
Discrepancy-Enlarging Loops, and Three Further Issues

In Chapter 3 we talked about efforts to conform to behavioral reference points. Those processes cover a lot of behavior, but not all behavior. Sometimes people want to *attain* particular ends, but sometimes they want to *escape* or *avoid* particular ends. Sometimes people want to *be* specific ways, sometimes they want to *not be* specific ways. The experiences of trying to move toward and trying to move away obviously differ, and they involve different self-regulatory structures.

In this chapter we consider moving-away processes, and a different kind of feedback loop: the discrepancy-enlarging loop. As we said in Chapter 2, some feedback processes act to create a divergence between an input (perception of present condition) and a comparison value. Rather than resembling a gravity field, it looks like antigravity. Rather than a goal, it seems to involve an anti-goal. These loops may be less prominent in behavior than are approach loops. They do, however, play an important role. In this chapter we address that role. Then we turn to some broader questions that transcend the two types of feedback processes.

DISCREPANCY-ENLARGING FEEDBACK LOOPS IN BEHAVIOR

In trying to identify cases of positive feedback in behavior, there are several things to look for. First, positive loops always involve attempts to deviate from a comparison point, efforts to push away from something. Second, it's likely that the distancing from standard is constrained or overridden at some point by the action of a negative loop. To put it differently, an avoidance loop often seems to be operating in the *service* of an approach loop.

In some cases we can provide evidence for the idea that the phenomena we're examining reflect feedback processes. For example, in Chapter 3

we argued that self-focused attention engages the comparator in the loop that's regulating behavior, and we described evidence that self-focus enhances the functioning of discrepancy-reducing loops. It follows that self-focused attention may also enhance discrepancy-enlarging processes. In some of the examples that follow, there's evidence that this does happen.

Downward Social Comparison

At the end of Chapter 3, we described the nature of upward and downward social comparison. We focused there on upward comparisons. Now we turn to downward comparisons.

Downward comparisons occur when people want to confirm they're better off than someone else (see, e.g., Taylor & Lobel, 1989; Wills, 1981; Wood, Taylor, & Lichtman, 1985). Thus, the person that's used as the point of comparison is someone you want *not* to resemble, for one reason or another. For example, someone diagnosed with an early-stage cancer might compare himself to someone with a more advanced cancer. Downward comparison can make people feel better, confirming that they're better off than the comparison group (e.g., Aspinwall & Taylor, 1993; Reis, Gerrard, & Gibbons, 1993; Wheeler & Miyake, 1992).

Although downward comparison is often benign, it can lead to active self-enhancement and even to derogation of others. As Wills (1981, p. 246) noted, derogation increases the psychological distance between the self and those you want not to resemble. This effect of downward comparison suggests a more general theme, which we want to emphasize. When comparing downward, you often don't just want to *verify* a difference between yourself and the comparison group, you want to *emphasize* or *increase* your perception of a difference. Trying to increase the difference fits the idea that a discrepancy-enlarging feedback process underlies downward comparisons.

Negative Reference Groups

The social comparison process can occur in isolated instances, but it also generalizes to the broader case of reference groups. We noted in Chapter 3 that reference groups of various types inhabit people's social worlds. Reference groups help people evaluate the appropriateness of their attitudes and actions. Indeed, reference groups even help people

determine their attitudes when preexisting ones are weak or lacking (Newcomb, 1958).

Not all these groups are positive points of comparison, however. There are also *negative* reference groups, groups you dislike and want *not* to resemble. These aren't people you consider irrelevant to your life and therefore disregard. You think about them, actively seek out comparisons with them. You do so to emphasize – and increase – differences between them and you (cf. Brewer, 1979). This process closely resembles the positive feedback process: comparison of a present condition (yourself) with some reference value (the negative reference group) to create larger discrepancies between the two.

Support for this idea comes from research using a subject sample for whom a negative reference group was readily identifiable (Carver & Humphries, 1981). Subjects were Cuban-American students, the negative reference group was the Castro government of Cuba. Most people of Cuban descent in the United States view the Castro government as an army of occupation, despise its leaders, and dream of its demise. Data confirmed that Cuban-American students treat the Castro government as a negative reference group: When opinions on a series of issues were attributed to officials of that government, subjects disagreed with the opinions more than they did otherwise. This finding also confirmed that people respond to the negative reference group by trying to distance themselves from it, which fits the picture of the positive feedback loop.

