

PROCESSES AND PROCEDURES IN SELF-CONTROL: A WORKING MODEL

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Abstract

The processes of self-control involved in solving complex human problems consist of conscious effort, focused attention and choice between conflicting alternatives. Viewed as a complex set of specific teachable skills, self-control can be learned by clients and others if structured learning experiences are provided. Procedures such as identifying problems, assessing and building commitment, becoming more aware of behavior patterns, and using and evaluating action plans are presented within a social learning framework with an emphasis on reciprocal effects of cognitive, behavioral and environmental influences.

Résumé

Un effort conscient, une attention résolue et le choix entre des options contraires sont les composantes de la maîtrise de soi exigée dans la résolution des problèmes humains complexes. Si on considère ces composantes en tant qu'habiletés spécifiques, nous pouvons, par le truchement d'expériences bien structurées, enseigner la maîtrise de soi à nos clients et à d'autres personnes. On présente à l'intérieur d'un cadre d'apprentissage social les procédures suivantes: identifier les problèmes, évaluer et établir l'engagement, devenir plus conscient des différents types de comportement, utiliser et juger les plans d'action. Dans cette présentation, on accorde une attention spéciale aux effets réciproques des influences qui proviennent du domaine cognitif, du comportement et du milieu.

The helping professions, viewed broadly to include law, religion and medicine, have long advocated the fundamental value of individual responsibility. Yet the means of acquiring personal responsibility have remained vague and imprecise. This ambiguity is understandable; Western cultures have historically supported a kind of personality trait conception of moral character and personal integrity (Klausner, 1965; Thoresen, 1973). A person's ability to do such things as withstand temptation, delay gratification, curb aggressive acts, and take action in the face of difficult odds has been viewed as something wholly *within* the person — some enduring quality or vital force, often called willpower (Buchanan, 1812; Frankl, 1959; May, 1969). Persons without this power either lacked it innately or were afflicted with a sickness of sorts — of the heart and/or the soul. Although this

"trait-disease" view has remained popular, one finds on closer inspection some marked discrepancies between popular thinking about responsibility, the methods used to develop it, and the actual behavior of persons in specific situations (Hartshorne & May, 1928; Mischel, 1968). It has been repeatedly found that persons, depending on the situation, tend to act in "discriminating" ways when it comes to being personally or morally responsible.

Despite the prevalence of a trait conception, a variety of individual, family and social practices have been developed for teaching personal responsibility. Much can be said, for example, about how organized religions have played a dominant role in developing the skills of responsibility. The "spiritual exercises" of Saint Ignatius, founder of the Jesuit order, stand out as an example of how cognitive, behavioral and environmental factors can be arranged to discipline oneself (deGuibert, 1964), as does the daily physical, mental and social regimen prescribed by Zen Buddhism (Shapiro & Zifferblatt, 1976). Religious practices are mentioned here because, upon closer examination, one can readily see that becoming personally responsible and socially mature were not, in fact, viewed as qualities one

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was born with; rather, such behavior was shaped by carefully orchestrated learning experiences. Thus, while popular notions of acting responsibly have centered around various trait conceptions, usually in the form of some inborn internal strength and character, the actual development of responsible behavior has involved a variety of structured training experiences.

How willpower, personal responsibility, character, or the skills of self-control are conceptualized is crucial since one's interpretation strongly influences what is looked for, what is seen and hence what is believed (Mahoney, 1976; Thoresen, 1977). Until recently, it has been difficult to think of specific ways of *teaching* and *learning* self-control skills, since one seemed either blessed or burdened with such qualities. Although William James (1890) saw the problem of volition (willpower) as a matter of learnable skills ("volition" to him consisted of learning how to combine continuous effort with unflinching attention), it was B.F. Skinner (1953) who first presented the empirical foundations of a social learning view. Skinner focused on how a person could learn and could use a *variety* of very specific skills to change personal behavior — a variety which highlighted the social and physical environment. Self-control and the closely related concepts of character, willpower, and personal responsibility were, to Skinner, a matter of altering the sources of influence in one's life ("... controlling the variables of which behavior is a function"). Ironically, it was the radical behaviorists with their concern with external control via manipulating environmental variables and intensively studying single subjects over time who set the stage for the *scientific* study of self-control processes — the kind of inquiry which has fundamental relevance for a humanistic, self-actualizing view of human problems (Bandura, 1974; Buhler, 1971; Thoresen, 1973).

