The Role of the Self in Behavioral Change

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Abstract

Behavioral change is a complex and difficult process that is commonly marked by unactualized intentions, false starts and relapse. Building on the cognitive approach to the study of the self, this paper presents the argument that resistance to change is an automatic, natural and expected consequence of the information processing and affect regulation processes that comprise the self-concept. Behavioral change is conceptualized as a three phase process and the structural and functional properties of the self-schemas, possible selves and total self-concept that impede progress at each phase are explored. Finally, the research and clinical implications of positioning the self-concept at the crux of behavioral change are discussed.

The Role of the Self in Behavioral Change

American culture is rooted in change. Americans believe in change, value change, and seek it out in all aspects of life. Nowhere is this more apparent than in their desire for personal change. We believe in it and we strive for it. Stories of successful change are so fascinating that even the non-tabloid newspapers devote considerable space to them. Headlines read: "Former felon abandons life of crime to run an adolescent drug-prevention program;" "Captain of industry describes poverty-stricken early days;" "Grandmother of five begins second career as a novelist;" "Basketball star leaves drugs and finds God;" "Woman describes new low-impact step aerobics as route to fitness and happiness." Although change is our birthright and a seemingly common experience, it does not come easily. For every success story, there are hundreds of failures despite boundless good intentions. Even those who star in their own personal change stories cannot always hold onto the change. One of the most well-publicized recent examples of change undone is talk show host Oprah Winfrey. She lost 67 pounds, modeled a new wardrobe, and claimed she couldn't imagine how she had functioned with all that extra weight. Less than two years later, the weight was back and Winfrey vowed publicly never to diet again. She explained that she must accept herself as a person with a weight problem, and has to understand what eating means to who she is (1991).

In this paper, we will focus on the role of the self in behavioral change and explore how the self-concept is implicated in resistance to change. Based on a cognitive approach to the self-concept, we will argue that individuals' established conceptions of the self are the very crux of why people don't change and, in other cases, why they do. This approach differs from other, more traditional formulations of the change process. For example, from a self-concept view, resistance to therapeutic change does not reflect the workings of a set of oppositional forces designed to thwart the change agent and protect the true self. Instead, resistance to change is conceptualized as an automatic and natural consequence of

the information-processing and affect-regulation processes that comprise the self-system. The passive, shy male who sits silently in his psychotherapy session, the alcoholic who repeatedly relapses despite her stated commitment to sobriety, or the hypertensive who continually forgets to take his prescribed medication may not be actively "resisting" efforts to effect change, but are behaving in concert with established self-conceptions.

In exploring the role of the self-concept in resistance to change, we will: 1) provide a brief overview of the cognitive approach to the self-concept; 2) focus on specific structural and functional properties of the self-concept that influence the individual's ability to change; and 3) explore the clinical and research implications of this approach to resistance to change.

## The Cognitive Approach to the Self-Concept

The cognitive approach to the self-concept advocated by cognitive social psychologists over the last two decades has raised the status of the self-concept from an overused and poorly understood entity to that of a legitimate, perhaps vitally important construct, central to the understanding of human behavior. This current approach can be distinguished from its historical predecessors by its view that the self-concept is at once 1) a complex, multifaceted structure; 2) an active memory structure that functions to mediate and regulate behavior; and 3) a dynamic structure that is both highly stable and highly malleable (Markus & Wurf, 1987). These three properties of the self-concept are central to understanding how the self-concept functions to direct and regulate behavior, and as such they are at the heart of our explanation of the process of change.

## A Multifaceted Structure

Rather than viewing the self-concept as a single, average view of the self (i.e., global self-esteem) as many of the early empiricists did, the cognitive approach suggests that the self-concept is a complex, multifaceted structure that consists of a collection of cognitive-affective structures (Greenwald & Pratkanis, 1984; Markus & Wurf, 1987).

These structures have been characterized in a variety of ways. They have been called self-theories (Epstein, 1973), prototypes (Kihlstrom & Cantor, 1984), and subselves (Martindale, 1980). From our view, the self-concept can be productively viewed as a system of schemas about the self (Cantor, 1990; Markus, 1977; Markus & Sentis, 1982).

Self-schemas are generalizations about the self in specific behavioral domains (Markus, 1977). They are organizations of knowledge that are established as the result of categorizations and evaluations of the self made by oneself, and by others. Individuals' schematic domains are the ones in which they are highly invested--the ones in which they have devoted time and energy. Self-schemas can reflect and be developed around any aspect of behavior including personality attributes, social roles, and areas of particular interest and skill. One person may think of herself as an entrepreneur, an extrovert, and a dedicated friend, while another may think of herself as an Hispanic woman, a gourmet cook, a batik artist, and highly temperamental. Such categorizations of self differ in a great many respects, of course, but they are alike in that these schematic domains are those that the individual claims as self-definitional and that become the basis of one's self-esteem (Campbell, 1990; Pelham, 1995).

The valued and salient features of the self are likely to be represented in memory as dense, highly elaborated, and well-organized knowledge structures (Kihlstrom et. al., 1988; Markus, Smith, & Moreland, 1985; Stein & Markus, 1990). The person who has a self-schema for body weight has more than a general notion about her body size. Instead she has articulated in memory a rich and often highly detailed collection of weight related self-conceptions--"before my waist grew 1/2 inch, I wore a size 7 dress, I can't resist chocolate, I've always hated being bigger than my sister."

The conceptions organized within a self-schema vary not only in their content, but also in their tense. Some self-conceptions reflect what one was in the past, while others focus on the self in the present. When a particular domain becomes self-definitional, it

makes a claim on the individual's potential as well, and a diverse set of self-conceptions that reflect the person's ideas about the self in the future are also developed. These future-oriented self-conceptions or possible selves represent the self "I might become, hope to become, or am afraid of becoming in the future" (Markus & Nurius, 1986). Possible selves are viewed as the highly personalized, cognitive manifestations of the person's goals, desires, and fears, and as such they function as motivators and regulators of behavior (Ruvolo & Markus, 1992). For the person with a body weight self-schema, these possible selves might take the form of "I'll look great after I loose 30 pounds," "I'll never be thin," "If this keeps up, I'll have to buy my clothes at the special store for large and tall people."

**An Active Structure**

One important implication of conceptualizing the self-concept as a collection of cognitive schemas is that the self-concept becomes something more than a passive storage site for self-relevant information (Markus, 1977). Like other cognitive schemas, it can be seen as an active, functional structure that mediates and regulates behavior.

Significant empirical attention has been given to documenting the cognitive, affective, and behavioral consequences of the self-concept. The findings of a diverse collection of studies have convincingly demonstrated the powerful role of the self-concept in a variety of intrapersonal and interpersonal processes. The self is importantly implicated in the 1) processing of self-relevant information; 2) regulating behavior and mood; and in 3) structuring interpersonal interactions (for extensive reviews of this work, see Greenwald & Pratkanis, 1984; Kihlstrom & Cantor, 1984; Markus & Wurf, 1987).

The information processing consequences were the first functional properties of the self-concept to be empirically investigated and they continue to be a focus of considerable attention (see Greenwald & Banaji, 1989; Kihlstrom, et. al., 1988 for examples). Using a variety of experimental paradigms derived from information processing theory, researchers have demonstrated that the self-concept exerts a powerful influence over all aspects of the

information processing sequence including the direction of attention (Bargh, 1982), the speed and efficiency of processing (Kuiper & Rogers, 1979; Markus, 1977; Markus, Hamill, & Sentis, 1987), and the encoding and recall of social information (Bower & Gilligan, 1979; Rogers, Kuiper, & Kirker, 1977). The person with a self-schema for shyness for example, will have great cognitive and affective involvement with this domain, display particular sensitivity to the domain, enhanced recall of relevant information, and produce more shyness-related associations and inferences. In contrast to people without a self-schema for their shyness, those schematic in the domain, will be more compelled to find the page of the Reader's Digest that describes fool-proof strategies for becoming a self-assertive woman and will immediately notice at the cocktail party that they are the only ones not engaged in a lively conversation.

