EDWARD L. DECI &
RICHARD M. RYAN (1985)

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Toward an Organismic Integration Theory

Motivation and Development

Organismic theories in psychology are constructed around two core notions: that behavior is regulated in part by internal structures that are elaborated through experience; and that human beings are by nature active. There is no place where these assumptions are more critical than in the area of development, for as we will see they are essential to an understanding of the ubiquitous phenomenon of children working eagerly and continually to master their internal and external environments.

The Nature of Development

The term *development* is etymologically derived from the concept of unfolding, or opening out, thus implying a process of one's potentials becoming manifest or actualized. This is perhaps what Rogers (1963) had in mind when he described development in terms of an "actualizing tendency." As he put it, the organismic tendency toward its own maintenance and enhancement "is the very nature of the process we call life" (p. 3). Piaget (1971) viewed it similarly when he stated that "the very nature of life is constantly to overtake itself," (p. 362). So basic is the concept of development to the nature of organisms, that these authors invoked the concept of life itself in describing it.

From these quotes one can also infer that the concept of development does not encompass all human change. Whereas change refers to any type of alteration in structure, whether progressive, accretive, or entropic, the term development is reserved for those changes that involve

progressive organization of organic or psychological structure (von Bertalanffy, 1968). Thus, the study of human development entails an exploration of the transformations through which internal structures are increasingly elaborated and unified. Change that does not represent increased complexity and coordination of structure would not properly be termed development. This point is an especially important one, for it highlights the difference between mechanistic theories, which tend to view the issue of development in accretive terms, as a mere adding on of behaviors (or associative bonds that are said to determine behaviors), and organismic theories, which view it in terms of the elaboration of hierarchically organized structures.

The central process through which humans develop has been described in structural terms by several theorists. Piaget (1971), for example, spoke of "temporal transformation of structures in the double sense of differentiation of substructures and their integration into totalities," (p. 71), and Werner (1948) argued more broadly that the fundamental law of organic development is its tendency toward increased differentiation of elements and hierarchical integration of those elements. In the same vein, we suggest that development follows a general pattern in which one distinguishes specific elements of one's internal and external environments and then brings those elements into harmony with one's existing structures, thereby elaborating and refining the structures. We use the term *organismic integration* to refer to this general process.

Structural theories of development suggest that, through differentiation and integration, an invariant sequence of hierarchically organized stages emerges. The structures of each sequential stage build on and encompass the prior structures, and yet at each stage there is an organization or logic that gives relative stability and coherence to its form of functioning. It is in this sense of an emerging sequence of stages that we can give meaning to the term unfolding, from which development was etymologically derived.

One can easily be lead astray, however, by phrases like "an invariant sequence of stages," for it seems to connote a preprogrammed progression in which characteristics automatically emerge. Development is anything but preprogrammed, however. It emerges as the organism actively contends with the environment; it emerges from a dialectical struggle between the organism and the environment.

Accordingly, an explication of development requires more than just structural concepts; it requires the concept of activity. It is by acting on their surroundings, by exploring, testing, succeeding, and failing, that children develop their capacities and construct ever more elaborate and refined internal structures, which are the basis for future actions. Activity

is, of course, implicit in many structural theories, because it is said that the nature of structures is to function and, through functioning, to transform themselves. We suggest, however, that the mere assumption of activity is not adequate for describing the energization of development. It is here that intrinsic motivation, which is the energic basis of the active organsm, is directly relevant. Simply stated, intrinsic motivation plays its major role in development as the energizer of the organismic integration process, as well as, in many instances, of the behaviors that promote that integration.

Both the concept of inherent activity and our assertion that development is intrinsically motivated imply that the locus of causality for natural development is internal. It does not require the impetus of external reinforcers, as the mechanistic theories have asserted, but will occur as an outcome of the organism's striving for competence and self-determination, providing, of course, that the environment does not prevent or forestall it.

The organismic theories that are currently dominant in developmental psychology emphasize the structural rather than the energetic aspects of development. They address the *what* rather than the *why* of development. Piaget's (1952) theory of cognitive development, Loevinger's (1976a) theory of ego development, and Kohlberg's (1969) theory of moral development, for example, all focus on sequences of stages, and although they assume an inherent activity through which the transformations occur, they tend not to address its dynamics.

