reykowski, N. Eisenberg, & E. Staub (Eds.), *Social and moral values: Individual and societal perspectives*. Hillsdale, NJ: Erlbaum.
- Kazdin, A. E. (1974). Self-monitoring and behavior change. In M. J. Mahoney & C. E. Thoresen (Eds.), *Self-control: Power to the person* (pp. 218–246). Monterey, CA: Brooks/Cole.
- Kuiper, N. A. (1978). Depression and causal attributions for success and failure. *Journal of Personality and Social Psychology, 36*, 236–246.
- Kuiper, N. A., MacDonald, M. R., & Derry, P. A. (1983). Parameters of a depressive self-schema. In J. Suls & A. Greenwald (Eds.), *Psychological perspectives on the self* (Vol. 2, pp. 191–217). Hillsdale, NJ: Erlbaum.
- Lane, J., & Anderson, N. H. (1976). Integration of intention and outcome in moral judgment. *Memory and Cognition, 4*, 1–5.
- Latham, G. P., & Marshall, H. A. (1982). The effects of self-set, participatively set and assigned goals on the performance of government employees. *Personnel Psychology, 35*, 399–404.
- Leon, M. (1982). Rules in children's moral judgments: Integration of intent, damage, and rationale information. *Developmental Psychology, 18*, 835–842.
- Lobitz, W. C., & Post, R. D. (1979). Parameters of self-reinforcement and depression. *Journal of Abnormal Psychology, 81*, 33–41.
- Locke, E. A., Bryan, J. F., & Kendall, L. M. (1968). Goals and intentions as mediators of the effects of monetary incentives on behavior. *Journal of Applied Psychology, 52*, 104–121.
- Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice-Hall.
- Loeb, A., Beck, A. T., Diggory, J. C., & Tuthill, R. (1967). Expectancy, level of aspiration, performance, and self-evaluation in depression. *Proceedings of the 75th Annual Convention of the American Psychological Association, 2*, 193–194.
- Lord, R. G., & Hanges, P. J. (1987). A control system model of organizational motivation: Theoretical development and applied implications. *Behavioral Science, 32*, 161–178.
- Matsui, T., Okada, A., & Kakuyama, T. (1982). Influence of achievement need on goal setting, performance and feedback effectiveness. *Journal of Applied Psychology, 67*, 645–648.
- McCall, G. J. (1977). The social looking-glass: A sociological perspective on self-development. In T. Mischel (Ed.), *The self: Psychological and philosophical issues* (pp. 274–287). Oxford, England: Blackwell.

- Milgram, S. (1974). *Obedience to authority: An experimental view*. New York: Harper & Row.
- Miller, G. A., Galanter, E., & Pribram, K. H. (1960). *Plans and the structure of behavior*. New York: Holt.
- Morris, W. N., & Nemcek, D., Jr. (1982). The development of social comparison motivation among preschoolers: Evidence of a stepwise progression. *Merrill-Palmer Quarterly of Behavior and Development*, 28, 413-425.
- Nelson, R. E., & Craighead, W. E. (1977). Selective recall of positive and negative feedback, self-control behaviors, and depression. *Journal of Abnormal Psychology*, 86, 379-388.
- Nelson, R. O. (1977). Assessment and therapeutic functions of self-monitoring. In M. Hersen, R. M. Eisler, & P. M. Miller (Eds.), *Progress in behavior modification* (Vol. 5, pp. 263-308). New York: Academic Press.
- Neuringer, A. (1981). Self-experimentation: A call for change. *Behaviorism*, 9, 79-94.
- Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review*, 91, 328-346.
- Nicholls, J. G. (1990). What is ability and why are we mindful of it? A developmental perspective. In R. J. Sternberg & J. Kolligian, Jr. (Eds.), *Competence considered* (pp. 11-40). New Haven: Yale Univ. Press.
- Ostrow, A. C. (1976). Goal-setting behavior and need achievement in relation to competitive motor activity. *The Research Quarterly*, 47, 174-183.
- Perri, M. G., & Richards, C. S. (1977). An investigation of naturally occurring episodes of self-controlled behaviors. *Journal of Counseling Psychology*, 24, 178-183.
- Peterson, C., & Seligman, M. E. P. (1984). Causal explanations as a risk factor for depression: Theory and evidence. *Psychological Review*, 91, 347-374.
- Piaget, J. (1960). Equilibration and development of logical structures. In J. M. Tanner & B. Inhelder (Eds.), *Discussions on child development* (vol. 4). New York: International Universities Press.
- Pritchard, R. D., & Curtis, M. I. (1973). The influence of goal setting and financial incentives on task performance. *Organizational Behavior and Human Performance*, 10, 175-183.
