

A Motivational
Approach to Self:
Integration in
Personality

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Prologue

Two features characterize the dominant views of "self" within modern empirical psychology. First, the self tends to be conceptualized as a set of cognitive appraisals and schemata; second, the self tends to be understood as a reflection of social evaluations (e.g., Bandura, 1978; Greenwald, 1988; Harter, 1988; Kihlstrom & Cantor, 1984; Markus & Sentsis, 1982; Scheier & Carver, 1988).

It is quite understandable, in light of the history of empirical psychology, that current "self" theories would have these characteristics. First, the use of concepts like cognitive structures and mechanisms is de rigueur in current mainstream psychology (Hilgard, 1987). Inferences and schemata, for example, enjoy wide currency in contemporary theorizing. Second, most theories of self have emerged within the areas of social and social-developmental psychology, where the concern has always been with the influence of social forces on the psychological processes of individuals. It is for this reason, perhaps, that modern self theorists have used as their point of departure the early theories that emphasize the "self" as a mirror of social evaluations (Cooley, 1902; Mead, 1934).

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In this chapter we present a very different perspective on the self. In our view the two features mentioned above are only partially true, and taken together they miss the essence of what the self is and does. For us, self goes deeper than cognition—it is not a set of cognitive mechanisms and structures but rather a set of *motivational* processes with a variety of assimilatory and regulatory functions. In addition, the self does not simply reflect social forces; rather, it represents intrinsic growth processes whose tendency is toward integration of one's own experience and action with one's sense of relatedness to the selves of others. Thus the self is not simply an outcome of social evaluations and pressures but instead is the very process through which a person contacts the social environment and works toward integration with respect to it.

One important feature of our conception of self is that it provides a framework for distinguishing, both empirically and theoretically, those internally motivated, intentional actions that represent human agency and *self-determination* from those that do not (e.g., Deci, 1980; Deci & Ryan, 1985b; Deci & Ryan, 1987). Behaviors that either are intrinsically motivated or stem from well-integrated personal values and regulatory processes can, we argue, be described as self-determined in the exacting sense of that term, whereas behaviors that emanate from nonintegrated processes such as internal pressures and socially acquired introjects cannot. More accurately, we would say that in the former case the *degree of involvement of the self* in the initiation and regulation of action would be greater than in the latter case. We will now explicate these issues within the context of self-determination theory.

Introduction: The Organismic Dialectic

There is perhaps no type of theory for which the underlying meta-theory—the philosophical starting point—is more critical than for theories of the self. Because the self is the core of what we are, the characterization of self (whether explicit or implicit) reflects what the theorists assume the nature of the human being to be.

According to our perspective, a central feature of human nature is an active agency and a synthetic tendency that we ascribe to the self. From the time of birth, human beings are oriented toward the

active exercise of their capacities and interests. They seek out optimal challenges, and they attempt to master and integrate new experiences. In other words, they are engaged in a developmental process that is intrinsic to their nature and is characterized by the tendency toward a more elaborate and extensive organization. Interestingly, this synthetic nature, which is displayed as a tendency toward negentropy, is not unique to human personality development but is evinced by all living organisms (von Bertalanffy, 1968) at many levels of a systems analysis. As Piaget (1971) put it, the nature of life is always to overtake itself. In our view this nature, this tendency toward elaborated organization, is central to the definition and development of self (Ryan, in press).

Activity and integration do not occur in a vacuum, however, nor do the active, synthetic tendencies of the self always predominate. Enhancing one's self involves assimilating one's world (especially the social world), and although that world can be supportive of integrative development, it can also be resistant—even antagonistic—to it. Our theory of self-determination is concerned with this dialectical struggle between the active self and the various forces, both within and without, that the person encounters in the process of development. Further, it is concerned with the social context within which those encounters occur, which can either support or forestall development toward harmonious relations within and between persons. An obvious implication of this dialectical viewpoint is that synthesis of personality does not invariably succeed, and that some aspects of interpersonal and cultural environments conduce toward fractionation rather than integration and toward alienation rather than cohesion.

The development of self begins with intrinsic activity and the tendency toward coherent elaboration. One implication of this view is that there is a nascent self—a set of innate interests, potentials, and processes (most notably the organismic integration process)—that develops as the person engages in the dialectical interaction with unintegrated aspects of itself and the surrounds. Stated differently, the development of self entails integrating new experiences and regulatory processes with one's intrinsic self. To the extent that integration fully occurs, the behaviors that are thus regulated will be said to be self-determined. To the extent that integration does not fully occur, however, scripts or schemata from the social world may

be taken in but not integrated. In such circumstances, these "scripts" will provide the bases for non-self-determined behavior.

Since the central elements of our theory are the active organism, the social context, and the self, we shall briefly consider each in turn.

THE ACTIVE ORGANISM

Central to organismic activity are the concepts of intrinsic motivation and organismic integration.

Intrinsic motivation is inseparably intertwined with the idea of a spontaneous or active nature. It emerged as a concept in empirical psychology about the time this annual symposium began, owing in large part to the pioneering work of Harlow (1950, 1953), a participant in the first symposium. Subsequently, the important conceptual statement by White (1959, 1960), a later symposium participant, not only introduced the closely linked idea of effectance motivation, but likened it to what the psychoanalytic ego psychologists refer to as independent ego energy (Hartmann, 1939/1958). By postulating an intrinsic need for competence, White (1959) was also placing the concept of intrinsic motivation in a tradition that can be traced to Murray (1938), whose analyses of interview data led him to postulate numerous psychological (i.e., non-drive-based) needs. And by reviewing the animal learning studies of the early 1950s (e.g., Butler, 1953; Montgomery, 1953) as well as evidence within the psychoanalytic tradition, White's work represented a landmark integrative analysis.

Increasingly through the 1950s and 1960s, the concept of intrinsic motivation gained importance and was discussed primarily in relation to the two dominant behavioral theories of that era—operant theory (Skinner, 1953) and drive theory (Hull, 1943). Its central message was that "voluntary" behaviors are *not* all a function of operationally separable reinforcements (as the Skinnerians had asserted) and that these reinforcement-independent behaviors are *not* derivative of tissue deficits (as the Hullians had asserted). Instead, they are inherent in the nature of life, and their only necessary rewarding consequences are the spontaneous affects and cognitions that accompany them.

It has often been said that the rewards for an intrinsically moti-

vated activity are "in the activity itself," and though that is true in the sense that there are no separable external rewards, Berlyne (1971) correctly pointed out that rewarding consequences are in people, not activities. These consequences, in our view, are the feelings and thoughts that emerge spontaneously as people engage in the activity. The nature of these consequences (or more accurately, accompaniments) will become clear as we consider the needs and affects that are central to intrinsic motivation.

The idea of intrinsic motivation as a nonderivative motivational force has been discussed and defined differently within different theoretical traditions. We will consider four of these approaches in an attempt to provide a comprehensive characterization of intrinsic motivation and to address the issue of "rewarding consequences." The first approach states that intrinsically motivated behaviors can occur in the absence of any apparent external reward. This aspect of the definition, which emerged as a reaction to operant theory, is the basis of the operational definition and the "free-choice" measure of intrinsic motivation introduced by Deci (1971, 1972). Although this definition does not shed light on the internal psychological processes involved in intrinsic motivation, it has been of considerable importance both because of its challenge to operant psychology's tenet that all behavior is a function of external reinforcements and because the "free-choice" measure has served well as a laboratory measure of intrinsic motivation for nearly two decades. As we will show later, the measure has encountered some problems as the study of internal motivational processes has become more differentiated to include consideration of internalized regulatory processes.

A second definitional approach suggests that intrinsically motivated behaviors are those the person undertakes out of *interest*. Interest is what relates the self to external and internal experiences. It is the central affect of synthesis and is fundamental to the processes of organismic contact and assimilation. Accordingly, interest is essential for understanding self-development and for explicating an aspect of the psychological processes involved in intrinsic motivation. Thus, in both laboratory and applied studies of intrinsic motivation and autonomous development, self-reports of interest have played an important role as another operational measure of intrinsic motivation (e.g., Grolnick & Ryan, 1989; Ryan, Mims, & Koestner, 1983).

The third definitional approach has focused on the idea that intrinsically interesting activities are optimally challenging. Csikszentmihalyi (1975), for example, suggested that when activities are optimally challenging for a person's capacities, the person is likely to enjoy them and have an autotelic or "flow" experience. Deci (1975) proposed, further, that when people are intrinsically motivated they will seek out and attempt to conquer optimal challenges, and he pointed out that this idea is similar to Piaget's (1952) suggestion that people naturally approach optimally assimilable situations and to Hunt's (1965) proposal that the tendency to engage stimuli that are optimally discrepant from one's cognitive structure is inherent in information processing and development. The linking of optimal challenge to assimilation and intrinsic motivation has also been a fruitful research endeavor (Danner & Lonky, 1981; Harter, 1978).

The final component of our characterization of intrinsic motivation states that intrinsically motivated behaviors are based in innate psychological needs. In particular, White (1959) spoke of the need for effectance; deCharms (1968) of the need for personal causation; and Deci and Ryan (1980) of the needs for competence and self-determination. The idea of psychological needs, as mentioned, can be traced to Murray (1938), who identified achievement and autonomy as psychological needs, and also to Maslow (1943), who suggested that people have an innate need for what Goldstein (1939) termed "self-actualization."

The needs for competence and self-determination (autonomy) provide a comprehensive explanation for a wide range of exploratory and mastery behaviors and for the idea that individuals strive to develop their interests and capacities. Thus in most contexts these two needs are emphasized as the bases of intrinsic or mastery motivation (Ryan & Connell, 1988). However, an exclusive focus on mastery motivation fails to take account of the intrinsic social need that directs people's interest toward the development of relational bonds and toward a concern for interpersonally valued and culturally relevant activities.