The self-knowledge contained within an individual's self-schema and related possible selves is crucial in regulating affect or controlling one's emotional state. Such knowledge is used to defend against the negative emotional states that occur when one's sense of self is challenged or threatened, and it is used to promote and enhance the self-concept. Regulating affect typically involves defending one's self against negative emotional states by maintaining consistency with previous views of the self, and by enhancing and promoting the self whenever possible. For example, if an individual receives a reprimand from a family member, perhaps because of perceived self-centeredness and lack of concern, he may engage in what Swann and his colleagues have called "self-verification" (Swann, 1983; Swann & Hill, 1982). This method of restoring self-esteem involves seeking out others who can confirm the individual's own view of his behavior. Another strategy for handling a challenge to the self in an important domain, is to bolster the self in another self-defining domain (e.g., "I may have problems at home, but at least I do my job well"). This process has been termed "compensatory self-inflation" by

Greenberg and Pyszczynski (1985), or self-affirmation by Steele (Steele, 1988; Steele & Liu, 1983).

The self-concept has also been implicated in the motivation and regulation of behavior (Higgins, 1996; Markus & Wurf, 1987). A central thesis underlying this research is that images of the self in the future function as the cognitive framework underlying goal-directed behavior (Cantor & Zirkel, 1990). Affective states associated with the future oriented self-conceptions function to motivate or energize goal-directed behavior (Cantor, Norem, Niedenthal, Langston, & Brower, 1987; Stein, 1997), and the highly specific images of the self at various stages in pursuit of the desired goal shape and organize the enacted behaviors (Inglehart, Markus, & Brown, 1989). The person who imagines herself fitting into her now too tight pants, donning a bikini next summer, and being admired by her friends for her remarkable dieting success will be more motivated to sign up for the weight reduction program. In contrast to the person who can also see herself "fat" in the future, the person with a rich and detailed collection of "thin" possible selves will have more detailed plans and strategies for achieving her desired goals. Such people may not always be successful in changing their weight, but unless weight or weight control takes on enduring self-relevance, they are almost certain to fail in the long run.

Finally, the self-concept also plays an important role in organizing and directing interpersonal interactions. Under certain conditions self-schemas function as interpretative frameworks that influence the perception, organization, and recollection of the behaviors of others (Markus, Smith, & Moreland, 1985). In addition, established conceptions of the self influence our choice of interactional partners (Swann, 1983), the type of social feedback we prefer (Swann & Read, 1981a), and may even shape the behavioral responses of others in our social environment (Snyder, 1979; Swann & Read, 1981a).

## A Dynamic Structure

From the cognitive perspective, the self-concept is thought to be highly stable and consistent over time, and also highly changeable and responsive to the current social context (Markus & Wurf, 1987). The same individual who consistently, over a period of several years, endorses a set of personality attributes as self-descriptive can demonstrate remarkable fluctuations in her self view over the period of a few days. This apparently conflicting description of the self experience reflects the fact that while the self-concept is a stable collection of self-conceptions, only a portion of those conceptions are available in active memory at a given point in time (Markus & Nurius, 1986). The currently active collection of self-conceptions -- the working self-concept -- is a particular configuration of self-knowledge recruited from the self-concept as a whole. While the centrally self-defining conceptions of the self (i.e., the self-schemas) remain stably active in memory, the activation of other less developed images of the self changes in response to the ongoing social events (Markus & Kunda, 1986). As a consequence, even though the self-concept itself is a stable structure that consists of a relatively fixed collection of self-conceptions, the individual may well experience temporary shifts and changes in the self-view.

According to the cognitive approach, the self-concept is a large, complex, dynamic, yet stable memory structure that exerts a powerful and persuasive influence not only over the processing of social information but also in motivating and directing behavior (Cantor, 1990). Furthermore, these intrinsic properties of the self-concept exert their influence consistently, automatically, and often outside of the individual's conscious awareness (Lewicki, 1986). Based on such a view, we propose that the self-concept plays a pivotal role in the process of behavioral change. Permanent change seems to require that the desired possible self (the thinner self, the alcohol-free self, the non-aggressive self) and the means for achieving them become self-definitional . That is, the new conception must be transformed from a vague, fleeting idea about oneself to a clear, highly detailed, stably

activated and highly valued aspect of the self.  Furthermore, in most cases, the desired possible selves must replace established self-schemas, positive or negative, that are currently mediating or regulating the individual's behavior.  Securing a command position for a particular desired conception of self is a demanding project, typically requiring tremendous effort from individuals themselves, as well as those in their immediate social environment.

The effort to make a new and desired self-conception become self-definitional often fails, and for a diversity of reasons.  Categorizing and analyzing these reasons is beyond the scope of this project, however.  Instead, we seek to outline the self-system's instrumental role in behavioral change.  We will argue that conceptions of the self in the past, present, and future function, at times, to direct behavior toward the desired goal, and, at other times, to block or impede change.  In the next section, we will begin our exploration of the process of change by examining how the structural and functional properties of the self-concept can impede or block behavioral change.

**The Self-Concept and Resistance to Change**

Consideration of the structural and functional properties of the self-concept suggests an array of mechanisms that can impede efforts toward behavioral change. Determining exactly which of the mechanisms may be operating at a given point is a difficult problem, but one that is central to developing a concise model of the role of the self-structure in resistance to change.  We will begin this section by briefly reviewing the characteristics of the change process that we believe play an important role in determining the specific configuration of mechanisms underlying resistance to change at any given point in time.

Any attempt to explain why people don't change must begin by acknowledging the complexity of behavioral change itself (Bandura, 1986; Cantor & Kihlstrom, 1987; Meichenbaum & Turk, 1987; Prochaska, DiClemente & Norcross, 1992).  Change is not

an unidimensional phenomenon. Rather as indicated in Figure 1, behavioral change is probably best conceptualized as a complex process that consists of a series of phases including: 1) a recognition of the need to change; 2) an initiation of behaviors directed toward the desired outcome; and 3) maintenance of the desired behaviors over time and across varying social situations.

A failure or a breakdown can occur at any point in the change process. Consider the example of three people who fail to lose weight. The first person actively seeks weight loss treatment but is unable to sustain the prescribed life style changes after six successful months. The second overweight individual complains intermittently over a two year period about being fat and repeatedly plans to start dieting "tomorrow," but never actually engages in a weight loss program. The third person flees treatment after being told by his internist that he must loose weight and begin a regular exercise program to avoid the risk of heart disease in the future. In each case the person is unable to achieve the desired behavioral change, but the point of breakdown, and perhaps the underlying mechanisms, are distinctively different.

In addition to recognizing the need to focus on a specific phase of the change process when considering the mechanisms underlying resistance to change, it is necessary to take into account the preexisting relationship between the behavioral domain targeted for change and the individual's self-definition. Two types of relationships are possible. In some cases a rich, highly detailed and stably accessible self-schema may already exist in the domain. The individual may consider the domain central to who she is and may consistently think about herself in that way. However, the self-schema may be dysfunctional in that it does not accurately reflect the individual's knowledge, skills and behaviors in the domain, and thus a need for change may arise. The near straight-A student at a prestigious university may consider competence as centrally important to who she is but may have developed for any number of reasons, a biased view of the self as

"academically incompetent." Similarly, the alcohol-addicted businessman may readily acknowledge the centrality of his drinking to his self-definition, but may construct himself, unrealistically given his reference groups, as a "party animal" or "as a social drinker."

In other cases, individuals may simply not consider the targeted behavioral domain central to their self-definitions. The objectively obese woman may acknowledge her obesity but may fail to assign any importance to that characteristic of the self. When questioned directly she acknowledges her obesity but states that her body weight is of little concern to her. In this case the individual may have only a rudimentary knowledge structure of the self in the domain, one that lacks full elaboration and durable salience (Markus, Hamill, & Sentis, 1987). Although these differences in the self-concept are subtle, it is likely that they play an important role in determining the specific constellation of mechanisms operating within any one individual to disrupt the change process. In the discussion that follows we will acknowledge the importance of both the phase of the change process, and the nature of the preexisting self-concept, by considering the interactive effects of these factors on the process of behavioral change.