A second study confirmed that subjects who were higher in self-consciousness renounced the government-linked opinions more than those lower in self-consciousness. Thus, self-focus enhanced the enlargement of a discrepancy between the standard and people's expressed opinions. This is consistent with the idea that higher self-consciousness means more engagement of the comparator of a discrepancy-enhancing loop.

Feared Self and Unwanted Self

Reference groups are social entities external to the self that provide reference points for behavior. Other reference points for behavior are carried around as part of personality. One of these internal standards – a particular mental representation of the self – seems also to reflect the existence of a positive feedback loop.

Markus and her colleagues (e.g., Markus & Nurius, 1986, 1987; Markus & Wurf, 1987) argue that the self-concept consists of more than information about the present and past self. It also incorporates

beliefs about the future (cf. Epstein, 1973; Rhodewalt & Agustdottir, 1986), called possible selves. Three such selves are emphasized: the expected self, the hoped-for self, and the feared self (Markus & Nurius, 1986). Expected selves are what people believe they can, or will, realistically become. A hoped-for self is an aspired self, something that feels possible but is more removed than the expected self.

A feared self is a possible self that one doesn't want to become but fears becoming – for example, a drug abuser, a career failure, or a failure in close relationships. Ogilvie (1987) wrote in similar terms about what he called the undesired self. The feared self is held to be an important part of the self-concept because it acts as a motivator, so that the person takes concrete action to avoid that possible self. Because people try to avoid or escape from the feared self, its effect seems to reflect the functioning of a positive feedback loop.

Oyserman and Markus (1990) have argued that the most effective self-regulation occurs when people hold both desired selves and opposing feared selves in a given domain. In their view such a "balance" between the desired and the feared creates an optimal motivational situation, because there's both a goal to strive toward and a goal to avoid. This assertion brings us back to a point we made earlier about discrepancy-enlarging feedback processes.

Positive Feedback Process Constrained by Negative Feedback Process

In thinking about how people respond to feared selves and undesired selves – and negative reference groups and downward social comparisons – we return to an argument about how positive feedback loops work. We said earlier that this loop can be adaptive and functional if its operation is bounded or constrained by a negative feedback loop (see Figure 4.1, which has been adapted only slightly from Figure 2.4). This argument leads us to a position that differs from that of Oyserman and Markus in one respect and resembles it in another.

In particular, an avoidance feedback process always seems to benefit from an approach process constraining it. In this respect we agree with Oyserman and Markus. That an avoidance loop benefits from an approach loop is easily illustrated by reference group behavior. A negative reference group doesn't guide you anywhere in particular (unless the behavioral dimension is occupied at one end by the reference group, which was the case in the 1981 research by Carver and Humphries). Although people do portray and even define themselves

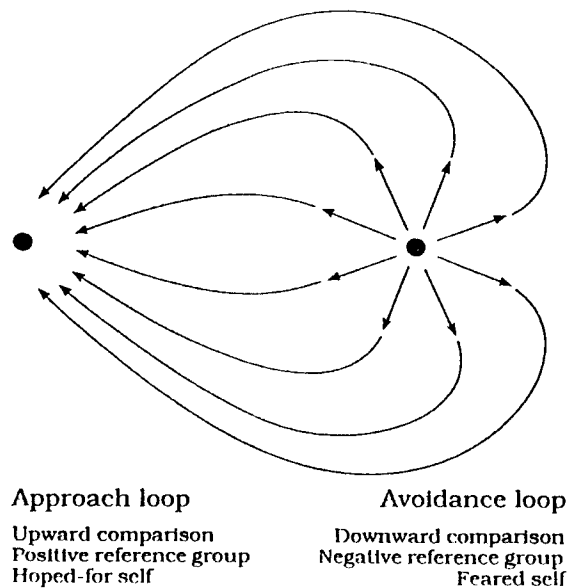


Figure 4.1. Positive feedback loops (avoidance loops) imply movement away from comparison values, but their action often provides little direction unless constrained by the effects of negative feedback loops (approach loops). We suggest that downward social comparison, negative reference groups, and feared selves serve as reference points for avoidance loops, and that upward social comparison, positive reference groups, and hoped-for selves serve as reference points for approach loops.

partly by differences between themselves and others they dislike, too much reliance on this principle is bad. It produces a person who doesn't stand *for* anything, but only stands *against* things. This isn't much of a basis for a healthy sense of self.