Harlow's (1958) interesting work on affiliation, suggesting that there is a psychological need for love as distinct from the physiological need for sex, provided some evidence about people's tendency toward social relatedness and about the developmental significance of a healthy connectedness to others, as did the work on the need for

affiliation (McClelland, 1985; Shipley & Veroff, 1952) and the relatedness needs (Alderfer, 1972; Maslow, 1943).

In our own recent theorizing, we have attempted to synthesize the work on intrinsic needs by suggesting that there are three primary psychological needs. The need for *competence* encompasses people's strivings to control outcomes and to experience effectance; in other words, to understand the instrumentalities that lead to desired outcomes and to be able to reliably effect those instrumentalities. The need for *autonomy* (or self-determination) encompasses people's strivings to be agentic, to feel like the "origin" (deCharms, 1968) of their actions, and to have a voice or input in determining their own behavior. It concerns the desire to experience an internal perceived locus of causality with regard to action—that is, to experience one's actions as emanating from the self. Finally, the need for *relatedness* encompasses a person's strivings to relate to and care for others, to feel that those others are relating authentically to one's self, and to feel a satisfying and coherent involvement with the social world more generally. We believe these three innate psychological needs are reasonably exhaustive and help to explain a substantial amount of variance in human behavior and experience (e.g., Connell, 1990; Deci & Ryan, 1985b; Ryan, in press; Ryan & Lynch, 1989).

One heuristically useful consequence of specifying the human needs that relate to intrinsically motivated processes is that it allows us to predict the contextual conditions that will promote rather than undermine those processes. Contextual factors that allow the satisfaction of the basic psychological needs are theorized to promote intrinsic motivational processes, while those that thwart one or more of the basic needs are theorized to impair such processes—a point to which we will return.

Organismic integration refers to the most basic developmental strivings of the self that can be considered at two levels of analysis. First, there is the tendency toward unity in one's "self," that is, toward coherence in one's regulatory activity and experience. The process of organismic integration, operating at this level, entails differentiating aspects of one's interests and capacities and then working to bring them into a higher-order organization with other aspects of one's self. Second, there is the tendency toward interacting in a coherent and meaningful way with others so as to experience satisfying personal relationships with individuals and a harmonious

relation to the larger social order. Here too one is attempting to differentiate aspects of the social world and to create an organized set of relationships and representations. This dual-level process of seeking integration and cohesion both within oneself and with others is the essence of the active agentic self in development (Ryan, in press).

The concept of integration or organized complexity is at the heart of several important theories, and it is the combination of innate activity and integration that gives a theory an *organismic* character. In Piagetian theory, for example (Piaget, 1952), the concept of organization refers to the complementary processes of differentiating cognitive structures into elaborated elements and then integrating these differentiated elements into organized totalities. In psychoanalytic theory, the integrative process is often referred to as the synthetic function of the ego (Freud, 1923/1962; Nunberg, 1931).

According to self-determination theory (Deci & Ryan, 1985b), intrinsic motivation (as organized by the needs for competence, autonomy, and relatedness) is the energizing basis for natural organismic activity. It leads people to encounter new challenges that are optimal for their self-development and that can be integrated as development proceeds naturally. Like all natural processes, however, development through integration must be nurtured, and the inputs that are theorized to nurture this development are those that allow the person to satisfy the basic psychological needs for autonomy, competence, and relatedness. Thus, specifying the inherent psychological needs not only helps to characterize the "content" of human nature but also explains what organizes and, in a sense, delimits the direction of organismic integration.

The *dialectic* of development involves the integrative tendency of the self as it meets the forces and events that arise internally from organismic conditions and externally from contextual circumstances—what Greenspan (1979) referred to as the internal and external boundaries of the self. Integration, and thus development, results when the person is able to make contact with and assimilate events and thus gain a sense of being an agent with respect to them. But if the challenges one encounters are too far beyond an optimal level, development will be impaired or inhibited.

In describing organismic integration, we do not mean to portray development as autoplasmic. Development not only entails modify-

ing oneself, it involves acting on, and thus changing, the environment to make it more consistent with oneself. Furthermore, because of the person's nature (as specified here by the needs for competence, autonomy, and relatedness), some forces cannot be integrated. For example, processes or contents of socialization that are inconsistent with basic needs cannot be fully assimilated or integrated. As such, they may lead to conflict, internal fragmentation or inconsistency, and anomie. It is in this sense that the "content" of human nature delimits organismic integration.

THE SOCIAL CONTEXT

Human activity occurs within real or imagined social contexts. As we work, play, study, perform, or relax, other people often observe us, make requests of us, or coact with us. And even when others are not actually present, we may be aware of what they would like us to do or how they would like us to do it. The quality of the others' presence (whether actual or imagined), as well as the quality of the broader social context within which we interact with others, can have an important effect not only on our behavior but also on our feelings about ourselves and our overall development.

In the motivational analysis of self-determination theory (e.g., Deci & Ryan, 1985b; Grolnick & Ryan, 1989; Grolnick, Ryan, & Deci, 1990), we have often focused on three dimensions for assessing the social context. We refer to these as autonomy support, structure, and involvement. *Autonomy support* (as opposed to control) describes a context that provides choice, minimizes pressure to perform in specified ways, and encourages initiation. *Autonomy-supportive* relationships are those that are responsive with respect to an actor's interlial frame of reference. For example, teachers provide a social context for students, parents for children, managers for subordinates, and they—the teachers, parents, or managers—are being autonomy supportive of the target persons (the students, children, or subordinates) when they are able to promote action with respect to the target persons' perceptions and needs. *Structure* describes the extent to which behavior-outcome contingencies are understandable, expectations are clear, and feedback is provided. The degree of structure afforded by a social context directly affects one's sense of

efficacy and perceived control over outcomes (Skinner, Wellborn, & Connell, 1990). *Involvement* describes the degree to which significant others (e.g., parents for children) are interested in and devote time and energy to a relationship. It concerns others' dedication of psychological resources that the target person can use as a basis of support and an aid to effectance.

Social contexts that are autonomy supportive, that provide moderate structure, and that contain involved others are optimal for encouraging self-determined engagement and promoting development, because they facilitate the target person's expression and satisfaction of his or her basic psychological needs. These are the contexts that not only will promote effective behavior but will also help the person develop the inner resources required for adaptive self-regulation. On the other hand, social contexts that are controlling, that are unstructured or overstructured, or that do not provide involvement of significant others run the risk of undermining self-determination and impairing development by thwarting both the satisfaction of basic needs and the involvement of the agentic self.

THE SELF: IN BRIEF

The idea of inherent capacities and tendencies toward development—that is, of intrinsic motivation and organismic integration—suggests that the neonate is not *tabula rasa*, is not empty and waiting for the world to write its script. Instead, it suggests that there is an inherent rudimentary self, a set of processes and potentials (e.g., exploratory tendencies, innate preferences, and the motivation to relate and assimilate) that represent the beginning of a developing self. As one acts from this self—exercising capacities, following interests, and relating to others within varied social contexts—the self develops. Thus, although we assert that development is intrinsically motivated (is motivated by the needs for competence, autonomy, and relatedness), we do not believe that development *per se* is the goal of activity; rather, it is the by-product of activity that emanates from the phenomenal core of one's experience and satisfies one's basic psychological needs.

One very important corollary of the view that a nascent self develops through mastery-oriented encounters with the physical and

social surrounds is that only to the extent that some new element—some regulatory process, say—is brought into harmony with the characteristics of one's inherent self will that element become part of one's self. Only when an element is fully integrated will it represent self.

The Regulation of Behavior

Within empirical psychology, two types of concepts have been pivotal to explanations of behavioral regulation. The first type, which is a wholly mechanistic conceptualization, suggests that *associative bonds* develop between an internal or external stimulus event and a behavior to determine future behaviors. Terms such as conditioning and reinforcement (e.g., Hull, 1943; Pavlov, 1927; Skinner, 1953) have been used to describe how these associative bonds develop mechanistically to provide an environmental supplement to one's genetic endowment. The various associative theories do, of course, differ in many important respects, but the main similarity is that none of them gives a central causal role to experiential variables such as cognition, awareness, or consciousness. An organismic conceptualization, on the other hand, requires that some type of internal experiential variables be accorded determinative status in the regulation of behavior, and the concept that has most often been used for this purpose is *intention*.

An intention is a conscious or preconscious formulation about some future behavior or outcome the person will attempt to perform or achieve. Within empirical psychology, this approach can be most directly traced to the influence of Tolman (1932) and Lewin (1936) and to the emergence of the field of artificial intelligence and cognitive simulation (Newell, Shaw, & Simon, 1958). The concept of intention can be treated in relatively mechanistic ways (e.g., computers can be said to have intentions), or it can be used as a truly organismic concept. It is to the latter view that we subscribe.

According to this approach, people's behavior is intended to yield a desired outcome, whether that is a concrete, external object such as a monetary reward or a spontaneous, internal feeling such as enjoyment of an activity. If, because of an enduring aspect of their personality (Rotter, 1954) or because of the way the current situation

is structured (Seligman, 1975), people believe they will not be able to achieve a desired outcome, they are expected not to engage in intentional action. Instead, they will be helpless, disorganized, and unmotivated.

The theories that have evolved out of the "intentional" perspective have had two central concepts, one that refers to the desired outcome and its psychological value to the person, and one that refers to people's beliefs or expectations about being able to attain that outcome (e.g., Tolman, 1959; Vroom, 1964). Terms like valence, goals, and incentives have been used to describe outcomes, and terms like probabilities, instrumentalities, and expectancies have been used to refer to the person's attainment beliefs.

Two types of expectancies or attainment beliefs have been identified as critical for intentional behavior and have received a tremendous amount of empirical attention (e.g., Skinner, Chapman, & Baltes, 1988). The first type, *contingency expectations*, concern whether the person believes various outcomes are reliably linked to (contingent upon) particular behaviors (Rotter, 1966). The second type, *efficacy expectations*, refer to whether one believes one can competently perform the requisite instrumental actions (Bandura, 1977).