We offer in this article an introduction to a social learning model of self-control, one which presents self-control as a complex set of teachable and learnable skills. The model is a tentative working version that describes self-control in a way that may be of practical use to the clinician/researcher. Our concern here is to encourage the practicing counsellor and therapist to try out a self-control approach. To this end, we first present a conceptual model of self-control processes before describing procedures involved in actually achieving self-managed change. In doing so, we suggest the need to integrate some notions about decision-making and problem-solving with self-control procedures (Note 1).

AN EXPANDED WORKING MODEL

What might a comprehensive model of self-control look like? It may be useful to think about

self-control as a *problem* involving *conscious effort* made in trying to implement a *choice* between options having *conflicting* consequences, especially immediate vs. longer term consequences. Stated differently, a person may be said to engage in self-control when faced with two (or more) choices, he chooses one which is more difficult but better for him in the long run. This conceptualization highlights decision-making, conflict, and conscious effort. Viewing self-control as a choice between options, for example, points up the decision-making and problem-solving features that are part of every self-control effort. Choices must be made and solutions must be developed continually when committing ourselves to working on a problem, when developing strategies for becoming self-aware and when creating action plans that seem workable. Knowing the logical decision-making or problem-solving steps does not guarantee that a person will follow the steps or implement a particular decision (D'Zurilla & Goldfried, 1971). These approaches actually demand some exercise of self-control in order to even go through the steps, let alone decide or solve something.

The Experience of Conflict

The conflict experienced when behavior results in differing consequences (immediate versus delayed) is also central. In fact, it is this conflict that requires use of self-control procedures when dealing with some problems rather than the more rational decision-making and problem-solving approaches. These models assume that people will implement their choice or solution once it is arrived at. They tend to ignore how thoughts, feelings, and physical/social environments all influence behavior, often making it difficult to put into action what we think we should do (and even want to do). The essence of self-control is the ability to manage our behavior when faced with such conflict.

To emphasize the difference between a self-control approach and problem-solving or decision-making models, consider a high school girl who decides quite rationally to stop smoking. A decision-making or problem-solving approach assumes that once this decision is reached, it should be implemented. It is a matter of what she values more, her health or her cigarettes. But breaking the smoking habit is rarely such a simple process. Most people experience a great deal of conflict. This girl may find herself constantly thinking about how good a cigarette would taste. She may find it difficult not to light up when with friends who smoke or at times when she would ordinarily enjoy a cigarette, such as after a meal, at a party, or whenever she feels very tense. It is also likely that she will experience unpleasant physical effects due to withdrawal of her daily

intake of nicotine. Finally, smoking may be a mark of sophistication; it may be strongly associated with her feeling good about herself as a person. This array of thoughts, feelings, physiological reactions and environmental stimuli all make it difficult for her to implement her reasonable decision to stop smoking. To be successful, she needs to learn ways to deal with the conflict between what she wants to do and what is easiest and most gratifying in the short run. A self-control approach can help her to identify these sources of conflict and develop and use methods to lessen their influence on her behavior.

Making Conscious Effort

Self-control also requires conscious and sustained effort over time. Conflicting thoughts, inconsistent feelings and discouraging environments often make it difficult to change behavior. We need to apply ourselves to the task, and be prepared to make additional effort as we sometimes slip backwards into old ways. Self-controlling actions might be thought of as the power or energy needed to get new behavior patterns up over a very steep hill.