## The Recognition Phase

### Information Processing Consequences of Self-Schemas

The information processing consequences of the self-schemas are one subtle but powerful way in which the self-concept exerts influence over the process of change. Self-schemas direct attention, facilitate encoding, aid recall, and function as a framework for self-relevant judgments, inferences, and predictions (Markus & Zajonc, 1985). Aspects of the environment that are relevant to a particular self-schema grow ever more accessible and compelling, and self-representations with respect to these features -- including verbal, imaginal, and somatic representations--become more elaborated and complex. Patterns of information processing begin to take on characteristics of expert information processing.

Properties that previously had to be deliberately inferred (e.g., is this a place where one can drink? Will this make one fat?) can now be immediately perceived.

As a result of their information processing consequences, self-schemas may be influential in the initial recognition of the dysfunctional behavioral patterns (Cantor & Kihlstrom, 1987). Yet the same information processing consequences that may facilitate change, can under certain conditions, function to block or interfere with the process of change.

Presence of a schema. The selective attention associated with the self-schema is one important way in which the self-structure can interfere with the recognition stage of the change process. Studies have consistently shown that people direct their attention toward information that confirms their established view of the self while tending to ignore or avoid disconfirming feedback (Lewicki, 1984; Swann & Read, 1981a). This means that people who have an unrealistic or dysfunctional view of themselves in a domain may have only limited ability to utilize the social feedback that could focus attention on their unrealistic self-conceptions and the associated behaviors. The alcohol-addicted individual who views himself as a social drinker will tend to ignore, overlook, or simply not hear, the comments of his family and friends that point to his increased consumption and his concurrent difficulties fulfilling responsibilities. Instead, he may attend to whatever evidence he can find to convince himself that his behavior remains unchanged. In this case, the established self-schema functions to support and perpetuate itself and is likely to resist interpretations or framings that might bring the dysfunctional behaviors into conscious awareness.

The same attentional biases that prevent utilization of social feedback can also help to explain situations in which people are unable to utilize internal feedback to recognize dysfunctional behavior and the need for change. An unrealistic self-schema, for example, in the domain of health can influence the person's ability to attend to important internal feedback, such as physical symptoms. This, in conjunction with other common self-

serving biases such as the propensity for people to explain their own behaviors in terms of situational factors rather than internal factors (Jones & Nisbett, 1971), may allow the individual to attribute the discomforting symptoms to external sources rather than recognizing the symptom as potentially important feedback about one's own behaviors. The heavy smoker with a "healthy" self-schema may, at least initially, overlook momentary episodes of shortness of breath, and when pressed to attend to them by others in the social environment, may attribute the episodes to the weather (i.e., "it's so humid you can't breath"), pollution (i.e., "the pollution is unbelievable around here, you can't even breath"), or the pitch of the stairs just climbed. In this case the established "healthy" self-schema functions to direct attention away from vitally important visceral feedback and thereby facilitates the utilization of a variety of self-serving biases (Greenwald, 1980).

The encoding and recall biases associated with the self-schemas are also important in understanding the role of the self in disrupting the process of change. A substantial body of research suggests that information consistent with the established self-view is more easily encoded and subsequently recalled than inconsistent information (Greenwald & Pratkanis, 1984; Markus & Wurf, 1987). The self-reference effect, as it is commonly called, is explained by the amount of cognitive elaboration that self-relevant material receives at the time of encoding (Kihlstrom & Cantor, 1984). A stimulus judged relevant to the self is encoded within the existing highly elaborated self-structure. Consequently, the stimulus will have many linkages in memory that will function as retrieval cues and, ultimately, will enhance recall (see also Higgins & Bargh, 1987).

The self-reference effect can systematically disrupt the change process. Identification of the need to change, and the establishment of a commitment to do so, is dependent on the person's ability to recognize consistencies or trends in one's behavior over time. From this perspective, the utility of social feedback is in focusing attention on a dysfunctional behavior and in initiating an evaluation of the self in that domain. But,

efforts to reflect on one's behaviors in a domain will naturally lead to the recollection of schema <u>consistent</u> incidents. Such selective recall can easily undermine the validity of the social feedback, and reaffirm one's belief in the accuracy of the established self-view (e.g., I'm okay, there were at least three days that I didn't drink last week, or I couldn't be overeating, I didn't eat anything at all before dinner today).

Other cognitive biases associated with the self-structure can also disrupt the process of self-reflection (Cantor & Kihlstrom, 1987). For example, Greenwald (1980) has coined the term beneffectance to refer to people's propensity to recall their success over their failures and to see themselves as the cause of positive outcomes and others as the cause of negative outcomes. Although these cognitive biases function adaptively to preserve self-esteem and the established self-view, at times when a re-appraisal of the self is required, these same self-serving biases may be considered maladaptive blocks to effective behavioral change. The overweight individual who selectively recalls the diet conscious lunches of salad greens and skim milk, while failing to remember the frequent mid-afternoon snacks of cookies and candy may see little need for altering dietary behaviors. Similarly, the alcohol-addicted individual who unrealistically attributes his recent job loss to his boss' incompetence, rather than to his own diminished performance will be able to avoid the recognition of intensification of his drinking behaviors over the last year.

In addition to distortions of contemporary self-related events, Cohler (1982) has suggested that people reconstruct earlier life experiences to be consistent with their current self-view. On the basis of a fairly large collection of empirical findings, he suggests that there are particular points during the life cycle (i.e., middle childhood, early adulthood and middle adulthood) when people are most likely to revise their autobiographical histories to maintain a sense of self-consistency and coherence in the midst of life change. This ability to rewrite one's personal history may serve as a less painful alternative to the honest self-reflection that often precedes behavioral change. Rather than acknowledging the enduring

and profound impact of a self-destructive behavior such as alcohol addiction on one's life history, the individual may reconstruct the past as relatively positive and satisfying (e.g., remembering one's early parenting years as warm family times, while ignoring the fighting and the emotional pain caused by the drunken episodes) and, thereby, diminish the need for change.

Absence of a schema. In the previous section, we have discussed instances where individuals do have a representation of the self in the focal behavioral domain, i.e., eating or drinking, but where the self-schema is dysfunctional or unrealistic in the sense of being at odds with the representations that others have of them. In other cases, individuals may lack any coherent organization of self-knowledge in the focal domain. And the lack of a self-schema in a domain of self-knowledge can also interfere with the individual's ability to recognize behavioral trends and consistencies. Since the self-schema functions as an interpretative framework for self-evaluative judgments, inferences, and predictions, the absence of an elaborated schema in the domain means that there is no standard available for the comparison process. The individual who views the self as a heavy drinker will have a framework for judging current behaviors relative to past behaviors (i.e., I used to drink only a few drinks before dinner, now I seem to continue drinking throughout the evening), for comparing the current self with one's ideal (I'm out at the bars in a stupor, when I should be with my son at his Little League game), and for making inferences and predictions about the self in the future (i.e., when I go to the office Christmas party, I'll have a hard time resisting the alcohol). In contrast, the heavy drinker who fails to include this dimension within his self-definition will lack the interpretative framework necessary to recognize consistencies in his behaviors over time (Markus, 1977; Markus, Hamill, & Sentis, 1987) and for recognizing discrepancies between what one currently is, used to be, wants, or should or ought to be in the future (Higgins, 1987).

The idea that people can fail to categorize themselves in ways that seem absolutely obvious to observers is widely recognized by those involved in promoting therapeutic change (Meichenbaum & Turk, 1987). Most clinical practitioners can recall cases in which an obvious problematic physical characteristic (i.e., obesity) or dysfunctional behavior (i.e., alcohol abuse or heavy smoking) was not experienced by the individual as an important self-defining feature. The findings of a study completed by Markus and her colleagues (Markus, Hamill, & Sentis, 1987) lend empirical support to this clinical observation. In a study designed to demonstrate that people's self-conceptions focus on distinctly different features of their behavior, marked differences were found among people in the structure and function of their body-weight self-schemas. Even within the objectively overweight subjects included in their sample, variability was found in the elaboration of the body-weight self-schema. Some objectively overweight subjects had only a very general, unelaborated schema for body-weight while others had a much more fully elaborated or dense schema in the domain. Furthermore, these differences in elaboration of the body-weight self-schema were related to important processing differences including, differences in the consistency of body-weight self-discriminations, and differences in judgments regarding the relevance of a variety of weight relevant stimuli.