- Rehm, L. P. (1981). A self-control therapy program for treatment of depression. In J. F. Clarkin & H. Glazer (Eds.), *Depression: Behavioral and directive treatment strategies* (pp. 68-110). New York: Garland Press.
- Rehm, L. P. (1982). Self-management in depression. In P. Karoly & F. H. Kanfer (Eds.), *Self-management and behavior change: From theory to practice* (pp. 522-567). New York: Pergamon.
- Relich, J. D., Debus, R. L., & Walker, R. (1986). The mediating role of attribution and self-efficacy variables for treatment effects on achievement outcomes. *Contemporary Educational Psychology*, 11, 195-216.
- Rizley, R. (1978). Depression and distortion in the attribution of causality. *Journal of Abnormal Psychology*, 87, 32-48.
- Sanford, N., & Comstock, C. (1971) *Sanctions for evil*. San Francisco: Jossey-Bass.
- Schunk, D. H., & Gunn, T. P. (1986). Self-efficacy and skill development: Influence of task strategies and attributions. *Journal of Educational Research*, 79, 238-244.
- Schwartz, J. L. (1974). Relationship between goal discrepancy and depression. *Journal of Consulting and Clinical Psychology*, 42, 309.
- Sieck, W. A., & McFall, R. M. (1976). Some determinants of self-monitoring effects. *Journal of Consulting and Clinical Psychology*, 44, 958-965.
- Silver, W. S., Mitchell, T. R., & Gist, M. E. (1989). *The impact of self-efficacy on causal*

- attributions for successful and unsuccessful performance.* Unpublished manuscript, University of Washington.
- Simon, K. M. (1979). Self-evaluative reactions: The role of personal valuation of the activity. *Cognitive Therapy and Research*, 3, 111–116.
- Snyder, M. (1987). *Public appearances/private realities: The psychology of self-monitoring.* New York: Freeman.
- Strang, H. R., Lawrence, E. C., & Fowler, P. C. (1978). Effects of assigned goal level and knowledge of results on arithmetic computation: Laboratory study. *Journal of Applied Psychology*, 63, 446–450.
- Suls, J. M., & Miller, R. L. (1977). *Social comparison processes: Theoretical and empirical perspectives.* Washington, DC: Hemisphere.
- Suls, J., & Mullen, B. (1982). From the cradle to the grave: Comparison and self-evaluation across the life-span. In J. Suls (Eds.), *Psychological perspectives on the self* (Vol. 1, pp. 97–125). Hillsdale, NJ: Erlbaum.
- Surber, C. F. (1985). Applications of information integration to children's social cognitions. In J. B. Pryor & J. D. Day (Eds.), *The development of social cognition* (pp. 59–94). New York: Springer-Verlag.
- Tilker, H. A. (1970). Socially responsible behavior as a function of observer responsibility and victim feedback. *Journal of Personality and Social Psychology*, 14, 95–100.
- Wallace, I. (1977). Self-control techniques of famous novelists. *Journal of Applied Behavior Analysis*, 10, 515–525.
- Weiner, B. (1986). *An attributional theory of motivation and emotion.* New York: Springer-Verlag.
- Wener, A. E., & Rehm, L. P. (1975). Depressive affect: A test of behavioral hypotheses. *Journal of Abnormal Psychology*, 84, 221–227.
- Wood, J. V. (1989). Theory and research concerning social comparisons of personal attributes. *Psychological Bulletin*, 106, 231–248.
- Wood, R. E., & Bailey, T. (1985). Some unanswered questions about goal effects: A recommended change in research methods. *Australian Journal of Management*, 10, 61–73.
- Wood, R. E., & Bandura, A. (1989a). Social cognitive theory of organizational management. *Academy of Management Review*, 14, 361–384.
- Wood, R. E., & Bandura, A. (1989b). Impact of conceptions of ability on self-regulatory mechanisms and complex decision making. *Journal of Personality and Social Psychology*, 56, 407–415.
- Wood, R. E., Mento, A. J., & Locke, E. A. (1987). Task complexity as a moderator of goal effects: A meta-analysis. *Journal of Applied Psychology*, 72, 416–425.
- Yukl, G. A., & Latham, G. P. (1978). Interrelationships among employee participation, individual differences, goal difficulty, goal acceptance, goal instrumentality, and performance. *Personnel Psychology*, 31, 305–324.
- Zimbardo, P. G. (1969). The human choice: Individuation, reason, and order versus deindividuation, impulse, and chaos. In W. J. Arnold & D. Levine (Eds.), *Nebraska symposium on motivation, 1969* (pp. 237–309). Lincoln: Univ. of Nebraska Press.
- Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81, 329–339.