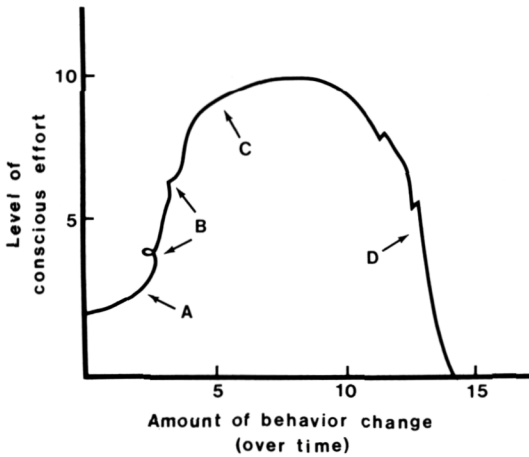


Figure 1.

Relation of effort to behavior change in self-control.

Figure 1 describes the amount of conscious effort required in relation to the amount of positive change accomplished over time. A modest level of commitment and effort is usually experienced at first (see A in Figure 1); some behavior change occurs at this time. However, a steep and irregular slope is soon encountered where a very sharp increase in effort is required in the face of very little change (the "standing still" phase). Sometimes the person regresses, falling back and reducing effort (see B in Figure 1). It is here where unaided resolve and the best of intention fail because the person experiences the

conflict and frustration of trying to do something (carry out an alternative) that is unfamiliar and less immediately satisfying than the usual way of behaving.

It is also here that a multi-method approach to self-control, especially the use of planned environmental techniques such as brief self-contracts can really make the difference. Quite understandably, many will give up in their efforts to change at a time when the conscious effort and time required increases and far exceeds the positive change experienced.

It is only when the ratio of effort to change experiences over time *begins* to decrease (a decelerating slope) that a person's progress over time seems more consistent with the effort required (see C in Figure 1). Thus, the person gradually reduces the amount of conscious effort and yet experiences more change. This relationship begins to stabilize and the new behavior pattern functions with little conscious effort required (see D in Figure 1).

Theoretically, the changing pattern of effort to change over time might be viewed as moving through three self-change phases: self-control, self-management and self-regulation (see Figure 2). The first and most challenging phase is self-control, where conscious effort, conflict and choice are at a maximum. As effort and the related choice conflict diminish, the self-management phase takes place. Finally, the stabilizing of effort in relation to time and change ushers in the self-regulation phase. This latter phase is by far the most common one experienced in that much of what a person does requires little if any conscious effort or conflict (Note 2).

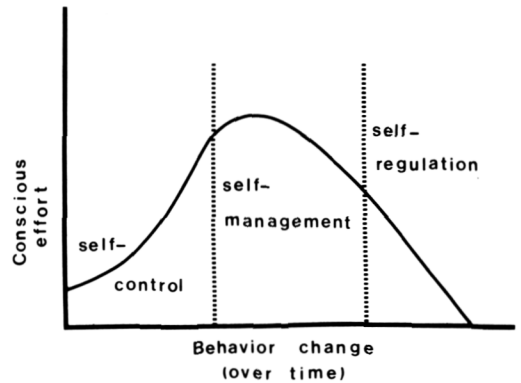


Figure 2.

Three relative phases of self-change.

Buchanan (1812) long ago observed that new behaviors acquired "at the expense of much labor" gradually lose their laborious quality. In doing so, such behavior becomes "automatic", occurring apart from any direction attention by the person. Most of our physiological processes, for example,

are self-regulatory — breathing, hormonal actions, seeing, digestion, circulation — along with common social behaviors and other routine activities. It is true that by means of structured sensory feedback — biofeedback — we can learn to self-manage many of these processes currently operating under self-regulatory mechanisms. But to do so requires a degree of conscious effort and some choice conflict (Note 3).

Clearly, the patterns offered in Figures 1 and 2 are not precise nor do they represent the actual experiences of every person working on every problem requiring self-control. The effort gradient (the steep slope) pictured in Figure 1 may not, for example, closely fit the specific situation of every successful ex-smoker, weight loser or newly assertive person. Indeed, the relationship of effort to change may be more gradual or more abrupt. Yet the concepts of effort, conflict and choice in relation to positive change over time are common elements in any detailed consideration of helping persons learn and use self-control skills.