**Organizational Properties of the Self-Schema**

How information about the self is organized within the self-schema also plays a role in shaping the individual's response to challenging social feedback and, therefore, may be important in the understanding of individual differences in the recognition phase of behavioral change. Stein (1994) has shown that complexity of the self-schema mediates the attentional biases typically associated with self-schemas and influences the person's ability to attend to and utilize feedback that challenges the established view of the self.

The concept of complexity of a cognitive structure was derived from Werner's developmental theory and Kelly's theory of personal constructs (Bieri, 1955; Burleson,

1987; Crockett, 1965). It is based on the assumption that people represent objects in memory as systems of dimensions or constructs. Although the original conceptualization of complexity focused both on the number of constructs within the cognition and the extent to which the constructs were hierarchically organized (for example see Crockett, 1965), recent definitions focus exclusively on the quantity of information (Vannoy, 1965). Complexity is generally defined as the number of distinct or independent attributes included in the cognitive structure (Bieri, 1955; Linville, 1987; 1985; O'Keefe & Sypher, 1981; Scott, Osgood & Peterson, 1979). Individuals with high complexity of the self-schema have many attributes included in the self-schema and those attributes are distinct and separate from each other. Whereas, individuals with low complexity of the self-schema have relatively fewer attributes articulated within the self-schema and those attributes tend to be more interdependent such that they covary.

In a study designed to examine the effects of self-schema complexity on the utilization of challenging social feedback two groups of subjects, those with high complexity of the student self-schema and those with low complexity of the student self-schema, were given disconfirming feedback about their performance as a student and their responses to the feedback were monitored. During the first of two experimental sessions, a card-sorting task developed Zajonc (1960) was used to identify the high and low complexity groups. For this task subjects were first asked to generate all the self-descriptors important to how they think about themselves as a student and then they were asked to identify the dependencies among their self-descriptors. In addition to the self-complexity measure, baseline levels of self-evaluation in the student domain and the response latency times for those judgments were measured during the first session. At a second session approximately two weeks later, subjects completed an intelligence test and were given either positive (confirming) or negative (disconfirming) bogus feedback about their performance. The self-evaluation judgments and the response latency times for those

judgments were measured again after subjects received the performance feedback. For this study, changes between time 1 and time 2 self-evaluation scores and response latency times were used as indicators of whether the disconfirming feedback was considered and used to update or revise the established self-view.

The findings revealed that high complexity subjects were <u>slower</u> to make self-evaluation judgments after receiving the disconfirming feedback and experienced a <u>slight decrease</u> in self-evaluation scores suggesting that they were able to attend to and use the new and disconfirming feedback when making the subsequent self-evaluation judgments. In contrast, the low complexity subjects were significantly <u>faster</u> in making the self-evaluation judgments after receiving the threat and experienced an <u>increase</u> in their self-evaluation. Such a pattern indicates that for the low complexity subjects, the challenging feedback triggered a defensive reaction . The faster response latencies along with the positive increase in self-evaluation suggests that low complexity subjects did not simply ignore the challenging feedback but more actively sought to discount the feedback by reaffirming the positive view of the self in the domain.

The findings of this study suggest that the availability of a highly complex self-schema buffers the impact of a threat and enables the individual to consider, and perhaps even integrate, the new information into the existing self-view. The rich collection of distinct and separate self-conceptions apparently reduces the weight of any single new piece of information and, consequently, protects the individual from experiencing dramatic shifts in mood and self-esteem each time a threat is encountered. Because the disconfirming feedback leads to less distress for high self-complexity people, they are more able to carefully consider new information about the self and, consequently may be more able to use the new information to identify a pattern of dysfunctional behavior.

In contrast, individuals with low self-complexity have fewer self-conceptions available in memory to reduce the impact of the threat and, consequently, they experience

greater shifts in mood and self-esteem in response to the threat. The findings suggest that at least under certain circumstances, people with low self-complexity protect themselves against the negative by ignoring the threat and reasserting the existing self-view. From this perspective, individuals with low complexity of the self-schema may be less able to thoughtfully consider and use social feedback to identify maladaptive patterns of behavior. For the person who has a non-complex view of himself as a dedicated and attentive husband, complaints from his wife that his behavior is highly controlling may trigger a defensive intensification of the behaviors rather than the thoughtful self-introspection necessary to the recognition of the need to change.

**Possible Selves**

The motivational and regulatory functions associated with the future-oriented component of the self-system also have important implications for the process of behavioral change. Future-oriented self-conceptions, or possible selves, are specific and highly personalized "desired," "feared" (Markus & Nurius, 1986; Ogilvie, 1987), and "ought to be" images or senses of the self in the future that function as standards in the process of self-appraisal (Higgins, Klein, & Strauman, 1985), and as incentives that energize, direct, and regulate instrumental actions (Markus & Nurius, 1986). Positive and negative affect states associated with the possible selves serve as an important source of energy that propel the person into action. In addition, these highly detailed, specific and enduring visions of the self function as stable goals that give meaning, organization and coherence to behavior. As such, possible selves are viewed as the cognitive foundation of goal-directed behavior (Markus & Ruvolo, 1989) and of behavioral change itself (Cantor, 1990).

In the recognition phase of the change process, possible selves function as standards against which the current self can be judged and evaluated. An important part of the recognition of the need for change is the identification of problematic consistencies and trends in one's behaviors. These behavioral patterns, however, have meaning for the

individual only in the context of what one hopes to be and fears being in the future (Markus & Nurius, 1986).

Failure to experience the need to change even after consistencies in one's behaviors are recognized may be due to the constellation of possible selves used to give meaning to the behaviors. Whereas the recognition of a pattern of behavior may for one person threaten to make a feared self a reality or a desired self an impossibility, the same pattern of behavior may be experienced as completely consistent with the future-images of another. An overweight middle-aged woman who imagines herself as a satisfied and jolly grandmother may notice her inability to resist sweets and her associated jump in weight, but may see little reason for concern. In contrast, if the same woman imagines herself a svelte sunbather donning a bikini in the Caribbean in a few months she may be distressed and, consequently, resolve to change as she recalls her recent lapses in will power. In both cases, the pattern of behavior is recognized, but the meaning derived from the context of the possible selves, and the consequences for behavioral change are quite different. Change requires the desire to be different and that desire must be elaborated into a desired possible self, one that can successfully compete with other desired possible selves.

## The Initiation Phase

The initiation phase of behavioral change represents the point of transition from the recognition of the need to change to the execution of instrumental behaviors designed to realize the desired goal. This phase of behavioral change reflects the confluence of motivational energy, knowledge, and skills and the ability to formulate and enact an organized course of action. As in the recognition phase of behavior change both the current self-schemas and the future -oriented possible selves play a vital role in both successful and failed attempts at change.

**Information Processing Consequences of Self-Schemas**

Once the individual recognizes the need to change, the actual initiation of behavioral change is dependent, in part, on the availability of knowledge and behavioral skills necessary to organize and direct new behavioral patterns (Bandura, 1977a; 1986). An individual who has no self-schema established in the targeted behavioral domain not only lacks the necessary behavioral routines and scripts typically associated with the expert knowledge structure that can be used to direct behavior toward the desired end-state (Cantor & Kihlstrom, 1987; Kendzierski, 1988; Kendzierski, & Whitaker, 1996) but, in addition, lacks the rich cognitive framework that facilitates the acquisition of new information and skills.

The findings of studies that have examined the effects of expert knowledge structures on the perception and recall of knowledge have particular relevance to the knowledge acquisition component of the change process. These studies have shown that individuals with an expert knowledge structure available in a behavioral domain require fewer trials to learn schema relevant information, extract more information from brief exposure to the information, and are subsequently able to more accurately and confidently recall the information than those with less expertise in the domain (Chase & Simon, 1973; Chi & Koeske, 1983; Markus, Smith, & Moreland, 1985). This superiority in ability to extract and recall information after brief exposure is related to the expert's ability to organize information into larger and more meaningful units or "chunks" that are more efficiently stored in memory (Chase & Simon, 1973). In addition, experts are more able than novices to flexibly adjust their information processing strategies to meet the demands of the task.