Heider (1958), in discussing the concept of intentionality, described a continuum from impersonal causation to personal causation, pointing out that only actions that are mediated by an intention can be said to be personally caused (i.e., motivated) whereas those that are not mediated by intentions are said to have impersonal causes (and are thus not properly termed motivated). DeCharms (1968), elaborating on Heider's concept of personal causation, introduced the terms internal and external perceived locus of causality to represent different types of personal causation. Internal perceived causality refers to one's seeing oneself as the locus of initiation for a behavior (and thus feeling like an "origin"), while external perceived causality describes intentional actions for which one perceives the source of initiation to be outside oneself (and thus feels like a "pawn"). DeCharms's theorizing thus suggests that one can be either an origin or a pawn and still be "intentional" in one's behavior.

The concept of an internal versus an external perceived locus of causality has often been confused with that of an internal versus an external locus of *control* (e.g., Weiner, 1986), yet the two have quite

different referents. Locus of *control*'s being internal versus external (Rotter, 1954, 1966) refers to whether a person believes that outcomes can (versus cannot) be reliably attained; in other words, it refers to contingency expectations, with efficacy expectations implicit within them. Thus locus of control allows one to predict whether a person is likely to engage in motivated (intentional) action. In contrast, the locus of *causality*'s being internal versus external refers to whether the experienced locus of initiation for a motivated (intentional) action is internal versus external to one's self (Ryan & Connell, 1989). As such, internal versus external *control* is somewhat parallel to the Heiderian distinction between personal and impersonal *causality*, whereas internal versus external *causality* can be best understood as referring to gradations or subcategories within personal causation and thus to variations in the degree to which an intentional action is self-determined. It is worth noting, however, that although there is a structural parallel between internal versus external control (Rotter, 1966) and personal versus impersonal causation (Heider, 1958), the two sets of terminology, when properly used, have rather different theoretical flavors because the locus of control concept is anchored in a reinforcement framework while the locus of causality concept derives from a phenomenological perspective (Spiegelberg, 1972).

INTRINSIC VERSUS EXTRINSIC MOTIVATION

DeCharms (1968), in discussing internal versus external causation, used the dichotomy between intrinsic and extrinsic motivation to characterize the different loci of causality. Intrinsically motivated behaviors (those behaviors that occur in the absence of external controls) were said to represent internal causality, whereas behaviors that are coerced or seduced by external forces were said to represent external causality. The intrinsic/extrinsic distinction sparked a great many experimental investigations (e.g., Deci, 1971, 1972; Kruglanski, Friedman, & Zeevi, 1971; Lepper, Green, & Nisbett, 1973; Ross, 1975) and considerable debate (e.g., Calder & Staw, 1975; Deci, Cassio, & Krusell, 1975). The central, and now well-known, finding from the studies was that extrinsic rewards can undermine intrinsic motivation, presumably through shifting the perceived locus of

causality from internal to external. This finding has been difficult to reconcile with the operant theory view that all behavior is "motivated" by extrinsic reinforcements (e.g., Reiss & Sushinsky, 1975) and with the expectancy theory view that the effects of intrinsic and extrinsic motivation are simply additive (e.g., Porter & Lawler, 1968).

BEHAVIORAL REGULATION: SELF-DETERMINATION

As the research on intrinsic motivation continued, a number of experiments began to show that extrinsic rewards do not necessarily undermine intrinsic motivation, even though the early research (e.g., Deci, 1971) indicated that on average they do. For example, Ryan (1982) found that positive feedback could either enhance or diminish intrinsic motivation, depending on the way the feedback was worded, and Ryan, Mims, and Koestner (1983) found that performance-contingent monetary rewards could either increase or decrease intrinsic motivation depending on the interpersonal context within which they were administered. Other studies (e.g., Koestner, Ryan, Bernieri, & Holt, 1984; Pallak, Costomiris, Sroka, & Pittman, 1982; Pittman, Davey, Alafat, Wetherill, & Kramer, 1980) revealed similar findings.

These and other types of evidence led us (Deci & Ryan, 1985b) to suggest that the simple intrinsic/extrinsic dichotomy had in a sense outlived its usefulness. The two types of motivation are dynamically different and need to be kept separate for some analytic purposes; but the undifferentiated approach of pitting extrinsic motivation against intrinsic motivation is misleading. In particular, we have suggested that characterizing all extrinsically motivated behavior as having a perceived external locus of causality is incorrect. Instead, whereas intrinsically motivated action is definitionally self-determined, as deCharms (1968) originally suggested, we argue that extrinsically motivated action can vary in its degree of self-determination, thus having either a relatively internal or a relatively external perceived locus of causality. Accordingly, any intentional action can be described using the perceived locus of causality continuum and thus can be said to be more or less self-determined, a point we will return to in the section on internalization.

To summarize in categorical terms, we suggest that the regulation of actions can be viewed as being *self-determined*, *controlled*, or *amotivated*. Both self-determined and controlled behaviors are intentional, though only self-determined behaviors involve a true sense of choice, a sense of feeling free in doing what one has chosen to do. Controlled behaviors, although undertaken with the *intent* of achieving an outcome, are not truly chosen. Rather, they are compelled by some internal or external force; one feels one *has to* do them, whether to attain a monetary payment or to appease some generalized sense of authority. Both self-determined and controlled behaviors require at least a moderate sense of being able to *control* or attain outcomes (that is, they require contingency and efficacy beliefs), though as noted they differ greatly in how the behaviors are initiated and regulated.

Amotivated actions, in contrast, are those whose occurrence is not mediated by intentionality. In other words, amotivation with respect to an action refers to the person's being ineffective in regulating it; its occurrence is thus experienced as impersonally caused.

Having differentiated intentional actions along a perceived locus of causality continuum, anchored by self-determination and control, it would be instructive to return to the concept of human agency. Agency, as we previously noted, is central to an organismic perspective; it describes the inherent tendency of organisms to originate behavior, to relate to and assimilate events, and to gain a sense of effectance. In human psychology, this spontaneous, agentic tendency is the basis of self-determination. Accordingly, in our theory, an intentional action would be said to typify human agency only to the extent that it is self-determined. Behavior that is initiated by external or internal prods and coercion lacks a sense of volition or choice and would not be said to represent true agency, even though it is intentional.

Theories that do not distinguish between self-determined and controlled behavior—that do not have the concept of autonomy (or self-determination) as an integral aspect—often confuse the meaning of agency. A case in point is a recent discussion of the topic by Bandura (1989). After summarily dismissing the concept of "autonomous agency" by defining it as action that is "wholly independent of environmental influences," Bandura ascribed agency to any intentional action, adding that self-efficacy is the central mechanism of

agency. The problem in doing that, however, is that people can be intentional, with high efficacy expectations, and yet lack a sense of psychological freedom with respect to the outcomes they are competent at attaining. They can have self-efficacy and still be pawns, driven toward action or outcomes either by heteronomous forces or by introjected pressures. By equating the concepts of agency and intentionality, self-efficacy theory implicitly makes the peculiar application of the term "agency" to cases where one is a pawn, thereby continuing to miss the important distinction that is made by the concept of self-determination (or autonomy). The idea of human agency properly refers to action that is characterized by an internal perceived causality—that is self-determined—rather than to all intentional action.

This point is much more than a theoretical quibble. As we will see later, in the section on culture, it is integral to a meaningful understanding of how people can be involved yet still be free with respect to economic and political forces in their societal context.

Amotivation. Unlike self-determined and controlled behavior, amotivated action is not intentional—that is, the person does not try to do it—and as such it represents what Heider referred to as impersonal causation. A clear though uninteresting example would be someone's being unexpectedly knocked over from behind. There is movement in the affected person but no intention, and in a certain sense the movement would not even be considered a behavior. A more classic instance of amotivation is the type of passivity or disorganized action that results from the experience of not being able to achieve a desired outcome, whether because of one's own incompetence in that domain or because of some barrier such as a rigid, arbitrary authority who dispenses outcomes in an unpredictable way. In spite of wanting an outcome, one will not act in a predictable, goal-oriented fashion because of the experienced inability to attain it. There may be action, but it is likely to be disorganized and accompanied by the feelings of frustration, fear, or depression. This type of amotivation occurs at the external boundary—the boundary between the person and the external world. Amotivation at the external boundary is similar to what Seligman (1975) called helplessness.

A more interesting and complex instance of amotivation is exemplified by a man who actively intends one behavior (for example,

not hitting his friend) yet behaves in a different way (he hits the friend). He has an intention to behave one way, yet he cannot control himself. Of course, the action of hitting is motivated by a dynamic, nonconscious process; but with respect to the behavior of *not hitting* there is amotivation, a helplessness with regard to execution of the intention. This represents amotivation at the internal boundary (the boundary between the self and nonintegrated internal forces). One is ineffective or amotivated with respect to forces, such as affects or impulses, that are within one rather than forces that are in the environment.

INTRINSIC/EXTRINSIC REVISITED

The dichotomy that was posed in the early studies between intrinsic motivation and extrinsic control does represent the paradigmatic example of the difference between an internal and an external perceived locus of causality (between self-determined and controlled action). Intrinsic motivation is the prototypical form of self-determination: with a full sense of choice, with the experience of doing what one wants, and without the feeling of coercion or compulsion, one spontaneously engages in an activity that interests one. The action emanates from oneself and is thus *self-determined*. By focusing on intrinsic motivation as a starting point for studying self-determination, researchers have been able to detail the characteristics of behavior that epitomizes self-determination—behavior that represents a template against which other behaviors can be compared. Thus, for operational purposes, we would say that the more closely the qualities of a behavior approximate those of intrinsically motivated behavior, the more that behavior would be said to be self-determined.