In practice, however, this is rarely what happens. Consider another example of negative reference group behavior. It seems a near universal phenomenon of life in the United States that adolescents want to be different from their parents (thus taking parents as a negative reference group). There are, of course, innumerable ways to be unlike someone else. Although adolescents vary in how they deviate from their parents, positive reference groups typically emerge (other adolescents and various role models). This positive reference group evolves its own norms, to which the adolescent fervently adheres. Thus, it's possible to be a nonconformist by conforming to a different value.

This isn't, of course, a principle of adolescence alone, but a principle of life. To state the principle more baldly, when you're afraid of

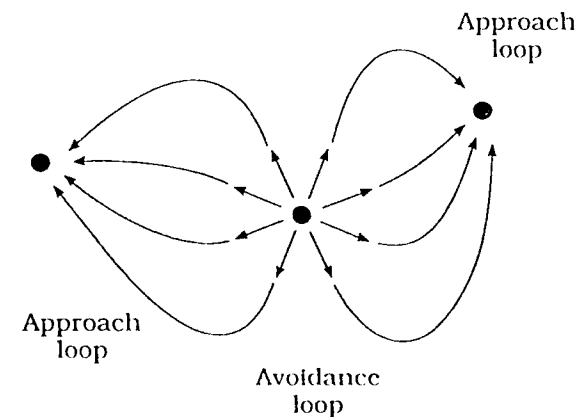


Figure 4.2. Sometimes more than one desired value is available when an avoidance loop is operating. In such a case, some efforts to escape the undesired value will be captured by one desired value; other efforts will be captured by the other desired value. It seems likely that which desired value constrains the moving-away-from process depends partly on which value is closer to a person's preexisting values and partly by the direction in which the person initially moves to avoid the undesired value.

something or repulsed by something, you try to get away from it. But away is just away. Instead of continuing endlessly to get away, you usually find somewhere else that's safe or desirable to go *to*.

In thinking about this point it's worth noting that the situations people confront are often more complex than the one diagrammed in Figure 4.1. Many situations hold several potential attraction points to move toward (Figure 4.2). For this reason, you can't always expect a single positive value to capture all the attempts that people make to avoid the undesired value. Thus, if several people try to deviate from a mutually disliked reference point, they may diverge from one another in pronounced ways. One disgruntled adolescent may gravitate to membership in a rock band, another may gravitate to the army. Presumably, what value is approached will depend partly on the fit between the available values and the person's preexisting values, and partly on the direction the person took initially to escape the undesired value.

This pattern of influences appears to be quite similar to that proposed by Brewer (1991) in her theory of how people use multiple reference groups to achieve two ends simultaneously. She argues that people have a need for connection and similarity to others, and a need to differentiate themselves (be distinct) from others. These goals are achieved by identifying strongly with an ingroup while emphasizing differences regarding

an outgroup (or more than one). Social identity and group loyalty are seen as strongest for identifications that maximize the extent of attainment of the two goals at the same time.

Although we see the guidance of a negative feedback loop as nearly indispensable to the long-term effectiveness of a positive loop, unlike Oyserman and Markus (1990) we see no compelling reason to assert that the principle applies in both directions. That is, we're not convinced that the presence of a negative loop benefits from the presence of a positive loop (cf. Elliot & Sheldon, 1997). As long as there's a process that moves the person toward a desired value, there seems no special benefit in also having a potentially disruptive process (disruptive because, in a sense, it's directionless).

The Ought Self

Another example of a discrepancy-enlarging process constrained by a discrepancy-reducing process occurs in what Higgins (1987, 1989, 1996) calls the ought self. Ought selves reflect a sense of responsibility, duty, or obligation. An ought is a self you feel compelled to be, rather than intrinsically desire to be. Although ought selves are positive (people wish to conform to them), the ought self seems to derive from punishment. That is, living up to an ought means being a particular kind of person to avoid others' disapproval or self-disapproval. Thus, self-regulation regarding an ought involves trying to move *toward* the ought, as a way of moving *away from* an unwanted comparison point (see Figure 4.3).