The findings of these studies on expert knowledge structures suggest that the availability of a highly elaborated self-schema in a behavioral domain may enhance the individual's ability to acquire the new information necessary to organize and direct behavior

toward the desired outcome. The individual with a "hypertensive" self-schema may be more able to identify meaningful self-relevant information in a patient education session, and may be more likely to recall, and subsequently have available, the information to guide and direct behaviors. In contrast, the individual who has no self-schema established in the domain will lack an organizing framework for hypertension management information. Consequently, the "hypertensive" aschematic individual is more likely to have difficulty recognizing meaningful information and will have less ability to recall and utilize the information as a behavioral guide.

**Possible Selves**

An important notion underlying our discussion of possible selves in the recognition phase is that a discrepancy between one's current self and a desired future-oriented image facilitates behavioral change. The idea here is that when the current behaviors threaten the realization of the desired possible self, negative affect is generated and the need for behavioral change is brought into focus. The affective states associated with current and the desired self discrepancies may also function as the motivational energy that fuels the initiation of behavioral change. Research on self-image discrepancies has found that mismatches between the current and the desired selves lead not only to the expected negative emotions of disappointment, sadness, anger, and anxiety (Higgins, 1987), but also to positive emotions such as excitement and enthusiasm (Cantor et al., 1987). Furthermore, these affective states, both positive and negative, are under certain conditions associated with increased levels of activity (Higgins, Bond, Klein, & Strauman, 1986) and positive behavioral outcomes (Cantor et al., 1987).

Self-concept discrepancies and the related affective states function as an important source of energy used to instigate motivated behavior, and as such may be central to the inciting actions necessary to achieve the desired change. Yet to be an effective incentive for behavioral change the desired possible self must be realistically attainable, and the amount

of distance between the current and the desired selves not too great. Higgins and his colleagues have convincingly demonstrated that the intensity of negative affect experienced is directly related to the magnitude of the self-image discrepancy. That is, the greater the distance between what one currently believes the self to be and what one wishes to be, the more intense the affective experience. Since intense negative affective states can function to distract (Sarason, 1984), inhibit (Higgins et al., 1986), and overwhelm goal-directed behavior (Beck, 1967), large self-image discrepancies are likely interfere with or inhibit the initiation of behavioral change.

One source of variability among possible selves is the extent to which they are tied to an existing current self-schema. Some possible selves are closely tied to a current self-schema such that they represent an extension or elaboration of the self in the domain while others have little or no connection to the current self-definition. Possible selves function most effectively to motivate goal-directed behavior when they are closely tied to established current self-schemas. Because self-schemas reflect domains of self-knowledge that are both highly important and highly salient, individuals are likely to have thought more about themselves in these domains (Wurf & Markus, 1990) and have a more realistic understanding of their abilities and potentials in the domain. Furthermore, because self-schemas include not only declarative knowledge about the self, but also procedural rule, scripts, and strategies (Kihlstrom & Cantor, 1984) schematic individuals will have some means available for attaining the desired goals once they are established. Consequently, possible selves that are shaped by established self-schemas are likely to be relatively realistic.

In contrast, positive possible selves that lack mooring in an established self-schema are more likely to be glorified images of the self that the individual has few means available to achieve. When such possible selves are used as the standard for self-evaluation, the discrepancy between the current and the desired self will be large and the resultant affective

states overwhelming. In order to reduce the negative affect and reestablish a positive or neutral affect state, the individual may abandon a possible self as unattainable and in doing so strengthen the emotional commitment to the established behavioral routines. A high school dropout with a history of delinquent behavior may at the beginning of rehabilitation articulate a vision of himself as a wealthy, BMW driving business executive. However, after a single semester of intense struggling and frustration in attempt to complete his GED, he may abandon his goal as "impossible for someone dumb like me" and reinvest in his delinquent identity. The unrealistic possible selves, in this case, rather than facilitating the initiation of behavioral change, may function to impede the goal-directed behavior and block the process of change.

Up to this point in our discussion of the initiation phase of behavioral change we have focused on motivational consequences of self-concept discrepancies. Now we will shift our focus away from the issue of self-concept discrepancies to the effects of affect states directly associated with the possible selves. The failure to have elaborated positive possible selves in a behavioral domain may also function to impede or block the initiation of behavioral change. Markus and her colleagues have drawn attention to the fact that positive possible selves themselves function to energize and motivate goal-directed behavior. Simply thinking about a positive possible self can create a positive mood that stimulates and energizes goal-directed behavior (Inglehart et. al., 1989; Markus & Ruvolo, 1989). For example, in a study of the effects of possible selves on motivated behavior, Ruvolo and Markus (1992) found that individuals who were primed to think about "their future successes" expended more effort and persisted longer at a subsequent difficult task than those primed to think about their "future failures." These results suggest that the availability of vivid realistic positive possible selves may facilitate behavioral change by creating incentives that excite the individual and stimulate the initiation of goal-directed behavior.

Individuals who have a predominance of negative self-schemas available in working memory, such as those with a clinical depression (Pyszczynski, Holt, & Greenberg, 1987) will have fewer positive possible selves available to fuel the initiation of behavioral change. Such individuals may have little difficulty recognizing negative behavioral patterns and elaborating their possible negative consequences, but their ability to vividly imagine the self successfully achieving a desired state may be severely limited. In such cases the individual will lack the positive, energizing incentive needed for moving beyond the recognition phase.

In other cases a positive desired possible self may be fully elaborated in memory but for a variety of reasons may be closely linked to an array of highly negative and feared possible selves (Strauman, 1996). Consider for example, the unassertive and overly submissive wife who expresses a strong desire to become more outgoing and aggressive in her marital relationship but who freezes each time she is about to assert herself. For this woman a variety of early life experiences may have led to a close association between self-assertiveness and abandonment such that the desired "outgoing and assertive" possible self is tightly linked with the feared self of "divorced and alone". The tight linkage in memory means that the activation of the desired possible self automatically leads to the concurrent activation of the highly feared possible self and results in high levels of anxiety and fear that impede the enactment of the desired behaviors.

In addition to the motivational consequences, the lack of an elaborated and realistic positive possible self can also disrupt the initiation of behavioral change by inhibiting the formulation and enactment of an organized behavioral plan. One important function of positive possible selves is that they serve as personalized goals that give form and direction to behavior (Wurf & Markus, 1990). The drug addicted adolescent who recognizes the need to change, but has only a vague idea of wanting to be drug free, will have few cues available to shape and direct his behavior toward the desired end-state. In contrast, the

individual who vividly imagines himself as drug free, physically fit, and gainfully employed as an automobile mechanic will be more easily able to identify and focus on the instrumental behaviors needed to achieve his goals.  In characterizing the role of possible selves in how some adolescents turn away from delinquency to more conventionally sanctioned activities, Oyserman and Markus (1990) quote from a former delinquent:

> I was determined to make it in the [Job Corps].  Night after night I imagined myself graduating from Job Corps.  I imagined my name being called and walking across the stage to get my certificate.  I imagined that my whole family was in the audience.  They were clapping and cheering really loud for me.  They were proud of me.  The images of their smiling proud faces made me feel good and excited...

> I imagined other things too.  I imagined how it would feel to get a good job.  I imagined how it would feel to hear people saying good things about me.  Those thoughts seemed real and made me feel good.  I longed for the time when they would come true...

> I began doing what I know I needed to do to make these dreams come true.  I became a good student.  I went to class every day so I could earn an award for perfect attendance.  I worked and studied hard, too, so I could earn awards for good class performance (Rhodes, 1988, p. 37).

### Maintenance Phase

Once behavioral change is initiated, the next important challenge facing the individual is to sustain the new behaviors across time and varying circumstances (Prochaska, et al., 1992).  The obese individual who has enthusiastically embarked on a weight loss program must now somehow endure the low fat weight reducing diet and prescribed exercise program throughout the various seasons of the year, and across all types of social circumstances.