STEPS IN THE MODEL

Given that we view self-control as conscious effort made to implement a choice in the face of conflict, how might self-control skills be developed? Gaining control over behavior seems to involve a number of procedures: *Identifying the problem, Assessing and building commitment, Becoming more aware of behavior patterns, Developing an action plan, Trying out this plan, and Evaluating how the plan is working.* Each of these phases are made up of several sub-steps. Figure 3 presents an overview of an expanded model.

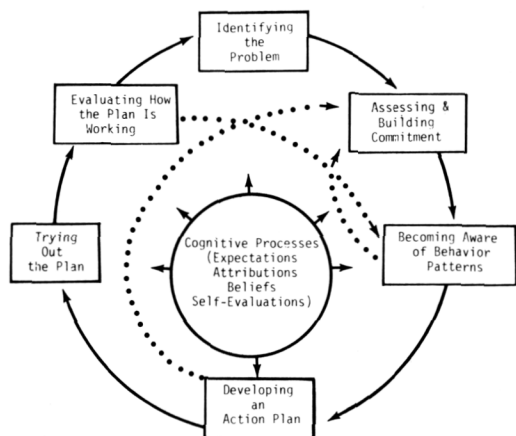


Figure 3. A general working model of self-control.

Several features of this model deserve comment. First, notice that the procedures making up this model have much in common with decision-making and problem-solving strategies. The

essence of self-control, however, seems to lie in the dynamic movement through these phases. Exercising self-control involves continual recycling through its steps. The process is not unidirectional; each procedure may be repeated a number of times. Thus, we may need to assess and build commitment after each stage in order to keep ourselves working on the problem. We may redefine the problem after observing our actions and the actions of others in relevant settings. Once we have tried out a plan, we may find that other thoughts, feelings and features of the physical and social environment need to be changed in order for this plan to work more effectively. Indeed, we may come to see new problems.

Offering a simple list of procedures in no way communicates the richness, the complexities and the difficulties involved in controlling one's behavior. Figure 3 is an attempt to portray the recycling and interaction between phases. This model also depicts the *constant* influence of cognitive processes on every facet of a self-control effort: What a person thinks can either support or impede her progress and continually influence what she is able to accomplish.

While the model presents the steps of self-control in a sequence, it should be noted that persons may go through them at different rates and in different orders. For example, a depressed woman may spend a lot of time identifying her problem and building commitment, but once clarified, she may quickly implement a plan. Another woman who feels depressed may know what her problem is but needs to exert more effort developing and trying action plans before she finds one that can be used successfully. The rate and order of these procedures will depend on how much is known about the problem, the complexity of its controlling conditions, the conflict and effort experienced in trying to change, coupled with the person's previous experience with self-change.

The following description of the procedures of self-control may seem more extensive than is necessary. However, our goal is to provide counsellors and other professionals with a comprehensive model that can be used to understand the process more fully and identify more precisely the many problems clients have in self-control. For some examples of comprehensive self-control oriented programs geared to specific problems. The reader is directed to Coates and Thoresen (1977), Danaher and Lichtenstein (in press), Jeffrey and Katz (1977), Miller and Munoz (1976) and Rosen (1976).

Identifying the Problem

Every self-control attempt begins with some identification of a problem. While decision-making and problem-solving approaches have

given attention to this activity (D'Zurilla & Goldfried, 1971; Krumboltz & Baker, 1973), self-control models have largely ignored it. They have generally assumed that we know what our problem is; this is not always true, especially with children (Károlyi, in press). Also, these models have generally ignored the fact that we can construe our problems in many different ways; how we conceptualize what is wrong greatly affects what we try to do about it (Mahoney, 1974).

Step 1. What does the process of problem identification involve? The first step is simply recognizing that a problem exists. While this step may be clearcut for some, it represents a major stumbling block for many troubled persons. The problem exists in teaching self-control to children. For example, a child is not likely to exert conscious effort to control his hyperactive behavior at the dinner table if he doesn't recognize that it is a problem. Others may know a problem exists but are unable to clarify it. For some clients, *learning to control themselves needs to begin here* (Krumboltz & Thoresen, 1976).