Research by Higgins and his colleagues has confirmed that people whose lives are dominated by ought selves are particularly attuned to the avoidance of negative outcomes. They preferentially encode information pertaining to negative outcomes (Higgins & Tykocinski, 1992). They're also more likely than other people to choose strategies for positive goal attainment based on avoidance of *undesirable* conditions (Higgins, Roney, Crowe, & Hymes, 1994). Such findings have led Higgins (1996) to examine more closely the avoidance aspect of the dynamics of ought-based self-regulation, which had been less prominent in his earlier thinking (see also Higgins, Shah, & Friedman, 1997; Tykocinski, Higgins, & Chaiken, 1994).

Indeed, Higgins has begun to write about what he calls *promotion* and *prevention* focuses underlying behavior (e.g., Higgins, 1996; Higgins et al., 1997). These terms appear to refer to discrepancy-reducing

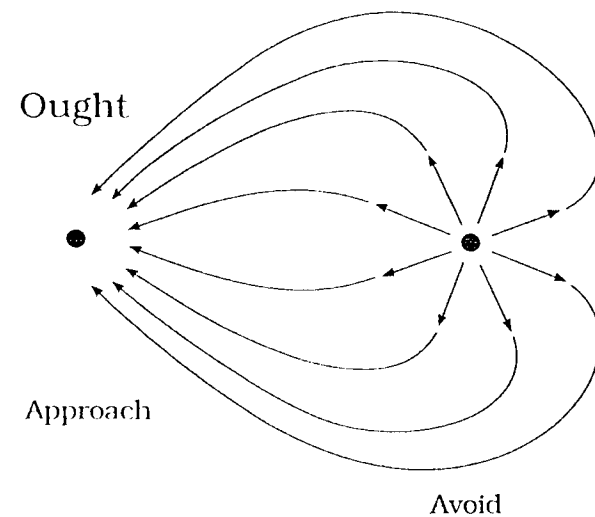


Figure 4.3. Self-regulation with respect to an ought self involves both a desire to move toward a prescribed value and a desire to move away from a proscribed or punished value. The effects of the latter avoidance process are given form by those of the desired ought, which serves as the reference value in an approach loop.

and discrepancy-enlarging feedback processes, respectively, in that they concern attempts to move toward goals versus attempts to move away from anti-goals. Ideal discrepancies evoke primarily a promotion focus; ought discrepancies evoke primarily a prevention focus.

For our present purpose, what's important about the dynamics of ought-based self-regulation is that two processes are involved: one in a sense more basic, the other providing a positive form and direction for the effects of the first. Although there are many ways a person could avoid a feared or disliked self-quality, the desire to escape provides no positive direction for movement (Figure 4.3). A positively valued point is required to provide such direction. This is what the ought self does, thus giving coherent form to self-regulation stemming from avoidance.

Reactance

Another class of phenomena that may reflect positive feedback processes stems from the principle of psychological reactance (Brehm, 1966; Wicklund, 1974). Reactance occurs when you expect some freedom to exist and then experience a threat to that freedom. The threat causes you to try to reassert or regain the freedom. The freedoms here

are usually limited in scope: examples are the freedom to choose one action over another, to decide what opinion to hold, or to choose one object from an array of desirable options. The behavior that results from the reactance varies, depending on what freedom is threatened. In many cases, the response involves rejecting an attitudinal position, a behavior, or a choice that's being forced upon you.

Three aspects of this description appear similar to our description of positive feedback loops. First, many reactance effects involve distancing yourself from a value or position – whatever position is being forced upon you. Second, this discrepancy enlargement seems to operate within the framework of a discrepancy-reducing system. That is, pushing away the option being forced on you (or pushing away the attempted infringement on freedom) lets you conform to a self-image (or public image) of a person who exercises self-determination. Third, the reactance effect doesn't go on endlessly, but only to restoration of the freedom. These points fit the notion that the functioning of positive loops is relatively short-lived and occurs in the service of a broader negative loop.

Also consistent with the idea that there are feedback processes at work here (and thus a comparator) is evidence that reactance phenomena are enhanced by self-focus. Some of this evidence comes from research on how coercive attempts to persuade a person influence that person's attitude. Coercive communication causes its recipient to resist the persuasion attempt, even to the point of shifting the opinion in the opposite direction (e.g., Snyder & Wicklund, 1976). This effect is stronger when self-focus is high than when it's lower (Carver, 1977; Carver & Scheier, 1981c).