The behaviors that were referred to as "extrinsically motivated" in most of the experiments of the past two decades are those that were either coerced or seduced by externally administered consequences—the receipt of a reward or the avoidance of punishment, for example. The convincing evidence that the rewards and threats were controlling (and thus that the behaviors were controlled) was that when they were given to subjects for doing an intrinsically interesting activity, the subjects typically lost interest in the activity

and were willing to continue it only if the external inducement continued. The subjects' behavior had become dependent upon those inducements, and the perceived locus of causality changed from internal to external.

As we mentioned earlier, however, the presence of an extrinsic incentive does not ensure external causality or controlled behavior. Experiments have shown, for example, that a person can be autonomous or self-determined in the presence of extrinsic rewards or structures (Ryan, Mims, & Koestner, 1983), and thus we would say that the pursuit of extrinsic goals can be fully endorsed by one's self. Accordingly, extrinsically motivated behavior may have either an external or an internal perceived locus of causality.

One process that is central for externally prompted (i.e., extrinsically motivated) behaviors' becoming self-determined is described by the idea of internalization. That term has been used by many theorists, with widely differing theoretical and metatheoretical perspectives, to describe the change from outer to inner regulation (e.g., Collins, 1977; English & English, 1958; Hartmann & Loewenstein, 1962; Lepper, 1983). Schafer's (1968) description of internalization as a process by which people *actively transform* external regulations into internal regulations is perhaps the most compatible with our own view, because it emphasizes that internalization is something the person does—something, we would say, that *the person is motivated to do*—rather than something that is *done to the person*.

In a developmental analysis we have outlined a continuum representing the degree to which the regulation of a nonintrinsically motivated behavior has been internalized (e.g., Deci & Ryan, 1985b; Ryan & Connell, 1989; Ryan, Connell, & Deci, 1985). We begin with the assumption that many behaviors and values come to be acquired in the course of socialization that were not originally interesting or intrinsically motivated but that may be important for effective functioning in the social world. Typically such behaviors have to be initially encouraged through extrinsic structures, contingent approval, or tangible incentives. The goal of socialization, however, entails acceptance by the individual of the value of such culturally transmitted practices and taking responsibility for performing them. Ultimately, a person who is fully socialized with respect to a behavior would perform it volitionally, independent of the original prompt. This requires *internalization*, and our analysis asserts that, as one

more fully internalizes and accepts the regulation of behavior, one will experience a greater sense of willingness and self-initiation.

INTERNALIZATION: SELF-DETERMINED EXTRINSIC MOTIVATION

As people interact with the social order, they adapt to some aspects of it while modifying others to make them more conducive to satisfying their needs for autonomy, competence, and relatedness. Internalization is the process through which people make the adaptation—through which they accept values and regulatory processes that are endorsed by the social order but are not intrinsically appealing. In our view, internalization is a natural outcome of organismic integration that occurs as people encounter the challenge of achieving meaningful relationships with others. To be accepted as part of a dyad, family, group, or culture, people must share social practices and ideals, whether or not the practices are interesting or their personal value is initially apparent. To a large extent, it is the need for relatedness that provides the primary impetus for internalizing values and regulatory processes. Wanting to find their place in the social order, people are motivated to connect with and accommodate to that order.

Integrating social values and regulatory processes requires more than merely accommodating, however; it requires identifying with them and bringing them into a coherent relation to other aspects of the self. Here the need for autonomy can be seen to be particularly important. To be self-determining with respect to internalized regulatory processes and structures, one must fully assimilate them; that is, one must accept them as one's own and bring them into a consistent relation to the other needs, processes, and values that represent self.

Elsewhere (Deci & Ryan, 1985b; Ryan & Connell, 1989), we have suggested that people can be more or less successful in their attempts at integration, and thus we described three types of internalized regulation that differ in the extent to which they represent autonomous self-regulation. Before any internalization has occurred, a person is likely to engage in an uninteresting activity only when requested to do so by another, with explicit or implicit re-

wards or sanctions accompanying the request. We label such behaviors *externally* regulated because they are done for the external inducement. The least self-determined of the three types of internalized regulation is referred to as *introjected regulation*. It occurs when one has taken in, or introjected, a value or structure but has not fully accepted it as one's own. In the classic forms of introjection, the socializing agent still figures phenomenally in the regulation of the action; compliance is thus associated with a sense of the other's approval, whereas transgressions connote imagined disapproval. In the more common forms it involves establishing "shoulds" or rules for action that are associated with or enforced by the expectations of self-approval or of avoiding guilt and anxiety. In either case, when regulations are introjected there is an inherent tension because the person is still in a sense "being regulated" rather than operating with an integrated sense of volition. Introjected regulatory processes can also be more or less critical and evaluative, and more or less demanding, depending on the quality of the original external structures and the social contexts in which they were acquired. Although varied in affective tone and intensity, however, they nonetheless represent instances of internal regulatory processes that have not been fully integrated with the self and thus accepted as one's own. Accordingly, introjected regulation does not represent self-determination.

If organismic integration continues to function with respect to an introjected regulatory process, one may identify with the importance of the activity for oneself and thus accept it as one's own. The regulation that would follow is referred to as *identified* regulation and represents greater self-determination than does introjected regulation. When the person has identified with a regulatory structure, there is less experience of pressure and conflict and less salience of guilt and anxiety. What may be missing, however, is consistency between this and other identifications that may have been internalized. For example, identifications between achievement strivings and caregiving roles can be strong within an individual and yet at times be antagonistic and conflictful. Thus the most self-determined form of internalized regulation is referred to as *integrated* regulation. One comes to experience an organization among regulatory processes within which they can harmoniously coexist. This would be accompanied by the feeling of integrity in action and cohesion of

the self. As one becomes more integrated, these various identifications would not remain "isolated molecules" but rather would find a smooth and balanced synthesis, being reciprocally assimilated and meaningfully hierarchically organized. When regulatory structures are well integrated one's action is experienced as personally valued and freely done. Thus integrated action is *authentic* in the full sense of emanating from the "author," of displaying full self-endorsement.

It is worth noting that even after a behavioral regulation has been fully integrated, it is typically still extrinsically motivated because it is usually still an instrumental action—done because of its importance for achieving personal goals rather than because of its inherent or intrinsic interest. Nonetheless it would be self-determined, because it would be undertaken willingly and with no sense of coercion.

To summarize, in this theoretical analysis of internalization we have attempted to show that extrinsically motivated behaviors can be more or less self-determined; that internalization, which is a natural aspect of organismic integration, is the underlying process that allows people to be self-determined with respect to extrinsic motivation; that this process is motivated by people's basic psychological needs; and that some internalized regulatory structures have not been (and may never be) integrated with the self and thus do not represent self-determination. We turn now to a theoretical consideration of emotional regulation in which we will also suggest that behavior motivated by one's emotions may also either be or not be self-determined.

EMOTIONAL INTEGRATION

Emotions have been a focus of psychological study for over a century (e.g., Lange, 1885). Most psychologists interested in the topic agree that emotions involve a physiological response to some real or imagined stimulus, accompanied by an experiential component. There is less agreement about whether, if that experiential component is blocked from awareness, there is still an emotion, though we strongly subscribe to the view that there is. Further, many theorists also agree that the physiological change and experience that consti-

tute an emotion are associated with an inherent impulse or behavioral tendency (e.g., James, 1890) that can result in action. When one is angry, for example, the impulse may be to strike; when frightened, to flee; and when joyful, to exclaim.

Although there is disagreement about the extent of cognitive and self-relevant mediators between the referent stimulus and the subsequent emotional behavior (e.g., James, 1890; Schachter, 1966), it seems useful to consider three aspects of that mediating process. The first two, as proposed by Arnold (1960), are the immediate intuitive appraisals and the slower reflective judgments through which people interpret and give meaning to the stimulus. These processes are the antecedents of emotional experience. The third mediating element concerns the regulation of the behavior that is motivated (i.e., energized) by the emotion. In our view the development of self-determination with respect to emotions relates to both the second and third of these mediating elements. It involves learning both to reflectively interpret stimuli in more integrated ways and to regulate one's emotion-motivated behavior more autonomously.

Several current theories of emotion (e.g., Weiner, 1986) interpret reflective judgment as a self-attributional process. They posit that people assess outcomes with respect to such dimensions as internality, controllability, globality, and stability and then feel particular emotions as a function of the resulting attributions. Our understanding of the role of cognitive activity as a mediator of emotional experience is quite different, however, and can be seen to be much closer to the position expressed by Rogers (1951) when he suggested that emotions are a function of the relation of a stimulus to one's organismic and self-actualization.

From our motivational perspective, the interpretive process involves assessing the relation of events and stimuli to one's needs, goals, and expectations. The interpretation becomes the proximal antecedent of the emotion. Stimuli that threaten one's needs or goals may occasion fear or anger, for example, whereas those that satisfy them may occasion enjoyment or pride. This interpretive process, however, can operate with respect to introjects and other unintegrated aspects of a person or with respect to intrinsic and integrated aspects. When the internal state or standard against which a stimulus is appraised represents an integrated aspect of one's self, the emotional experience will be more integrated—that is, it will be

more fully in awareness and will more authentically reflect the self. When the basis for appraisal is an unintegrated aspect of the person, however, as with ego involvement or contingent self-worth, the emotion will be less flexible and more pressured; it may be less fully experienced and more subject to defensive reactions such as projection. It will less fully express one's self.

The other issue concerning self-determination (or integration) with respect to emotions relates to the regulation of emotion-motivated behavior and concerns the extent to which a behavior that follows an emotion is determined by the emotion itself or is chosen by the person. Emotions are strong internal forces, with evolutionarily determined and genetically endowed behavioral tendencies (e.g., James, 1890) that can lead automatically to behaviors or can, to a greater or lesser extent, be mediated by intentional processes. As a person develops within the self a set of flexible and coherent processes and structures for regulating emotions, that person will become more self-determined with respect to emotional behaviors. The emotion will serve as an input to the process of behavioral choice rather than determining the behavior. In other words, the person will experience choice with respect to the behavior that is based on a full awareness of the emotion and of the goals and values relevant to it.