Step 2. The next step involves making a conscious *decision* to work on solving the problem. Here we are talking about the commitment to *try* to solve the problem, rather than following through with a solution. Simply identifying the problem requires some commitment to thinking about it, gathering more information and trying to become more aware of its patterns. Commitment has typically been conceptualized as an important *initial* step in the self-control process; however, it is usually considered a *one-time process*, referring to our commitment to following through with the entire self-change effort (Marston & Feldman, 1973; Thoresen & Mahoney, 1974). Commitment, however, is a *continual* problem that warrants attention at many points in the self-control cycle. Even going through the steps of self-control requires commitment; without it the entire self-change effort will fail. By continually assessing commitment, we increase the likelihood of recognizing when it is a problem and we make it more possible to increase it as needed.

Step 3. Identifying the problem also demands that we specify its components as much as possible. This means looking at how we think and feel about a problem as well as learning how the environment currently supports our behavior. Analyzing our definition of the problem involves examination of our *beliefs* about its nature, our *expectations* about our ability to change and what will happen if we do, our *attributions* about its causes and our *evaluations* of our own behavior.

A teenager, for example, may attribute his arguments with his father to something unlikeable

about himself, his innate inability to control his anger or his simply not knowing any alternative ways to behave with his parent. The possibility of reducing the number of arguments will vary greatly depending what he (and his father) believes. Further, if he construes arguments to be the result of his inability to control anger, he might not expect to be able to change; this expectation might then interfere with his developing and following through with an action plan. Or he might not expect his father's behavior to change despite changes he himself might make and, therefore, he would have difficulty committing himself. Finally, how the boy evaluates his relationship with his father will also influence his definition of the problem. One outburst a day may be very upsetting to a boy who prides himself on being easy to get along with. His father, on the other hand, may find their current interaction normal and even rewarding. Assessing beliefs, expectations, attributions and self-evaluations from the beginning can help identify thoughts that are likely to interfere with self-control efforts as well as pinpoint those that may need altering (e.g., Davison, 1969). Sometimes the first step in controlling a behavior is learning to look at it differently.

Step 4. Specifying the components of a problem also involves identifying features of the physical and social environment that currently support it. For instance, if a 12-year-old girl has few friends, part of the problem might be a lack of parental encouragement or modeling of how to make and maintain friends or limited opportunities to meet new people. The more environmental features identified as possibly influential, the more likely they can be altered to support change.

Step 5. The feelings we associate with a problem are also important to pinpoint when specifying problem components. We may feel upset or deprived or lonely or ashamed. But how do we know how we feel? It depends largely on how we think about the situation and our behavior. Feelings and emotions are often the result of our interpretation of a situation plus physiological arousal associated with a problem (Mahoney, 1974). It is useful to know, for example, that when a teenage girl feels depressed, she tends to overeat. A counsellor can help the girl anticipate these affective cues and improve her self-control. On the other hand, this girl may decide that her problem lies in how she interprets situations associated with feeling depressed, e.g., being alone. She may choose to change the personal meaning to her of being alone. Changing her interpretations may ultimately change both her feelings of depression and her overeating. Knowing how we feel and how these feelings influence our behavior gives us another lever with which to set self-control processes in motion.

Final step. Understanding how thoughts, feelings and features of the environment may contribute to a problem requires some observation of behavior. The final step in the problem identification phase, called self-observation, influences and is influenced by the previous steps to give us a better picture of what the problem is. As we observe our behavior in a more systematic fashion and begin to specify certain features of the problem, our commitment to trying to solve it will be affected. It may be necessary to return to the problem identification phase if the nature of our problem changes with increased awareness of its characteristics.

*Assessing and Building Commitment:
A Decision Plus Some Action*

How does commitment function in this model? It seems useful to conceptualize it as a *decision* to change plus some *action* taken to help implement that decision. This definition emphasizes that we can *do* things to improve our ability to follow through with a desired change. Thus, an adolescent girl might demonstrate her commitment to losing weight by making a *decision* to really try this time plus *doing* something to help her follow through with the decision (e.g., enlisting a friend's support or enrolling in a weight control class). Simply deciding to change a behavior is not sufficient evidence of being committed. Commitment requires some kind of action.