Another interesting reactance effect occurs when an initial preference for one of several options causes people to feel a loss of freedom of choice. The result of this is a tendency to push away the original preference (making it harder to make a decision). This movement away is stronger among persons high in self-consciousness than among those lower in self-consciousness (Carver & Scheier, 1981c).

In sum, several aspects of the structure of reactance phenomena make it reasonable to suggest that they may involve discrepancy-enlarging feedback processes. In displaying these characteristics, reactance effects join several other phenomena reviewed in preceding sections. Our conclusion from this review of these diverse phenomena is that discrepancy-enlarging loops play an important role in human behavior.

FURTHER ISSUES

We turn now to three issues that pertain to the use of feedback models for behavior. These issues are general ones, bearing on the subject of this chapter and on that of Chapter 3. Two issues stem directly from the idea that discrepancy-reducing feedback loops (and to a lesser extent discrepancy-enlarging loops) are the basic building blocks of self-regulation. The third issue is whether the feedback loop is, in fact, a plausible model at all for the phenomena we address throughout this book.

Feedback Loops in Mutual Interdependence

We've focused thus far on the individual, taken alone. To the extent that we've considered others at all, it's been to view them as sources of feedback about the effectiveness of one's actions. But providing feedback to the actor isn't the only role that others play.

Most of the time when people interact, each interactant has his or her own goals. Any dyadic interaction involves a mutual interdependence between interactants (Figure 4.4). Each individual displays the hallmarks of feedback control – checking on the effects of his or her behavior to see whether desired goals or standards are being met, and altering behavior as needed to move closer to them. Each also acts as a source of feedback to the other, providing information about the other's success in moving toward the value guiding the other's actions.

Thus the two are an interdependent pair of feedback systems, each reliant on the other for critical information, but each with its own agenda (see also Darley & Fazio, 1980). Whenever a dyad interacts, such an arrangement exists. It's possible for the arrangement to be unbalanced, such that the reference value for one interactant is simply the providing of information to the other. But this situation is relatively rare. More commonly, both interactants have their own goals.

The interactants are independent, in a sense (because the goal for each exists in the mind of only one person). In another sense, however, they aren't independent at all. It's often impossible for one person to conform to his or her standard unless the other person acquiesces to the attempt. Often, there will be willing acquiescence only if acquiescence also helps the other person move toward his or her goal. When Harry interacts with Sally, he gets information from her behavior that tells him

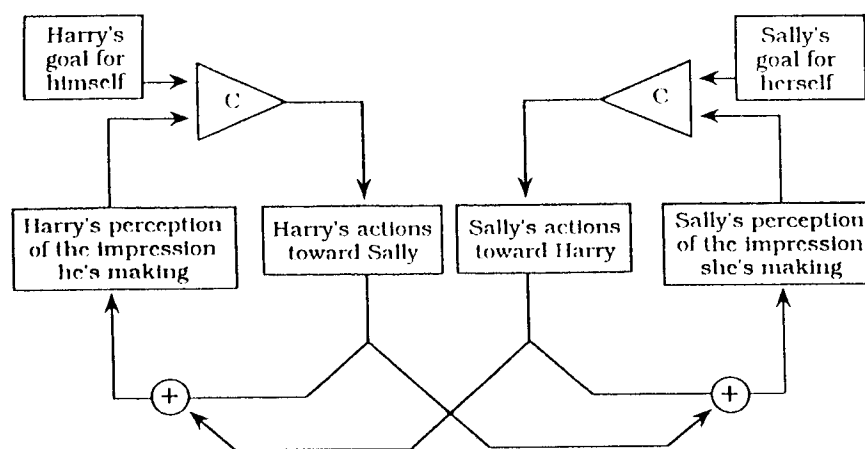


Figure 4.4. When Harry met Sally, each had a goal in mind in the interactions they had as a dyad. Each acted in such a way as to attempt to attain the goal he or she had in mind. At the same time, each provided information that the other could use to determine whether or not he or she was reaching his or her own goal.

he's doing what he intends to do only if Harry's behavior also tells Sally that she's doing what *she* intends to do.