In many ways, the process of integration at the internal boundary (e.g., emotional integration) is similar to integration at the external boundary. Both involve developing integrated regulatory processes and values that relate to one's basic sense of self. Out of the need for competence (i.e., to be effective), the need for relatedness (to be involved with others in a satisfying way), and the need for autonomy (to act in accord with the self), people gradually develop and integrate processes and structures for interpreting information and regulating their experience and action.

As with other types of motivated behavior, our theory describes three broad classes of emotion-motivated behavior. Some emotional behaviors, we assert, are accompanied by a true sense of choice and freedom; they have an internal perceived locus of causality and are said to be self-determined. Other emotional behaviors are accompanied by a sense of pressure, for example, to preserve self-worth or to avoid guilt; they have an external perceived locus of causality and are referred to as being controlled. Controlled behaviors, like self-

determined ones, are intentional; the person acts to achieve a desired outcome or effect. Yet with controlled behaviors the person feels compelled rather than free, and the behaviors are rigid rather than flexible. Finally, there are still other emotional behaviors in which one is overwhelmed by an emotion and its impulses; one behaves automatically because one is unable to regulate the behavior intentionally. Indeed, such behaviors may even occur in spite of one's intending not to do them. Here the regulation of the emotion-driven action is said to be amotivated, in the sense that it is not mediated, regulated, or endorsed by a sense of intentionality.

Empirical Evidence: The Integrated Self

The development of self involves an organismic integration process through which intrinsic interests and capacities become elaborated and refined. One develops a set of flexible, unified regulatory processes and values that allow one to engage more willingly in socially prompted and emotionally motivated activities, while feeling both self-determined and connected with others. Related to this view is the premise that many processes, structures, and forces that are internal to the person are not integral to the self. Introjected structures, for example, are not considered integrated with one's self, nor are emotions for which integrated interpretive and regulatory processes have not been developed.

In the past few years, we and our associates at Rochester and elsewhere have begun three types of research to test this formulation. Let us consider these in turn.

INTERNALLY CONTROLLING REGULATION: EXPERIMENTS

Ryan (1982) first argued that some internal events relevant to the initiation and regulation of behavior are controlling and pressuring and thus inhibit autonomy. The initial experimental research on this topic (Ryan, 1982) employed the concept of ego involvement, a concept that has been prominent in psychology for many years.

Sherif and Cantril (1947) defined ego involvement in terms of

the contents of one's ego that provide standards of judgment or frames of reference. Both Alper (1942) and Greenwald (1982) asserted that there has been no general agreement about how best to treat the concept theoretically, although Alper (1942) suggested that experimenters who had researched the concept seem to have agreed that it means "threats to self-esteem." Greenwald (1982) later proposed that there are three types of ego involvement, agreeing that contingent self-esteem is one of the forms. Breckler and Greenwald (1986) later equated the idea of self-esteem-contingent ego involvement with achievement motivation (McClelland, Atkinson, Clark, & Lowell, 1953), a comparison we believe is inappropriate. Achievement motivation is based on the desire to match an internal standard, although, as we have argued elsewhere (e.g., Ryan, Connell, & Grolnick, in press), the standard can be highly variable in how well it is integrated. Achievement can, for example, be motivated by standards that serve to preserve contingent self-esteem or by standards that are fully and flexibly endorsed by one's self. Thus achievement motivation can be more or less self-determined.

The general strategy in the experiments on ego-involvement has been to induce an ego-involved (i.e., self-esteem contingent) orientation in some subjects and a task-involved orientation in others while they work on an interesting activity. The first agenda in this research strategy was to assess the subsequent intrinsic motivation for the target activity of ego-involved versus task-involved subjects. The idea was that if ego involvement decreased subjects' intrinsic motivation for the target activity, this would indicate that the ego-involved regulatory process is controlling and thus restricts subjects' self-determination.

To test this experimentally, Ryan (1982) reasoned that students at a competitive university could easily become ego-involved (self-esteem contingent) in their performance on achievement tasks. Thus he employed a hidden-figures task and told the "ego-involved" subjects that performance on this task reflected creative intelligence. "In fact," he added, "hidden-figures tasks are often used in IQ tests." Ryan suggested that this would lead subjects to be contingently evaluative of themselves and thus internally controlling in their approach to the task, thus precluding true self-determination. A decrease in intrinsic motivation was predicted for ego-involved subjects relative to those who were task involved. Results sup-

ported this prediction; subjects who had been given the ego-involvement induction displayed less subsequent intrinsic motivation, as assessed by the behavioral free-choice measure, than subjects who had been given a rather neutral, task-involved induction. Plant and Ryan (1985) replicated this result, as did Koestner, Zuckerman, and Koestner (1987) and Ryan and Deci (1989). In the Ryan and Deci experiment the instructions were automated, using a tape recorder, so the subjects would not have to interact with the experimenter. That minimized the extent to which the detrimental effect could be attributed to interpersonal rather than intrapsychic controlling processes.

Plant and Ryan (1985) took a complementary approach to exploring this problem. They reasoned that if subjects are made "objectively self-aware" (Duval & Wicklund, 1972)—that is, aware of themselves as if observed from the outside—they would be more likely to be controlling in regulating themselves. In their study some subjects worked on an interesting activity in front of a mirror and some worked in front of a video camera, both procedures having previously been used to induce objective self-awareness. Comparison subjects worked on the task in conditions not expected to induce objective self-awareness. Results indicated, as predicted, that objective self-awareness decreased subjects' intrinsic motivation, thus further confirming that the regulatory process we refer to as *internally controlling* does not represent self-determination and is to some extent antagonistic to it.

Performance feedback is extremely important when people are ego-involved in achievement, because performance outcomes are the basis on which they judge their self-worth. The function of positive feedback is thus instrumental for attaining their internally controlling goal of maintaining self-esteem. When they get positive feedback, they have accomplished their goal and have no further need to persist at the activity. On the other hand, if ego-involved subjects do not get positive feedback (particularly on an ambiguous task where they cannot reliably assess their own performance), they will not have achieved the goal of succeeding and thus maintaining their sense of self-worth. Consequently, they are very likely to persist at the activity during the subsequent free-choice period, so that at least they can observe improvement in themselves and thus have some "self-administered" positive feedback. In the Ryan and Deci

(1989) experiment, ego-involved subjects received either positive feedback or no feedback after their performance on a task that involved drawing with their nondominant hand. As predicted, subjects who did not receive positive feedback persisted significantly longer than those who did, a finding opposite from the more typical pattern of positive feedback's enhancing intrinsically motivated persistence.

The study helps to clarify the conditions under which internally controlling regulation will lead people to persist at an activity—when the persistence may be instrumental to attaining their internal, controlling goal. However, it also highlights the methodological problem that free-choice behavior, long used to assess intrinsic motivation, may not be a wholly appropriate measure when used in experiments that stimulate ego-involvement. Intrinsic motivation and ego-involvement are different (in fact, incompatible) forms of internal motivation, yet they sometimes have the same behavioral manifestation of persistence (Deci & Ryan, 1985b).

ASSESSMENTS OF REASONS FOR ACTING

A second type of research that has differentiated types of internal motivation and explored the extent to which the regulation of action is autonomous focuses on the reasons people report or endorse for engaging in various actions. Reasons can vary from being very external (e.g., I do it because others make me) to being intrinsic (e.g., I do it because it's fun) and can include each of the internalized forms of regulation. Thus, the reasons people give for their actions can vary along the continuum from an external to an internal perceived locus of causality.

Ryan and Connell (1989) provided initial evidence for this conceptualization by asking children to endorse the salience of external, introjected, identified, and intrinsic reasons for doing their schoolwork. The data confirmed that the external, introjected, identified, and intrinsic scales formed a simplexlike pattern, suggesting that the four regulatory styles can be ordered along a single dimension of self-determination or autonomy. Further, the researchers found that the more autonomous styles (identification and intrinsic) were positively correlated with enjoyment of school, expenditure of effort,

proactive coping, and perception of the classroom context as being autonomy supportive, while the less autonomous styles were correlated with anxiety and poor coping. Introjection in particular was strongly correlated with anxiety and with anxiety amplification following failure, thus highlighting the inner tension resulting from unintegrated proscriptions. In a study using the same survey of reasons, Grolnick and Ryan (1987) found that students who endorsed more autonomous reasons for school-related behaviors had better long-term memory for material they were exposed to in a learning task. This suggests that the relative autonomy of achievement-related behavior influences the quality of learning.

Ryan and Connell (1989) also presented a scale of prosocial self-regulation during middle childhood and adolescence that assessed external, introjected, and identified styles of regulation. These scales again showed intercorrelations conforming to a simplexlike pattern, and the researchers found that identified regulation in the prosocial domain was associated with empathy, moral reasoning, and positive relatedness to others, indicating that more autonomous self-regulation is associated with a variety of positive outcomes.

Taken together, work with the two questionnaires suggests that it is useful to understand regulatory styles in terms of a gradient of autonomy or self-determination and that the styles reflecting greater autonomy are associated with a range of variables that indicate higher levels of personal adjustment and effective functioning. The difference between the introjected style—the internal regulatory style that is quite controlling—and the identified and intrinsic styles is particularly important for illustrating that some internal regulatory processes and values are *not* fully self-determined.

Vallerand, Blais, Briere, and Pelletier (1989) developed a related scale, in French, for assessing reasons in the academic domain among college-age students and found results that complemented those of Ryan and Connell. Their scale included an amotivation subscale as well, and they found, for example, that amotivation correlated negatively with interest and with satisfaction in school, whereas identification correlated positively with both.