### Possible  Selves

In this maintenance phase of behavioral change possible selves serve as a beacon to keep instrumental behaviors focused and directed toward the attainment of the desired goal.  Their effectiveness in this role is again, however, dependent on their association with established self-schemas.  Possible selves that are not linked to established self-schemas

lack the elaboration, balance, and salience that are needed to make them reliable and effective guides for sustaining behavioral change.

Possible selves that are tied to current self-schemas tend to be more vivid and fully elaborated (Wurf & Markus, 1990) and, as such, may include detailed images of the self at many intermediary stages in the change process (Markus, Cross, & Wurf, 1990). These intermediary possible self-images function as more readily attainable proximal goals that when achieved reinforce the behavioral efforts and help to solidify the new evolving view of the self. The woman who considers her weight a central feature of her self-definition is likely to spend a great deal of time thinking about her desire to be thin as she embarks on a dieting program. She is likely to vividly imagine herself at various stages in the process of reaching that goal, including successfully coping with the hunger throughout the day, refusing cake at the office party on Friday, fitting into her now-too-tight jeans, receiving the compliments of her friends for her dieting success, and finally wearing a size 10 dress again. By vividly imaging each stage of the change process the woman can mentally rehearse the behaviors needed to achieve the proximal goal, thereby, increasing the possibility of success and the associated feelings of competence and positive self-regard needed to sustain the behavioral efforts (Markus, Cross, & Wurf, 1990).

On the other hand, the individual with only a vague and distant image of the self in the future may have fewer opportunities for deriving the intrinsic reinforcement necessary to sustain the newly established patterns of behavior. The lack of vivid images of the self at various stages of the change process means that the individual will have few proximal goals available that can be used to measure one's progress toward the desired end-state, and fewer opportunities for experiencing success and the related feelings of competence and positive self-esteem. Consequently, the individual striving to achieve a global, distant desired self will be more vulnerable to the feelings of discouragement and frustration that can undermine the motivation necessary to sustain the prescribed instrumental behaviors.

Individuals schematic in a behavioral domain cannot only elaborate positive images of the self in the future, but can also vividly imagine negative possibilities for the self in the domain as well (Wurf & Markus, 1990). These negative possible selves, when balanced by an array of positive possible selves function as "motivational resources" that can fortify or strengthen ones ability to persevere toward the desired goal (Oyserman & Markus, 1990; Oyserman & Saltz, 1993).

In a study designed to examine the role of possible selves in delinquent behavior, adolescents between the ages of 13 and 16 years who had histories of varying levels of delinquent activity were asked to describe their "expected", "feared" and "hoped-for" selves for next year (Oyserman & Markus, 1990). Four groups of adolescents were studied: 1) youth enrolled in a metropolitan public school with no official history of delinquent activity, 2) youth with a documented history of delinquent activity who were placed in a community based intervention program as an alternative to probation, 3) youth with a substantial delinquent history who were unsuccessful in a community based program and subsequently place in a group home, 4) youth with the most severe delinquent histories who were currently living in a highly restrictive state training school. Although the four groups of adolescents were similar in their expected and hoped-for possible selves, marked differences were found between the non delinquent and delinquent groups in their feared possible selves. The most frequently reported feared self for adolescents with a history of delinquency was being a "criminal" whereas the most common fear for the high school sample focused on "not getting along in school". Furthermore, the delinquent groups differed from the high school sample in that they produced fewer balanced pairs of possible selves. Approximately 81% of the non delinquent high school sample produced at least one balanced pair of expected and feared possible selves. In contrast only 37% of the most delinquent group produced a balanced pair. Oyserman and Markus concluded that although the delinquent groups have elaborated images of themselves as criminals that could function

to deter delinquent activity, they lack the relevant and highly personalized positive goals to give structure and form to behaviors necessary to avoid their feared states.

At times during the process of change when positive possible selves are not sufficiently compelling to overcome more immediate temptations or distractions, the negative possible selves function as a backup source of motivation that enables the individual to sustain the desired behaviors. The thought of abandoning the "acing my math exam and graduating with honors" possible self for a tempting more immediate image of the the self "drinking and partying with friends" may be countered by the image of the self as "rejected by my first choice college." This negative possible self will itself become a motivational resource that will enable the individual to resist the partying temptation and continue to focus on the calculus problems.

Possible selves that lack mooring in current self-schemas are less likely to be balanced, consequently, the individual will have fewer resources available to ensure that behavior remains consistently directed toward the desired outcome. In this case the individual may be able to keep behavior directed toward the desired goal, but only as long as no competing positive possible selves are encountered. However, once the individual is tempted by an alternative, and perhaps equally compelling possible self, the individual will have less ability to automatically and vividly imagine the negative consequences of the behavior (Oyserman & Markus, 1990). Consequently, there will be fewer intrinsic deterrents available to keep behavior directed toward the established goal.

Possible selves linked to the self-schema have another distinct advantage over less central future-oriented images of the self in that they are more likely to remain stably accessible in the working self-concept. As already mentioned, the contents of the working self-concept are highly variable and dependent on current internal and external contexts. The only components of the self-system likely to remain salient across various contexts are those relevant to core self-conceptions or the self-schemas. Consequently, possible selves

that lack a link with an established self-schema are likely to fluctuate and wane in their accessibility and salience as the individual experiences changes in her internal state and external social environment. In such cases, rather than functioning as enduring and compelling beacons that keep attention and effort directed toward the goal, the shifting constellation of possible selves will lead to a pattern of inconsistent and disorganized behaviors.

**Total Self-Concept and Resistance to Change**

In the previous sections we focused on the role of individual domains of self-knowledge in disrupting the process of change. The main notion underlying our discussion is that peoples' core conceptions of the self are centrally important to the success or failure of the process of behavioral change. An unrealistic conception of the self in a particular domain, or a failure to consider the targeted behavioral domain as centrally self-defining can have important consequences on a person's ability to recognize the need to change, and also on her ability to initiate and sustain the desired behaviors. In addition to the individual domains of self-knowledge, however, the total self-concept also influences the process of change. Features of the total self-concept including the amount and organization of information included in the self-concept play an important a role in determining the person's ability to achieve and maintain behavioral change.

**Recognition Phase**

Like with the individual self-schemas, the amount and organization of information included within the total self-concept influence the person's response to self-threatening feedback and, consequently, may impact the recognition phase of behavioral change. Recently, Linville (1985) examined the effects of complexity of the self-concept on stability of affect and self-esteem. This study focused on the total array of knowledge about the self available in memory. Individuals with high complexity and those with low complexity of the total self-concept were given positive or negative feedback about their performance on a

cognitive task. The findings revealed that high complexity subjects responded to the feedback with less extreme changes in mood and self-esteem than low complexity subjects. Based on these findings Linville concluded that a highly complex self-concept may be considered an internal resource that buffers that negative impact of a threat.

Particularly in cases in which the person has no elaborated self-schema available in the focal domain, receptivity to social feedback that threats self-esteem may, at least in part, depend on the level of complexity of the total self-concept. The availability of a rich array of self-schemas may buffer the impact of negative feedback and, thereby enable the person to take in and thoughtfully consider the new information about the self - information that could bring into focus the need for behavioral change. In contrast, an individual who has few self-schemas elaborated in memory may be more vulnerable to the affective consequences of a threat . In this case the individual may be less able to accept the feedback as self-diagnostic and may be more motivated to avoid or otherwise discount the new information to preserve the established self-view.

A second organizational property of the total self-concept that may impact the person's ability to use social feedback to bring into focus the need for behavioral change is the compartmentalization of the self-concept. Compartmentalization refers to the extent to which information about the self is organized in memory in separate uniformly valenced categories (Showers, 1992). Some people tend to organize their self-knowledge according to the positivity and negativity of the self-conceptions. Those individuals, referred to as compartmentalized, cluster the positive self-conceptions in a behavioral domain in a "positive" category while the negative self-conceptions in the domain are isolated in a distinctly separate "negative" category. Other people use a mixed style of organization in which a single category of self-knowledge includes both positive and negative self-conceptions. Furthermore, people who use a compartmentalized style of organization tend to define the positive aspects of the self as broad, general traits and the negative aspects as

narrow, situation-specific features. In other words, the individual who organizes self-knowledge in distinctly separate positive and negative categories, tends to view the positive self-aspects as broad traits that are consistent across various social context and the negative self-aspects as highly specific, situation dependent tendencies.