This portrayal of dyadic interaction is structurally similar to our portrayal in Chapter 2 of the interdependency between a system regulating the temperature of a refrigerator and a system regulating the temperature of the room holding the refrigerator (Figure 2.7). In that example, the output of each system influences its subsequent input (the refrigerator's cooling system decreases the temperature inside the refrigerator). But the output of each system also influences the *other* system's subsequent input (the refrigerator's cooling system increases room temperature outside the refrigerator).

In that example, the effect of each system on the other was labeled a "disturbance," because the effect was unintended, a consequence of the fact that the two systems happened to be in a shared space, with input functions that can be influenced by each other's functioning. In Figure 4.4, the label "disturbance" is omitted, because there's presumed to be an active attempt to use the information contained in the other's behavior as input feedback. In other respects, however, the structure of the two examples is similar.

It's possible, of course, to go far beyond dyadic interaction in talking about relations among interactants with this sort of mutual interdepen-

dency (Levine, 1992). The area of thought known as family systems theory (e.g., Bowen, 1978; Bradshaw, 1988; Minuchin, 1974; Papp, 1983; Selvini Palazzoli, Boscolo, Cecchin, & Prata, 1978) is one such extension, considering whole families as interwoven systems. The focus of that theory is partly on the individual, partly on the dynamics that develop as individuals pursue their separate goals within the family unit, and partly on goals shared among the members of the group – in effect treating the group as a feedback system in its own right. When conditions are created that disturb the group's sensed reality, pressures are brought to bear to reestablish the group's equilibrium.

Indeed, there also appear to be feedback processes that occur within even larger populations of organisms. In at least some mammals, processes of this sort control such variables as population densities (Wynne-Edwards, 1964). Although we have less to say about family systems and populations (or even dyads) than about individuals, similar principles do appear to be at work throughout (see also Levine & Fitzgerald, 1992a).

The Search for Discrepancies

We turn now to consider one of the less obvious implications of the feedback concept. The notion that discrepancy-reducing feedback processes are particularly important in behavior suggests a general tendency to be attuned to information indicating a discrepancy between an intended condition and an actual condition.

There's indirect evidence that such a bias may exist (e.g., Kahneman & Tversky, 1984; Pratto & John, 1991; Schwarz, 1990; Taylor, 1991). It consists largely of findings that negative events have a larger impact on people (in a variety of ways) than do positive events (see also Hobfoll, 1989; Rook, 1984; Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991; for discussions of such tendencies in infancy, see Kagan, 1981; Stipek, Recchia, & McClintic, 1992). Indeed, negative information seems to draw attention automatically (Pratto & John, 1991). Situations involving problems are also more likely to stay on people's minds than problem-free situations (Klinger, Barta, & Maxeiner, 1980), and people seem motivated more by the desire to avoid loss of self-esteem than by a desire to enhance it (Tesser & Cornell, 1991). Taylor (1991) has argued that the greater responsiveness to negative events implies a mobilization of effort to minimize their impact, including acting to eliminate the undesired condition.

There's a certain irony in the idea that things being as they should doesn't draw much notice. After all, people want to see things be as they should, and they try fairly hard to make that happen (cf. Friedrich, 1993). Those reviewing the evidence on this point all note what appears to be a reasonable evolutionary basis for this asymmetry: Negative events have potential implications not only for subjective well-being but also for survival. When things are not as they should be, effort must be made to change them. When good things happen, no further action is required, and they therefore elicit less response.

Although negative events aren't quite the same as discrepancies between perceived and desired conditions, there seems enough of a similarity to suggest that the same principle applies to self-regulation. In the process of behaving, something being wrong is more likely to draw your attention than something being right, because (in general) when something's right, you simply move on to the next thing (don't forget that you still have to check in order to know you're right). In contrast, when things aren't right, something else has to be done, adjustments have to be made, before you can move on.

The Issue of Will

The last issue to be taken up in this chapter is a challenge to the notion that feedback processes provide a useful model for self-regulation. The challenge comes from two directions that are quite different from each other, though they have at least one element in common.