Defining commitment in terms of action highlights the fact that it takes self-control to develop self-control (Thoresen & Mahoney, 1974). That is, the actions that we take to commit ourselves to change are self-controlling actions. They are designed to help us engage in processes and use procedures that will ultimately bring about and maintain desired change. For example, the adolescent trying to lose weight uses some self-control in getting herself to sign up for the weight class. The difference between commitment actions and other self-controlling behaviors lies in their purpose. Commitment is aimed at restructuring our mental and physical environments to support our decision to change. Such actions are necessary steps in promoting change, but they may not be sufficient.

Assessing commitment. The commitment phase has two steps, assessment and development. When beginning a self-control effort, it is important to assess two things: (1) How willing are we to keep working on the problem? and (2) What actions are we taking to support our decision to change? As we have already mentioned, this assessment is closely bound with our conceptualization of the problem. Some ways of looking at a problem make it easier to commit ourselves than others. For example, it may be easier to commit yourself to making new friends if you believe the problem

lies in not knowing how to approach people and start conversations rather than thinking you are an unlikeable and uninteresting person. The function of the assessment phase is to identify the thoughts, feelings, social actions and features of the social and physical environment that makes it difficult to begin and to continue working on the problem.

Building commitment. How can commitment be developed? One way is to carry out a "mini" self-control effort. For example, we may try to change how we conceptualize our problem and what we say to ourselves about the chances of really being able to change. This may require that we observe and record certain behaviors. If a person, for example, believes that he "never" starts conversations and "always" feels depressed, self-observing may help him identify those times when he does start a conversation and when he does not feel depressed. Such data can help change his expectations and self-evaluations and gradually make it easier for him to commit himself — that is, to decide to change and to create conditions that make new behavior more likely.

Because commitment may wane at any point in a self-control process, it requires continual attention — a kind of eternal vigilance. *What* we need to be committed to will change over time as will *how* we maintain commitment. Essentially, commitment procedures build or provide the energy necessary to engage in the other steps of the self-control model.

Becoming Aware of Behavior Patterns

The awareness phase involves three activities: self-observation, refinement of the problem definition and decision-making about what to work on first. To begin, it is helpful to observe and record our behavior carefully. This type of observation is more specific than that used to identify the problem initially. Here we *systematically* record how often the behavior happens as well as when and where it occurs. If our goal is to stop arguing with family members, for example, we might begin by noticing and recording *where* and *when* each argument occurred, *who* was involved, *what* it was about and *how intense* it was. Specific observation of this sort helps develop a more detailed awareness: We have a clearer idea of the thoughts, feelings, actions, places, times, and people that may be triggering and encouraging the behavior we want to change. Observation of the places and times family arguments occur might uncover the fact that spending the entire evening together on nights when one person has had a "bad" day is too stressful and seems inevitably to trigger the problem behavior. Identifying this relationship suggests a place to begin change.

What we think about and how we feel *before*,

during, and after a problem behavior has occurred is also important to observe. Thought mediates much of what we do, and the conversations we have with ourselves (self-talk) serve as powerful cues and consequences for behavior in a very ongoing and immediate way. Similarly, the meaning we assign to particular events, that is, how we interpret them as well as what physiological reactions we experience are also important to note.

In sum, self-observation can give us a new slant on the problem. Putting our behavior under the observing microscope often turns up relationships that we never knew existed. In the long run, this fine-tuned analysis allows us to make more informed decisions about what we do want to change, what we might work on first, and how we might begin.

Self-observation may precipitate a commitment problem since getting more detailed information may highlight the complexity of our behavior. This may lead us to feel discouraged and unable to manage it. In this case, it may be appropriate to recycle to the commitment phase and deal with these thoughts and feelings directly so that our self-control effort will not be sabotaged. On the other hand, self-observation can increase a person's commitment if the problem is seen as a solvable puzzle consisting of parts and pieces which can be pieced together.

Developing an Action Plan

Developing a self-change strategy involves: (1) specifying the particular problem we want to work on; (2) observing behavior to become more aware of its controlling conditions (including cognitive conditions); (3) generating specific tactics we might use to help change the behavior; (4) evaluating possible tactics in terms of their short and long-term consequences, the effort and attention required to put them into practice and the likelihood of our following through with them; and, finally, (5) deciding what tactic to try.