Compartmentalization of the self-concept is associated with the level of self-esteem and mood. Showers (1992) showed that in non depressed samples, individuals who compartmentalized their self-knowledge and viewed their positive self-aspects as important experienced higher levels of self-esteem and positive mood than those with a mixed organization of self-knowledge. This effect was significant even after the number of positive and negative self-aspects was taken into account. Based on these findings, Shower's argued that for those individuals who view their positive self-aspects as important, compartmentalization provides a means for isolating and, subsequently avoiding the negative dimensions of the self.

Compartmentalization of self-knowledge may impact the recognition stage of behavioral change by influencing both the salience and the importance assigned to a behavior targeted for change (Stein & Markus, 1994). Because negative aspects of the self are viewed as specific instances of situation dependent behavior, an individual with a compartmentalized self-concept may accept negative feedback and acknowledge that the behavior is self-descriptive but feel little discomfort or urgency to change. In this case, integration of the new information into an established negative category reduces the amount of threat associated with the feedback, and, thereby, undermines its power to draw attention to the need for change.

## Initiation Phase

The amount and organization of information included within the total self-concept may also have important implications for the initiation phase of behavioral change. Individuals who have highly complex self-concepts will have a diverse collection of

internal resources available that can strengthen their ability to achieve the desired goal. First, the individual who is schematic in many behavioral domains is likely to have available a rich collection of possible selves that will, as long as they are not conflicting, function to strengthen one's commitment to the desired goal. The alcoholic who also views his roles as father, husband, and businessman as centrally self-defining is likely to have an array of positive possible selves articulated in memory, including positive images of the self being respected and admired by his teenage son, enjoying a warm and happy relationship with his wife, and being promoted to a management position, and perhaps also negative images such as being abandoned by his family, becoming unemployed, and living on the streets. These possible selves can function as powerful incentives that give rise to and fuel the more proximal goal of an "alcohol free" possible self. They serve as a backdrop that gives meaning and substance to the idea of the alcohol-free self. Without these higher level positive and negative possible selves, the more proximal possible self of maintaining sobriety would have little meaning and therefore, little motivating power.

The availability of a relevant repertoire of possible selves may also enhance the person's ability to formulate behavioral plans that converge and direct behavior toward the desired proximal goal. Continuing with the same example, the alcoholic who is striving to improve his relationships with family members, and to increase his career success will construct a series of behavioral plans for achieving those goals. Since each of the established goals is dependent on the individual's ability to remain alcohol-free, it is likely that one component of each of those plans will focus on the alcohol free possible self.

Finally, since each established self-schema includes an array of procedural routines, skills and knowledge, the individual with many self-schemas included in the self-concept is more likely to have a diverse collection of behavioral skills and strategies available that can be flexibly and creatively utilized to achieve the desired goals. The alcoholic striving to maintain total abstinence for one year can utilize skills associated with his father, husband,

and career self-schemas to guide and direct his behaviors away from alcohol abuse and toward the desired goals.

Persons with low complexity of the self-concept will, on the other hand, have relatively few resources available to energize and support their efforts toward behavioral change (Stein, 1996). A young woman with anorexia nervosa who has had difficulty separating from her parents and establishing her separate identity may, for example, have few elaborated self-conceptions articulated in memory other than the "fat" self targeted for change. In this case efforts for change are focused solely on avoiding the single most compelling component of the self-definition. Consequently, the person will have few realistically attainable possible selves available to motivate the desired behavioral change, and few skills and strategies needed to enact the necessary instrumental behaviors. Given that adherence to the prescribed treatment program will threaten the one salient conception of the self, and render the person confused, empty and directionless, resistance to change can almost be assured.

## The Role of the Social Context in Change

The main thesis underlying our discussion of behavioral change is that individual differences in the self-system influence, or perhaps even determine, the course of the change. This perspective, while emphasizing the role of the individual and her established cognitions, holds that the social environment is critical for behavioral change. We view the social context as an important determinant of the self-system and suggest that it is via the self-system that the social context most powerfully influences the course of behavioral change.

As we have alluded to several times in this chapter, the individual's social environment plays a fundamental role in shaping the self-system. The social environment functions not only to delineate the array of selves available within one's historical and cultural environment (Stewart & Healey, 1989; Veroff, 1983), but also functions to

validate and support the self-view once it is established. Whether the individual sees the self as healthy, shy, good looking, ten pounds lighter next month or possibly incapacitated by heart disease is dependent on the social environment. From historical analyses of the defining features of their good "self" (see Taylor, 1989) or "the good person," we know that the content of possible selves varies quite dramatically over time as it is very much a culturally constructed social representation. Thus, the desire to be model thin and the need to be so, although powerful and very much in evidence in the repertoire of possible selves of majority of women in this country, is of relatively recent vintage. And whether a socially sanctioned, culturally appropriate possible self actually becomes personalized and an aspect of a given individual's repertoire depends on the nature of the immediate social environment that either fosters or impairs the transmission the available possible selves. The self-system that motivates, directs, and regulates behavioral change, is then to a large degree, reflective of the social and cultural environment.

One important way in which the social environment exerts its influence on the process of change is through its impact on the working self-concept. Although the core self-schemas tend to remain chronically accessible in the working self-concept, other less elaborated conceptions of the self are likely to shift and change in their accessibility in response to the immediate social circumstances (Markus & Nurius, 1986). At points during the process of change when the newly formed self-conceptions are not well elaborated components of the self-concept, their salience in the working self-concept will be highly dependent on the social environment. The person who has just begun to envision herself as "confident and self-assertive" may not be able to keep the fledging, although, desired possible active in memory after experiencing a rejection or defeat in the work place.

Possible selves are more likely to remain an enduring guide for behavioral change when important others recognize, acknowledge and, ultimately, value the emerging self-view. In situations where significant others ignore, ridicule or more subtly fail to value an

emerging self-view, the individual's ability to keep the self-image activated as salient guide for behavior will be greatly reduced. The passive and dependent woman who is striving to establish an assertive self-schema may have little difficulty imagining herself assertively expressing her wishes within the confines of a supportive session with her psychotherapist. However she may have significantly more difficulty keeping the relevant self-conceptions active when negotiating with her domineering husband. In a familiar social context, the implicit and explicit behavioral cues will easily and automatically trigger the old, well-established, passive and dependent self-schema (Nasby & Kihlstrom, 1986). The new, more tentative self-conceptions, and the associated behaviors, will be difficult, if not impossible, to sustain.

The fact that the social environment is highly influential in determining the contents of the working self-concept can also have beneficial effects on the process of change. During the earliest phase of the change process the social environment can focus the individual's attention on the need for change by making the pattern of dysfunctional behaviors a salient component of the working self-concept. A steady flow of comments from important others that cannot be avoided will tend to keep a peripheral, unelaborated self-conception such as "I sometimes drink too much" salient in the working self-concept. As a result of the chronic accessibility, this dimension of self-knowledge is likely to become a fully elaborated self-schema as behavioral examples are accrued, and positive and negative possible selves are formulated. Eventually this newly formed self-schema, and the associated possible selves, can serve as the impetus and the force motivating and directing behavioral change.

Later in the change process the social environment may enhance the individual's ability to sustain behavioral change by validating and supporting the new and tentative self-view. For example, one of the curative effects of many drug and alcohol treatment programs, such as AA, is that they provide a social context that helps the individual

elaborate and keep salient an alcoholic or drug-addicted identity. An acute family crisis, such as a spouse's threat to divorce, can increase the salience of the feared self as a "destroyed alcoholic" and motivate the individual to seek help at AA. However, once the initial crisis has subsided, frequent and regular attendance to the meetings will function as an external support for both the feared street drug self image and the fragile, highly unstable emerging view of the self as a recovering alcoholic. Participation in the meetings, and repeated exposure to the testimonies of other's failures and successes, not only helps the individual solidify conceptions of the self as an alcoholic in the past, and as a recovering alcoholic in the present, but also provide opportunities for the individual to further elaborate positive and negative possible selves in the future. Eventually, the recovering alcoholic identity can become a highly elaborated and chronically accessible component of the self-system that stably and reliably functions to regulate and direct behavior.