Blais, Sabourin, Boucher, and Vallerand (1990) assessed adults' reasons for living with their spouses by elaborating on this methodology. They included six types of reasons—amotivation, exter-

nal, introjected, identified, integrated, and intrinsic—and found, in a sample of 63 heterosexual couples, that the six reason categories conformed to a simplex model (again supporting the idea of a self-determination continuum). Results also showed that the three regulatory styles constituting absence of self-determination (amotivation, external, and introjected) all correlated significantly negatively with dyadic adjustment, with agreement in 26 areas of marital relations (e.g., finances, contraception), and with general marital happiness. On the other hand, the three regulatory styles constituting higher levels of self-determination (identification, integration, and intrinsic) all correlated significantly positively with those same variables. Finally, these researchers tested a path model in which each partner's level of self-determination (i.e., regulatory style) predicted his or her perceptions of the couple's adaptive behaviors, which in turn predicted each partner's happiness/satisfaction in the relationship. This model explained 61% of the variance for the male's marital satisfaction and 55% of the variance for the female's, thereby further supporting the utility of distinguishing degrees of self-determination in one's motivation.

Ongoing work in various domains is continuing to show the importance of the continuum of relative autonomy. New results in the areas of religion (King, 1990; O'Connor & Vallerand, 1990), health care programs (Plant, 1990), and schools (Grolnick, Ryan, & Deci, 1990) indicate that the more integrated and autonomous one's motives for engagement, the more positive are the outcomes and attitudes associated with it.

INDIVIDUAL DIFFERENCES: CAUSALITY ORIENTATIONS

The third line of research relevant to organismic integration and self-determination involves the concept of general causality orientations (Deci & Ryan, 1985b). The *autonomy orientation* describes people's general tendency to orient toward inputs relevant to interest and choice (inputs that promote self-determination); the *control orientation* describes people's general tendency to orient toward salient controls in initiating and regulating their behavior; and the *impersonal orientation* describes people's general tendency to orient toward

cues that signify incompetence or lack of control and are thus amotivating.

The construction and validation of an instrument to assess general causality orientations was reported in a paper by Deci and Ryan (1985a). In it we suggested that everyone is to some degree autonomy oriented, to some degree control oriented, and to some degree impersonally oriented. Thus the scale gives three subscale scores, one for each orientation, which can be used separately or together in making various predictions.

Briefly, the autonomy orientation was positively correlated with self-esteem, ego development, self-actualization, and the tendency to support other people's self-determination. The control orientation, in contrast, was positively correlated with the type-A coronary-prone behavior pattern and with public self-consciousness, and the impersonal orientation was positively related to self-derogation, social anxiety, and an external locus of control (which, as we mentioned earlier, assesses the belief about behavior-outcome independence that relates to nonintentionality). Other research using the scale has shown that cardiac patients high on the autonomy orientation viewed their surgery more as a challenge than as a threat and reported more positive postoperative attitudes than did patients low on the autonomy orientation (King, 1984). Also, the impersonal orientation discriminated restrictive anorexic patients from patients with other subtypes of eating disorders and from matched comparison subjects (Strauss & Ryan, 1987).

In a recent study of general causality orientations, Koestner, Bernieri, and Zuckerman (1991) directly explored the relation of autonomy to integration in personality. Their strategy was to convert scores on the autonomy and control orientations of their college-student subjects to z-scores and to use those scores to form an autonomy-oriented group and a control-oriented group. They then explored the consistency of behavior, attitudes, and traits among these two groups, with the general hypothesis that autonomy-oriented subjects would evince greater integration or consistency across these aspects of personality than would control-oriented subjects.

First, the authors considered the relation between the free-choice behavioral measure and the self-report-of-interest measure of intrinsic motivation, because previous studies had shown only modest correlations between these two measures (Harackiewicz,

1979; Ryan, Mims, & Koestner, 1983). Koestner et al. (1991) used the data from two intrinsic motivation laboratory experiments and looked separately at the correlations between attitudes and behavior within the autonomy-oriented group and the control-oriented group. In both experiments the correlation for the autonomy-oriented subjects was in excess of 0.6, whereas for the control-oriented subjects there was no correlation. It appears from these data that the more autonomy-oriented subjects display greater integration between behaviors and feelings than do the less self-determined subjects. The behavior of the latter group is apparently based on controlling thoughts or contingencies rather than on the subjects' feelings and interests.

In a second study, Koestner et al. (1991) had subjects come to a lab and complete a trait measure of conscientiousness. As the subjects were about to leave, the experimenter gave them a questionnaire and asked them to complete it at home and drop it off at the Psychology Department office. The researchers then correlated subjects' conscientiousness score with the behavior of returning the questionnaire and found that this trait-behavior correlation for the autonomy-oriented group was significantly greater than for the control-oriented group. Finally, the researchers had a friend of each subject rate the person on various traits, including conscientiousness, and they correlated the self- and peer ratings. Here the correlation for the autonomy-oriented subjects was marginally stronger than for the control-oriented subjects. Taken together, these studies provide initial support for the theoretical proposition that autonomy is associated with greater congruence between self-report and action and reflects greater integration in personality.

Results of a study by Lonky and Reihman (1990) complemented those of Koestner et al. (1991). These researchers developed a domain-specific causality orientations scale to examine motivational orientations toward school achievement, and they used the measure to investigate whether college students' orientations would predict cheating under varied conditions. In the study, Lonky and Reihman found an association between motivational orientation and moral reasoning, with greater autonomy predicting higher levels of moral reasoning (more principled reasoning). Furthermore, motivational orientations did predict cheating, in that subjects high in autonomy cheated less and subjects high in control and

impersonal orientations cheated more. From this one could infer that subjects who were more autonomous in their orientation seemed to display greater integration or consistency between the development of moral reasoning and morally relevant behavior, thus providing further evidence for the general association between integration and self-determination.

The Role of Social Contexts: Theory and Evidence

Intrinsic growth strivings are at the core of the self and are displayed through tendencies toward integration both within and between persons. People seek optimal challenges, as well as dealing with the situations they encounter, and in doing so they attempt to satisfy their basic needs for competence, autonomy, and relatedness. Thus, in their interactions with the environment, people seek competence-enhancing feedback, they attempt to express personal choice and initiative, and they work to feel meaningfully related to others. People's success in satisfying these needs and actualizing their growth strivings depends to a considerable extent on the interpersonal dynamics of the context within which they occur.

In our view, people give meaning to inputs from the real or imagined social environment, and those psychological meanings—what we have often referred to as the *functional significance* of inputs or contexts—represent the antecedents of action. The functional significance, we suggest, is based in the relation of the inputs to the person's opportunities for satisfying the three basic needs.

PROMOTING COMPETENCE AND AUTONOMY

Our early studies on facilitating contexts explored the role of competence feedback and autonomy support in the promotion of intrinsically motivated behaviors. We reasoned that feeling competent with respect to an activity—in other words, being reliably able to achieve desired outcomes and to experience effectance in action—is necessary for intentional or motivated behavior. To the extent that circumstances afford access to competence-relevant information and clarity of contingencies, they are more likely to promote moti-

vated, intentional action. Conversely, a context is likely to be experienced as amotivating if it ensures or signifies that one cannot attain desired outcomes. Environments with inadequate structure—in other words, those that involve behavior-outcome independence (e.g., Seligman, 1975) or blocks to competence (Deci, Cascio, & Krusell, 1973)—have been found to amotivate.

Being motivated, however, does not ensure self-determination or its prototype, intrinsic motivation. Thus, for example, although positive feedback has often been found to increase intrinsic motivation (e.g., Boggiano & Ruble, 1979; Vallerand & Reid, 1984), other studies have shown definitively that promoting or affirming competence will enhance intrinsic motivation *only* when accompanied by a noncontrolling or autonomy-supportive ambience (Fisher, 1978; Ryan, 1982). In much of our writing, we have used the term *informational* to describe contexts that both promote competence and support autonomy by providing effectance-relevant inputs in the absence of control. Promoting or affirming competence in controlling situations (i.e., in the absence of autonomy support) does not enhance intrinsic motivation; rather, it promotes controlled intentional behavior (non-self-determined extrinsic motivation).

Since our primary agenda has been to differentiate motivated activity with respect to the concept of self-determination, much of our research has focused on the autonomy-supportive versus controlling dimension. We will briefly review that work, though detailed reviews appear elsewhere (Deci & Ryan, 1980, 1985b, 1987).

The initial experiments on intrinsic motivation indicated that task-contingent rewards (Deci, 1971), good-player awards (Lepper, Greene, & Nisbett, 1973), avoidance of unpleasant stimuli (Deci & Cascio, 1972), deadlines (Amabile, DeJong, & Lepper, 1976), imposed goals (Mossholder, 1980), surveillance (Lepper & Greene, 1975), and social evaluation (Smith, 1974) all undermined intrinsic motivation. These events, we suggest, tend to be experienced as controlling because the intent behind them is usually to "motivate" or pressure people to behave, think, or feel in specific ways. Pressuring locution such as "Be a good boy (girl) and do X" or "You should do X" has also been found to be controlling and to undermine intrinsic motivation (e.g., Koestner et al., 1984). In contrast, offering people explicit choices (Zuckerman, Porac, Lathin, Smith, & Deci, 1978) and using nonpressuring locution (Ryan et al., 1983)

have been found to maintain or enhance intrinsic motivation.

Field studies have yielded complementary findings. When the general interpersonal context, such as a classroom climate (Deci, Schwartz, Sheinman, & Ryan, 1981; Ryan & Grolnick, 1986) or a work-group climate (Deci, Connell, & Ryan, 1989), is experienced as autonomy supportive rather than controlling, it has been associated with greater intrinsic motivation, trust, self-worth, and satisfaction. All these studies therefore highlight the importance of autonomy support for promoting intrinsically motivated behavior.