While the action plan phase builds on traditional problem-solving and decision-making models, there are differences which deserve comment. First, the types of variables that enter into the models tend to differ. Self-control planning involves greater consideration of specific thoughts and feelings that influence behavior. The goal of an action plan may even be altering thoughts or feelings. For example, we may develop a plan to stop feeling embarrassed when meeting new people in addition to structuring ways to act more assertively. The content of a self-control plan may also be cognitive. A child might develop a series of things to say to himself when he feels distracted during school or angry on the playground.

Action plans need to be relatively easy to implement — even if the plan is not the most effective way to change the behavior. Decision-making and problem-solving models only peripherally consider whether the final plan is practical and likely to be carried out. Self-control plans explicitly consider commitment because the whole process is geared toward *doing* something now.

In sum, developing an action plan depends on other self-control skills and may require recycling to other phases before a workable plan emerges. The creation of a plan of action is but one step toward self-control, not the sole nor even the most crucial part of the process.

Trying Out the Plan

Implementing an action plan is really the heart of the self-control process. It is at this point that the conflict associated with immediate vs. delayed consequences is most clearly felt.

How do we go about trying out a plan? If some of the conditions possibly controlling our behavior have been identified, if we have worked to keep our commitment high, and if we have developed an action plan that seems practical, then the execution phase involves setting all these procedures into motion at once. We continue to assess our commitment and improve our chances to keep working to maintain thoughts and physical/social environments which are supportive. At the same time, we begin the plan itself, armed with a reserve of encouraging thoughts to counter the temptation and conflict we are likely to experience in trying to control our behavior (see B in Figure 1).

Most people experience a mental struggle, especially when first trying to change. Successful execution of a plan may depend on how prepared we are to engage in this struggle. It may be that once we have learned to manage some behaviors, we develop an array of supportive thoughts that can be used in any execution phase. Initially, however, we may need to include positive self-instruction as part of the action plan. As we try out the plan, we evaluate our ongoing efforts and these evaluations feed into commitment, making it easier (or more difficult) to continue implementation.

To illustrate, consider a young girl who wants to study at least one hour each day after school. Let us say she has developed an action plan that includes changing her thoughts, feelings, and environment; further, each change seems relatively easy for her to do. To put her plan into action, the girl needs to maintain her commitment above a threshold level. To do so, she may contract (written or oral agreement) with her mother to help her adhere to the plan or she may alter it so

that the plan seems manageable. She also needs to build a reservoir of thoughts to employ when she feels conflict about studying vs. reading a good book, watching TV or going to a friend's house. She may need to focus, for example, on how much she is getting done or how good she will feel when she is finished or how important it is to her to learn to discipline herself. Learning to use these thoughts to counter temptation effectively may require considerable practice. While she executes the plan, she will also be evaluating how she is doing, and these self-evaluations will influence her willingness to continue expending effort and attention. The more aware she becomes of her self-evaluation, the better her chances are of altering any self-defeating thoughts before they undermine her commitment and defeat her self-controlling efforts.

Getting oneself to try a plan (even if the plan itself is not successful) is dependent on the proper functioning of other self-control phases. Commitment may be low, the plan may be too difficult, or we may be ill-equipped to deal with the mental conflict involved in being in the problem situation. Further, we may need to try out a number of plans before we find one that is both practical and effective.

Evaluating How the Plan Is Working

Self-evaluation goes on continually — when defining the problem, when assessing and trying to build commitment, when self-observing and when developing and trying out plans. To some extent, we all evaluate how well we are doing as we do things. In fact, our self-evaluative reactions appear to be the most important factor in maintaining both commitment and behavior change (Bandura, 1977b). They seem to be one of the cognitive processes that mediate all parts of the self-change process (see Figure 3).

How does evaluation work? All evaluation compares performance to a standard. These standards are learned over time both directly and vicariously from parents, peers, and the culture at large (Kanfer, 1976; Kohlberg, 1971; Loevinger, 1976). Teaching self-control to children often requires teaching of standards as well as methods to manage behavior.