As can be seen in the example, the social environment at times serves as a crucial external support necessary to sustain the ongoing reciprocal relationship between the self-concept and the desired behavioral goals. Of course, unsolicited feedback from the social environment may not always lead to positive behavioral change. For certain individuals, the continuous flow of comments about dysfunctional behaviors could lead to further entrenchment of the behaviors and impede the process of change. As described earlier, social feedback can set in motion biased information processing and lead to a strengthening in belief of the accuracy of one's established self-view. For others, such as those with a mixed style of self-knowledge organization, negative feedback could swamp a valued self-schema and threaten desired possible-selves. The resulting escalation in negative affect could overwhelm the individual and, thereby undermine efforts to change. This diversity in responses to social feedback highlights the need to clearly understand the nature of the person's self-system and the meaning of the targeted behavioral domain before intervention

strategies are developed. While for some individuals involvement of significant others may facilitate or even enhance behavioral change, for others the very same interactions could derail budding efforts toward the desired goal.

**Implications for Future Research**

Positioning the self-concept at the heart of behavioral change is a logical extension of contemporary self-concept theory. As research evidence mounts to support the view of the self-concept as a central component of the information processing sequence and a fundamental motivator and regulator of purposive behavior, the link between the self-concept and behavioral change can become clearer and more compelling. Yet the majority of empirical findings cited in this paper are from studies that have not explicitly examined the role of the self-concept in process of behavioral change. Consequently, although these findings form a foundation of empirical support for the idea that the self-concept directs and regulates behavioral change, a great deal of additional research is obviously necessary.

Cross-sectional and longitudinal studies of people considering or actually engaged in behavioral change are necessary to test the validity of the mechanisms of change proposed in this chapter. For example, a cross-sectional study comparing the self-structure of heavy smokers who have sought help to stop smoking with that of heavy smokers who see no need for change will provide valuable information about the features of the self-system most central to the recognition and initiation phases of behavioral change. A prospective study that examines the self-system of individuals as they embark on a behavioral change program such as an alcohol treatment program or a weight loss program will be useful to further our understanding of the role of the self-system in the sustenance of behavioral change. In both studies the completion of a comprehensive assessment of the self-system including: 1) measures of the content, complexity and compartmentalization of the total self-concept; 2) measures of schematicity in the targeted and other relevant behavioral domains; and 3) measures of the contents, and balance of the available possible

selves would allow researchers to examine the independent and interactive effects of the various dimensions of the self-system on the process of behavioral change.

Empirical exploration of the effects of the therapeutic process on the self-system will also enhance our understanding of behavioral change. At this point in time, little is known about the effects of therapeutic intervention on the self-system and how these effects promote or impede the change process. Do individuals enter a treatment program with a highly elaborated self-schema in the relevant behavioral domain, or does participation in the program lead to the consolidation and elaboration of the identity? What therapeutic interventions are most effective in facilitating the formation of realistic possible selves? Will the effectiveness of the treatment program be increased if the formation of both positive and negative possible selves is emphasized? Should the treatment emphasize the dysfunctional behaviors or aim to facilitate the formation of other more positive self-schemas? Answers to these and other related research questions will not only increase our understanding of the process of behavioral change but also may lead to the development of more effective and precise treatment interventions.

**Implications for Clinical Practice**

Although we recognize that the position put forth in this chapter requires additional empirical exploration before it can legitimately be used to direct clinical practice, we would like to conclude our chapter with a few speculations about the implications of this approach to self-directed and helper-directed behavioral change. One of the most important implications of this approach is that it necessitates a more realistic, and perhaps more tolerant view of behaviors typically labeled resistant or noncompliance. Rather than viewing behaviors such as an unwillingness to acknowledge the need for change, or lapses in the execution of the newly acquired behavior, as indications of basic attitudinal or characterological problems, these behaviors may be viewed as a natural, if not expected components, of the process of behavioral change itself. Given that the goal of behavioral

change is to establish a new, sometimes dramatically different view of the self, it is not surprising that until this goal is achieved, other highly salient and readily accessible self-conceptions will be used to guide and direct behavior.

Behavior that appears as resistant may provide important diagnostic information about features of the self-system that must be addressed before behavioral change can occur (Stein & Markus, 1994). Attention to both the timing and the type of resistant behavior displayed may provide valuable clues that will facilitate identification of the dysfunctional feature of the self-system and enhance the formulation of appropriate interventions. For example, a health care provider working with an alcoholic who acknowledges the severity of his alcohol addicted behaviors, but refuses to commit himself to a treatment program, may begin by exploring the constellation of possible selves available in memory. If the only elaborated possible selves are images of the self as "a street drunk like my father," therapeutic efforts may focus on the establishment of other realistic, positive possible selves that eventually could function to motivate and direct the necessary behavioral change. In contrast, the health care provider working with an individual who fails to recognize and value his alcohol-addicted behaviors may have to consider the possibility that the alcohol related behaviors are not viewed as centrally self-defining for this person. In this case, therapeutic efforts may at least initially, have to focus on the formation and elaboration of the "alcoholic" self-schema.

The third, and probably most important, implication of our approach is that we believe that the process of change must in a fundamental way focus on the creation and elaboration of new conceptions of the self. Although efforts to effect change must begin by taking into account existing conceptions of the self, in all cases, the route to lasting behavioral change includes the establishment of new and compelling images of the self. Whether the individual must for the first time link the targeted behavioral domain to the self-view, or radically alter the established dysfunctional view of the self in the domain, the

primary challenge facing the change agent is to devise means by which new self-conceptions can be formulated and consolidated. Consequently, strategies to effect behavioral change should include a focus on helping the individual view the present, past and future selves in new and compelling ways, and include means by which these emerging self-views can remain salient components of the working self-concept.

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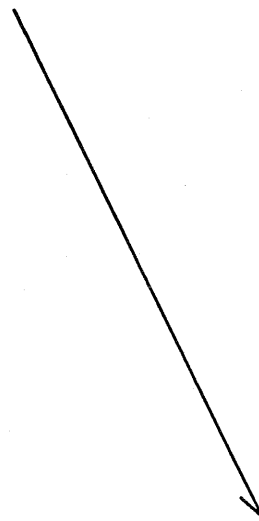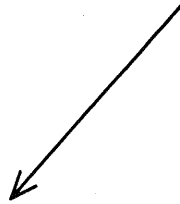
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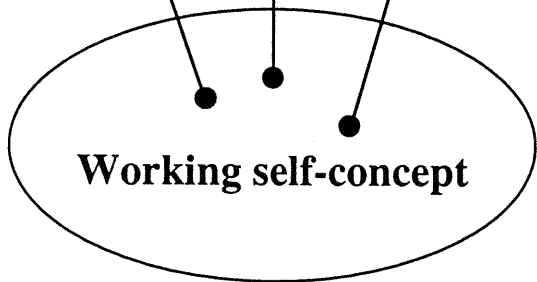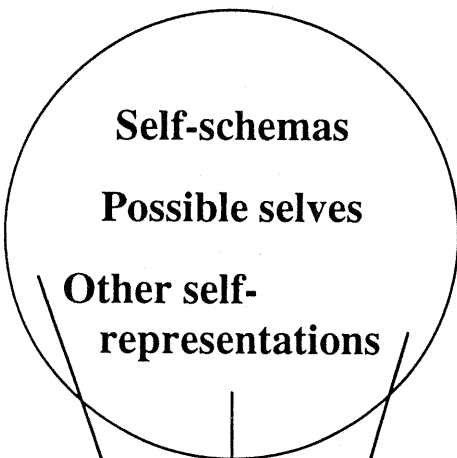
# Figure 1

## Social Environmental Antecedents

(e.g., employment, marital, friendship status, race, gender, ethnicity, culture, cohort, generation)

**Global Self-Concept**

Self-schemas

Possible selves

Other self-representations

Working self-concept

**Behavioral Change**

- Recognition of need for change, desire for change

- Initiation of change effort

- Maintenance of change program