An explicit rejection of control theory comes from Locke and Latham (1990a), whose work focuses on work motivation. There's a great deal in their own thinking that resembles the feedback model we're describing in this book. For example, they state that "Goal setting is . . . usually only effective when feedback allows performance to be tracked in relation to one's goals" (Locke & Latham, 1990b, p. 241). Despite this, and despite their nods of approval to other models with similar structures (e.g., Frese & Sabini, 1985), they recoil at the idea that the functions embedded in their theory (and others) reflect the operation of feedback processes.

The crux of their objection seems to be that feedback models are inappropriate because they are mechanistic. Locke and Latham's theory places a good deal of stress on "the causal efficacy of consciousness," a labored way of saying "will." Feedback models are inadequate, in their view, because they don't portray behavior as a series of willful choices. (It's of passing interest that Miller et al. [1960, p. 111] connected the

concept of will to the use of inner speech in formulating and executing Plans – essentially the same functions as Locke and Latham emphasize – but postulated this explicitly within the framework of a feedback-based model of behavior.)

A similar issue emerges in the writings of Deci and Ryan (e.g., 1985, 1991; Ryan, 1993; Ryan, Sheldon, Kasser, & Deci, 1996), though apart from this particular similarity their approach has little in common with that of Locke and Latham (see Deci, 1992, for a critique of the latter). Deci and Ryan emphasize the importance of a sense of personal autonomy or self-determination in behavior, arguing that behavior done autonomously (by choice) is different in character from behavior done for other reasons (compliance with explicit or implicit coercion). This raises the question of whether a feedback process can be thought of as reflecting autonomy in any meaningful way. Although this question is a complex one involving many issues, one issue it involves is will.

We've never taken a strong position on this issue, partly because we don't have a strong opinion about it. It may be that the feedback processes about which we're writing operate in service to another set of processes we haven't identified. If so, our account would be incomplete (that is, more incomplete than it is anyway). Nevertheless, it would remain a reasonable portrayal of the functions engaged by whatever is the missing process. As such, it would seem to remain useful and informative. It doesn't seem particularly constructive to insist that control processes can't be involved in the self-regulation of behavior, as Locke and Latham do, when the structure of self-regulation, by their own account, so obviously resembles the structure of a feedback loop.

On the other hand, it may be that what people recognize from introspection as effortful decision making and planning – the things that make it obvious to all of us that we have our own will – is actually self-delusional. Perhaps these patterns of thought are the products of control processes occurring behind the scenes, outside awareness, drawing people toward images of who they might be. If so, the "servicing" of one function by the other would be in the opposite order: consciousness and effortful processing operating to further one's continuing movement toward abstract goals (cf. Dewey, 1976).

Pervin (1992), writing about the Locke and Latham model, expressed considerable skepticism about its rational, volitional view of behavior, based in part on his years of clinical experience. His skepticism derived from the many ways people have trouble exercising will, doing what they

wish to do, and refraining from what they wish not to do (for another view on how much trouble these things can be, see Wegner, 1994). Although we have no clinical experience to rely on, we share a measure of Pervin's concern about the question of will. For the time being, then, we will simply continue to assume as a working model that feedback processes are fundamental, and see how far these assumptions will carry us.

5

Goals and Behavior

You must imagine your life . . . and then it happens.
(John Updike, *The Witches of Eastwick*)

To say that behavior is regulated by feedback processes is to assume the existence of reference values for behavior. In this chapter we consider reference values and some differences among them. For most practical purposes the term *reference value* is interchangeable with the term *goal*. Life, in this framework, is a continual process of establishing goals and adjusting patterns of behavior to match those goals more closely, using informational feedback as a guide.

GOALS

This emphasis on goals is very much in line with a growing emphasis on goal constructs in today's personality-social psychology (Austin & Vancouver, 1996; Elliott & Dweck, 1988; Miller & Read, 1987; Pervin, 1982, 1989). A variety of labels are used in this literature, reflecting differences in the emphases that various writers place on aspects of the goal construct. The next section briefly reviews a few of these constructs.

An Overview of Broad Goal Constructs

One of the earliest of this generation of goal constructs was Klinger's (1975, 1977) use of the phrase *current concern* to describe goals with which a person is presently engaged. This phrase conveys the sense that the goals are temporary. They occupy the mind for a while but eventually yield to other concerns. The phrase also suggests a sense of mental engagement with an issue or problem, a quality of unfinished business. This sense is certainly compatible with the idea that until a