In recent work we have also considered the contextual factor of interpersonal involvement as it affects motivation and self-determination. By involvement, we refer to significant others' devoting psychological and material resources to interactions with a target person.

For intrinsically motivated behavior, the immediate involvement of others is often not necessary. People frequently do what interests them quite by themselves, although research with children has indicated that such independent intrinsic activity (e.g., exploration and interest, without the immediate involvement of significant others) is most likely to occur if the children experience secure interpersonal attachments (e.g., Ainsworth, Blehar, Waters, & Wall, 1978). When people do not feel secure, immediate involvement may become very important, as was revealed in a recent study of 4- and 5-year-old children by Anderson, Manoogian, and Reznick (1976). The study included a so-called neutral condition in which the children were given an interesting task in the presence of an experimenter/stranger who had been instructed not to interact with them. According to the researchers, the children tried repeatedly to interact with the adult, who did not respond, and subsequently the children displayed very low intrinsic motivation for the target activity. By not being involved, the experimenter had inadvertently had a strongly negative effect on the children's intrinsic motivation for the activity.

For internalization, ongoing involvement may be even more important than for intrinsic motivation, because internalization requires the significant others to provide the regulatory structures and to endorse and demonstrate the values that become internalized. In one study of internalization, Grolnick and Ryan (1989) employed structured interviews to assess parents' involvement as well as their autonomy support and structure. The researchers reported that pa-

rental involvement predicted children's feeling able to attain their desired outcomes and that it supplemented the effects of autonomy support in predicting children's identified and autonomous self-regulation. Grolnick, Ryan, and Deci (1990) extended this by using structural equation modeling to show that children's perceptions of their parents' autonomy support and involvement predicted more autonomous self-regulation (which in turn predicted school achievement). Further, using a very different approach, Avery and Ryan (1988) examined preadolescents' "object representations" of their parents and found that perceived parental autonomy support and involvement were related to the nurturing quality of the object representation, which was also related to the children's self-esteem and positive peer relations.

Believing that significant others' autonomy support and involvement are optimal for promoting internalization and integration, Eghrari and Deci (1989) attempted, in a laboratory paradigm, to isolate specific factors that could contribute to creating that optimal context. They reasoned that internalization of regulations requires understanding or having a rationale for why the activity is important to one's personal goals. In addition, people should be more willing to identify with and accept responsibility for that important regulation if they do not feel pressured and if their own feelings or points of view are acknowledged. Results of the experiment indicated that in fact the combination of these three specific factors—rationale, low control, and acknowledgment of the person's perspective—did lead both to the highest level of subsequent behavioral self-regulation and to the highest level of feeling free and enjoying the activity (Eghrari & Deci, 1989).

AUTONOMY AND RELATEDNESS IN SOCIAL CONTEXTS

As we have said, involvement by significant others refers to the quantity of time, attention, and other resources devoted to a target person. Involvement can, however, vary in nature or quality. The others can relate to a target person in ways that acknowledge the target's individuality and frame of reference, or they can be involved as if the target were a social object, an instrument for the others' own

gratification. These differences in the quality of involvement are well captured by the autonomy-support dimension, so one can see how it is the *convergence* of involvement and autonomy support that promotes integration and development. For example, when an involved parent is also autonomy supportive, the child will be able to feel both autonomous and supported. But parents' involvement can also occur in combination with pressure and control. The technique of "withdrawal of love" is an example of how parents can be involved in an interpersonally controlling way. With this type of involvement, in which approval and affection are made contingent as a means of control, the child may have to sacrifice a sense of autonomy and personal development for the sake of approval. The need to be related is fundamental and basic, and the social context in which approval is made contingent upon particular behaviors can bring a person's needs for autonomy and relatedness into opposition. The unfortunate thing about this, of course, is that the synergy of these two needs' being satisfied is what promotes optimal development.

In contrast to our viewpoint, which asserts that the needs for autonomy and relatedness are complementary but that the social context may lead them to become antagonistic, a number of other theorists have suggested or implied that needs for autonomy and relatedness are themselves antithetical. For example, Steinberg and Silverberg (1986) have argued that developing autonomy entails breaking one's ties with family members, and other writers (e.g., Hare-Mustin & Marecek, 1986) seem to suggest that being concerned with autonomy precludes a concern with relatedness and interdependence. We believe, as indicated, that there is no inherent conflict between autonomy and relatedness, and we think the apparent contradiction between our viewpoint and the ones just mentioned results from the confusion of autonomy and independence. Consistently, we have defined autonomy as referring to a sense of endorsement and initiation with regard to one's own behavior. The opposite of autonomy is heteronomy, experienced as coercion or lack of self-determination and choice. In contrast, we construe the concept of independence as referring to the fact of not utilizing interpersonal resources, of not relying on others. Clearly, therefore, it is inappropriate to equate the concepts of autonomy and independence, and when theorists have done so, it has added confusion to

the literature on autonomy, relatedness, and independence.

One *can* be autonomously interdependent, thus being willingly dependent on others and authentically providing care for others. In addition, one can be nonautonomous in one's independence, by breaking relational ties to prove one's self-worth or appease some other controlling forces. The concepts that do appear to be antithetical, then, are not relatedness and autonomy, but relatedness and independence. In fact, as the earlier-mentioned Blais et al. (1990) study indicated, one is likely to feel most secure and satisfied in interdependent relationships when one feels autonomously involved and similarly experiences the other as being involved by choice. Furthermore, a study of adolescents by Ryan and Lynch (1989) showed that optimal adjustment involves maintaining relatedness with family while developing greater autonomy, and that independence or detachment involves weakening relational ties.

To summarize, we have argued that the basic needs for autonomy and relatedness are complementarily important to developing intrapsychic and interpersonal integration. Furthermore, the social context created by significant others plays a critical role in whether individuals' strivings to be both autonomous and related will be actualized. Contexts in which others are both autonomy supportive and involved allow satisfaction of the individual's basic needs and are thus optimal for development, whereas those that are controlling by virtue of contingent love and approval can pit the basic needs against each other and impair development. As research has shown, the experience of autonomy support is an important element not only in developing one's autonomous self-regulation but also in maintaining and deepening relatedness to others both during one's infancy (Frodi, Bridges, & Grolnick, 1985) and in later years (Ryan & Lynch, 1989). In short, optimal contexts allow the needs for autonomy and relatedness to work catalytically in forming and enriching intrapersonal and interpersonal development and integration (Ryan, in press).

The Self in Social Context

At the beginning of this chapter we pointed out that there are two important features to many of the current empirically based theories

of self: first, that self is viewed as a set of knowledge structures and cognitive mechanisms (e.g., Greenwald, 1988; Markus & Sentsis, 1982); second, that the cognitive structures are treated primarily as reflections of social evaluations (e.g., Harter, 1988; Schlenker, 1980), a view that is perhaps most clearly expressed by Cooley's (1902) idea of the "looking-glass self." The theory of self that we are presenting is substantially different from those theories, and we shall now summarize the differences.

MOTIVATIONAL PROCESSES

The processes of self are fundamentally motivational. The self is replete with knowledge, but it is not merely a set of knowledge structures, because it has at its core an energizing component that has been termed intrinsic or growth motivation. In functioning to satisfy basic needs, one's self-related processes are synthetic. They operate to reciprocally assimilate aspects of one's inner and outer environments, thus expressing one's interests, conquering challenges, and fully internalizing values, practices, and styles of being. Actions that emanate from the self are experienced as spontaneous and volitional because they stem from processes that reflect the most vital and integral aspects of one's personality.

Acting from the self, people seek harmony, though not quiescence. In other words, people strive for coherence among all the aspects of themselves and their world that are in awareness, and they seek to uncover new aspects of each that can then be differentiated and integrated. The natural tendency toward synthesis does not, however, mean that people suppress and rationalize dissonant aspects of themselves in order to achieve consistency and quiescence; rather, it means that they engage—even seek—inconsistencies and treat them as nutrients to growth, so long as the inconsistencies do not constitute challenges that are too far beyond what is optimal for their capacities. Insofar as denial, rationalization, and defensive consistency are in evidence, then processes antithetical to self-determination have been operative.

Self-related processes are characterized as agentic or self-determined. The fundamental affect underlying these processes is *interest*. Through interest one makes contact with arising emotions and

needs as well as with external inputs to action, and through interest one is able to guide or regulate intentional actions in a flexible, "choiceful" manner. This aids the tendency toward unity and coherence and the resultant experience of autonomy or self-determination.

There are, of course, other regulatory processes and structures within the person that do not represent self, but these unintegrated aspects exist in a kind of hierarchical relationship to the core self and thus are not simply "other selves." Many social-cognitive theories (e.g., Gergen, 1971; Kihlstrom & Cantor, 1984) specifically eschew the concept of a core self, positing instead that there are many different selves that have no natural or inherent relation to one another. Instead these selves are said to be interconnected as a function of the way the schemata have been "programmed" by social forces. For us, that view misses the essence of self and fails to acknowledge the developmental process of organismic integration with which human beings have been endowed by nature and through which self develops. To the extent that selves are separate in experience and functioning, there has been fractionization or lack of integration in personality. This is most likely to be in evidence under social conditions that lack the enhancing qualities of autonomy support, optimal structure, and involvement.

A REFLECTION OF SOCIAL PROCESSES?

The shifting focus in the field of motivation toward recognizing intrinsic motivation and organismic integration has emphasized that there are many innate aspects of the person. Infants are born with innate psychological needs—the needs for autonomy, competence, and relatedness—and throughout their lives they seek to satisfy these needs. They are born with general interests and innate capacities that go hand in hand to motivate their continued strivings for intrapersonal and interpersonal coherence. This view is *not*, however, equivalent to the view that abilities and interests are predetermined by genetics. Rather, it means that the innate organismic integrative process, combined with very general capacities and behavioral tendencies, is the starting point for an ongoing developmental process that involves interacting with the social and physical surrounds to

differentiate and integrate, to elaborate and construct, to reciprocally assimilate.