The first step in the evaluation phase is becoming aware of the standards we do hold. What do we expect from our first trial with a new plan? What should we be able to do? (Note 4). Next, we need to make a judgment about whether our standards are realistic and useful. Standards themselves can be the object of self-change attempts — especially if they are too high and constantly trigger self-defeating thoughts. This identification and evaluation of standards operates continually as part of the commitment

phase as well as when evaluating whether a plan is working (Mahoney & Mahoney, 1975).

Once we have examined and perhaps modified our criteria, the next step is to compare our progress to our standards. Based on this match, we may reward or punish ourselves with positive or negative thoughts, reactions from other people and/or tangible events or things. Further, we make some decision about what to do next. If the plan is operating effectively, we may choose simply to continue what we have been doing. If we want to speed up our progress or feel that another facet of the problem needs attention, we may decide to recycle to another phase in the self-control process. If our performance does not meet our expectations, we may first check to see if our standards seem reasonable and then return to the problem identification phase to diagnose what is wrong.

In sum, evaluation is a complex activity that occurs both as we engage in other self-control procedures and, more formally, after we have tried out a plan of action.

SOME CONCLUDING COMMENTS

The first step in solving many problems is learning to think differently about them. Conceptualizing self-control as a complex set of *teachable* and *learnable* skills rather than as a stable personality trait or a fortunate attribute makes it more possible to think about doing specific things to develop it. By identifying the possible procedures and processes involved in taking action which requires sustained effort in the face of conflict and by focusing on the ways certain thoughts, feelings, actions and physical/social environments can influence behavior, the efforts of interested counsellors and researchers can hopefully be facilitated.

Offering a broader conceptual model is only the beginning, however. Needed are well-controlled empirical studies using a variety of research *settings* (e.g., laboratory, family home settings), *measures* (e.g., self-reports, external observations) and *designs* (e.g., experimental cases, group factorial studies) to help us better understand the basic underlying processes and mechanisms involved in self-control (Bandura, 1977a). Considerable work is called for at the methodological level, such as developing a variety of valid dependent measures, and conducting generalizability studies to examine various sources of variability and unreliability (Coates & Thoresen, in press). We also need to explore ways to teach self-control skills, especially with children, so that such skills can be used across a variety of problems and situations. Such work will require the focused attention and sustained effort of many helping professionals. Hopefully, those in

positions of professional leadership and responsibility will help arrange environments to encourage those activities.

Reference Notes

- Note 1. For those interested in theoretical models of self-control from a behavioral viewpoint, see Bandura (1977b); Kanfer (1976); Kanfer and Karoly (1972); Karoly (in press); Mahoney and Arnkoff (in press); Mahoney and Thoresen (1974); Thoresen and Coates (1976); Thoresen and Mahoney (1974).
- Note 2. This theoretical continuum of self-control to self-regulation, highlighting differing amounts of conscious effort and conflict, closely parallels several cognitive theories of attention (e.g., Broadbent, 1977; Kahneman, 1973). Three interacting neural systems, for example, have been proposed by Pribram and McGinness (1975) — arousal, activation and effort — to explain the differences between “automatic” behavior (requiring little conscious awareness and mental effort) and actions requiring sustained focused attention. LeBerge and Samuels (1974) in discussing reading behavior describe automatic actions as the gradual elimination of focused attention in processing information.
- Note 3. In making this distinction between three phases of self-change (self-control, self-management and self-regulation) we realize that at present the terms are used interchangeably. It may be more useful, however, to make a discrimination based on the concepts of effort, conflict and choice relative to change over time.
- Note 4. Bandura (in press) has recently suggested that the success of all therapies hinges upon “efficacy expectations”, changing the client's beliefs that he or she can perform certain actions (e.g., the belief that I can reduce distracting thoughts or I can monitor my angry actions) which, in turn, will result in personally beneficial outcomes (e.g., I will eliminate my chronic depression or I will learn to control my anger). See Thoresen and Coates (in press) on efficacy as a new area for the behavior therapies.

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