An understanding of the development of *self*, we contend, requires that one begin from the frame of reference of the individual rather than the social world. The self is not merely conditioned by the social context. Quite the contrary, a child actively elaborates the "self" by using nutriment from the social context. It is the child, acting from his or her experiential core, that is the basis for the continued development of self, and the importance of the social environment is that it can afford the supports for autonomy, effectance, and relatedness that are essential for growth and development.

The social context can, however, also thwart development and can "implant" structures or introjects that influence and regulate behavior but are not integral to the self. Only if regulations and values are eventually integrated through the activity of the agentic self will they become part of the self and thus reflect autonomy. Whether that integration occurs depends both on whether the content of the social learning is consistent with the person's basic needs and on whether the social context provides the nutriment required for integration.

IMPLICATIONS: THE TRUE SELF

The idea of a "true self" has fascinated people throughout the centuries. It appears in a variety of writings, yet it has seldom been discussed by empirical psychologists. In one sense that is easy to understand, because empirical psychologists have tended to employ metatheoretical assumptions and theoretical concepts that can be readily researched. By using mechanistic metatheories and by ruling concepts such as "true self" out of consideration, research can be conducted more straightforwardly. Yet human beings are, above all else, living organisms, and we believe it is possible to begin with a more organismic metatheory (one that acknowledges the human being as an active, living organism) and apply empirical methods to the study of difficult psychological concepts. Accordingly, the concept of a true self is open to empirical exploration, and we have begun such exploration as we have elaborated self-determination theory. The concept of true self needs more empirical explication; but

such work is possible, and the starting point is the concept of intrinsic motivation. By studying the qualities of intrinsically motivated, autonomous behavior, we have found markers that can be used to judge empirically the extent to which a nonintrinsically motivated action is self-determined and thus the extent to which it emanates from the true or integrated self. These markers include behavioral qualities that can be observed (e.g., spontaneity and creativity; Koestner et al., 1984) as well as reasons for actions (e.g., interest and personal importance; Ryan & Connell, 1989), feelings (e.g., feeling free rather than pressured; Eghrari & Deci, 1989), and psychological indicators (e.g., expressing "wants" rather than "shoulds"; Ryan, 1982). If those who are interested in the concept of true self proceed astutely, it will be possible to continue developing empirical means for studying both what it is and how it relates to the false self or nonself that is manifest in introjected values, internally controlling regulatory "schemata," and other nonintegrated aspects of the psyche.

The view of self as action and development from within, as innate processes and motivations that lead people to master themselves (the internal boundary) and their environments (the external boundary), can also, we believe, represent an empirical means of addressing what some philosophers refer to as authenticity (e.g., Sartre, 1956; Wild, 1965). Authenticity, we suggest, is a descriptor for behavior that is an expression of the true self and for which one accepts full responsibility. When an action is endorsed by its "author," the experience is that of integrity and cohesion—the experience is one of being true to one's *self*. Authenticity is thus self-determination.

CULTURE: THE DIALECTIC OF HUMANITY

Throughout history one can find examples of repressive regimes and other cultural forces that are affronts to human dignity and have wreaked havoc on the well-being of citizens. Yet in spite of these, people have persevered and in many instances have emerged victorious. From the perspective of our theory, we analyze such situations in terms of the dialectic between the person, viewed in terms of intrinsic motivation and organismic integration, and the cultural

forces, viewed in terms of growth-promoting versus controlling and amotivating influences. For us, the recent events in Eastern Europe have been a palpable and heartening instance in which the need for self-determination has emerged as a strong influence in spite of having been suppressed for decades by strong controlling and amotivating forces.

A less dramatic though interesting example of the interaction of individuals and cultural influences can be seen in phenomena within the current American culture, where great value is placed on wealth and material consumption. The advertising industry is organized to imbue goods and services with value and to implant those values in people. The aim of advertising is to control behavior, and one of its primary hooks is to link self-esteem to owning and using objects and engaging in activities. (Feel good about yourself, become a blond!) The value of consumerism that is so pervasive in Madison Avenue hype can be viewed as a strong controlling force that represents a challenge to the self. To be caught up in such forces is to be controlled, whereas to resist such forces—to integrate the content that has personal meaning and to leave the rest—is to be self-determined.

In this example one can see clearly how the definition of concepts like human agency is critical for explicating people's relation to the culture they live in. To equate the concept of agency with intentional action, as is done in social-cognitive theory (e.g., Bandura, 1989), can result in ascribing agency to actions that are controlled by insidious social forces. For example, pressured dieting to look like the much-heralded models of the media and aggressive accumulation of goods do not represent human agency; rather, they represent instances where behavior is driven by outcomes or by contingent self-esteem. Hard-driving, compulsive striving for achievement and wealth can similarly be viewed as well-anchored heteronomy rather than as personal freedom. True agency means more than knowing how to attain outcomes and being competent to do so; it means feeling free by making authentic and meaningful human choices with respect to those outcomes.

The concepts of intrinsic motivation and organismic integration provide a basis for understanding agency and freedom in human behavior and for seeing how people can gradually come to identify with the unconditional value of life. Out of the need to be genuinely related to the social world and to feel free, people can naturally come

to accept the true selves of others as well as their own. In so doing, they will be accepting the value of life and will be able to see the possibilities for coexistence among all people and all forms of life; they will be able to achieve synthesis even in the face of controlling and amotivating social forces. The self as it works to integrate will continually encounter non-self-consistent values in such forms as controlling introjects and amotivated hatred. Fortunately, however, it is in the nature of self to struggle against such forces, to strive for integration rather than to be controlled or amotivated by them.

Epilogue

In his explication of the self, James (1890) made an interesting distinction between the "I" and the "me." The "I," he said, is the self as subject, the self as knower, whereas the "me" is the self as object, the self as known. It is instructive to consider this distinction in light of our current discussion. We agree, of course, that the self is both knower and known. However, some theories treat the self—both the knower and the known—as if it were an agentive *subject*, whereas others treat the self—again, both the knower and the known—as a passive *object*. This difference, we suggest, derives from whether the theory begins from the frame of reference of a person's viewing him- or herself as the locus of active development or alternatively from the extraspective frame of reference of the social environment, viewing it as the locus of a person's change.

To illustrate, let us begin by considering the work of Mead (1934), who presented an extensive discussion of the concepts of "I" and "me." He suggested that the "me" is an organized set of other people's attitudes that the person has assumed, whereas the "I" is the response of the organism to those attitudes. Although the response is somewhat unpredictable, said Mead, the "I" tends to fulfill its duty to the "me." In this conceptualization, the "me" is portrayed in "looking-glass" terms (Cooley, 1902), as a reflection of social processes, and the "I" is portrayed as if it were beholden to social demands that have been taken on to form the "me." Accordingly, even the "I" becomes largely a passive object, a knower and an actor that is under the thumb of the "me."

Alternatively, consider the theory we have outlined. It begins from the perspective of the "I," the knower and actor that is intrinsic

sically motivated and engaged in a proactive process of knowing it-self. Beginning from within, with personal knowledge (Bridgman, 1959), the theory suggests that the "I" actively integrates information from the social world—digesting it rather than simply absorbing it. Thus, if one were to use the term "me" to refer to this "self that is known," one would say that the "me" is actively constructed by the "I," through organismic integration, and does not necessarily reflect other people's attitudes.

McAdams (1990) used the "I/me" distinction to organize various self-relevant theories into two categories, depending on whether they tend to emphasize the "I" (the knower) aspect or the "me" (the known) aspect of the self. McAdams classified organismic theories such as Loevinger's (1976) theory of ego development and Blasi's (1988) theory of self and identity as "I theories," whereas he presented cognitive theories such as Markus's (e.g., Markus & Nurius, 1986) schema theory and Higgins's (1987) self-discrepancy theory as "me theories."

In our view, the groupings McAdams made go beyond simply reflecting whether the theories focus on the knower or the known; they reflect the underlying nature of the theories themselves. The theories presented in the "I" category are ones that begin from the internal frame of reference, that convey a true sense of agency and acknowledge an inner tendency toward development. On the other hand, the theories presented in the "me" category are ones such as the current social cognitive theories that begin from the external frame of reference, that do not convey a true sense of agency, and that view development in terms of changes brought about by the social world.

A theory of self must, we contend, convey the essence of the human being as an active agent; it must be an "I-type" theory to be a meaningful theory of self. Nonetheless, the important point that is conveyed in the "me-type" theories is that human beings, even though active by nature, do sometimes behave as if they were controlled by introjected evaluations or social pressures. Our theory, which is both organismic and dialectic, affords people their human essence, while also accounting for the processes through which they appear to be controlled. It places the active organism in a social context that can either support or impair its natural development and self-determination.

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The Adaptive Base of the Neural Hierarchy: Elementary Motivational Controls on Network Function

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Complex as well as elementary motives must be implemented by neural mechanisms, yet it has been difficult to relate such mechanisms to the psychological processes of human motivation. The difficulty in the past has been a lack of knowledge about the workings of the brain. In recent years there have been important advances in the neurosciences, but this knowledge is typically limited to specific neural mechanisms, rather than general brain function, and it is held by researchers who are seldom conversant with psychological theory.

The rediscovery of neural net models in cognitive psychology (Rumelhart & McClelland, 1986) has stimulated new efforts to cross the borders between cognitive science and neuroscience. The way information is represented in connectionist models seems similar to the way mental functions must be distributed across brain tissues. However, most of the work in the emerging field of cognitive neuroscience deals with specific model systems, such as motion perception or word recognition, and has yet to address the issues of adaptive self-control that are required for a theory of motivation.