By positing the intrinsic motivation of development rather than merely having activity be an inherent aspect of structures, we are in a better position to explicate the agency that we believe to be central to development. To some extent, we assert, one's development is something that one does to satisfy one's needs, rather than something that just happens when structures inherently function. Given our interest in self-determination (i.e., in human agency), we will focus more on the motivational than the structural aspects of development.

Motivational concepts are relevant to the constancies or invariants in development; in other words, the natural developmental progression is motivated. However, motivation takes on particular significance with respect to individual differences in both the rate and the extent of development. By considering motivational variables we have the opportunity to provide at least a partial answer to the questions of why some people develop faster than others and why some people's development progresses or stalls in certain domains. Furthermore, motivational variables are useful mediating constructs for organizing research and theory related to the issue of what environmental conditions facilitate versus hinder effective and reliable developmental change.

We maintain that the distinction between intrinsic and extrinsic motivation is critical for an understanding of development. We begin with the assertion that intrinsic motivation, one's basic needs to be competent and self-determining, is the primary energizer of the developmental (i.e., the organismic integration) process. However, the behaviors that constitute the inputs to development may be either intrinsically or extrinsically motivated. In other words, the development of some capacities and structures results from doing things that are interesting (i.e., from intrinsically motivated action), but the development of other capacities and structures results from behaviors that are not themselves interesting but are instrumental for adaptation to the social world (i.e., from extrinsically motivated action). The central developmental issue involved with extrinsically motivated behaviors is the internalization of their regulation, in other words, their integration into one's internal, organized structures.

Viewing the process of internalization as an aspect of the organism's quest for more competent, self-determined functioning has led to the theory of internalization that will be presented later in the chapter. As we will see, it moves beyond the other empirical theories to describe the motivational basis of internalization and to distinguish between types of internalized regulation by using the concept of self-determination. Viewing internalization as a function of the organismic integration process has also allowed us to apply the principles and findings acquired in the study of intrinsic motivation toward an understanding of the motivational conditions that promote versus forestall internalization and the development of integrated self-regulation.

The Organismic Integration Process

Internal structures develop toward greater elaboration and unity, and the more elaborated, unified structures provide the basis of more effective and autonomous functioning. The dual processes underlying this movement toward increasingly refined and wholistic structures are, as we have said, the differentiation of substructures and their integration into the larger unified structure. Taken together, we refer to them as the organismic integration (or simply, the integrative) process, which we have asserted is itself intrinsically motivated. Before addressing the motivational aspects of development, which are our central concerns, we will elaborate the general integrative process from a structural perspective by considering differentiation and integration in turn.

Differentiation involves the exercise of existing capacities in such a way that a relatively global aspect of one's internal structure becomes

broken down into more specific elements. Differentiation is perhaps easiest to see with respect to perceptual development in which the child continually detects properties and patterns in the environment that had previously elicited no response. But differentiation is evident in personality development as well. For example, consider the baby who has achieved the sense of mother as an entity separate from him or herself. The baby gradually learns through experiences that mother both gratifies and frustrates, thus differentiating mother into good mother and bad mother—the good mother gratifies and the bad mother frustrates.

In Piaget's theory, the phenomenon that we are calling differentiation occurs through the operation of the assimilation schema, which he referred to as "the basic fact of psychic life" (Piaget, 1952, p. 41). When organisms encounter environmental stimuli that are moderately discrepant from their existing cognitive structures, these inconsistencies activate the assimilatory schema, which involves the two processes of assimilation and accommodation.

Assimilation is the process through which the organism incorporates aspects of the environment into its preexisting cognitive structures. This includes, for example, repeating or reproducing past actions and generalizing them to new situations or objects, thereby enlarging the range of one's existing capacities. Assimilation entails discriminating situations to which a schema will and will not apply, thereby affording a more differentiated understanding of reality. Frequently, however, one's existing cognitive structures are not sufficient to incorporate all the nuances of a situation. Thus, grasping the novel or unknown aspects of a situation may be necessary. This requires *accommodation*, the process through which the organism changes or elaborates its existing cognitive structures to include more aspects of the situation.

The processes of assimilation and accommodation are inseparably intertwined in life, and together they constitute the assimilation schema through which cognitive structures are elaborated. This basic schema, which serves the function of adaptation, builds on one's existing structures and, together with the organism's tendency toward organization, transforms existing structures into increasingly complex ones.

Piaget's theory suggests that the organism is continually operating on the environment and obtaining information through the exercise of the existing schemata. The exercise of schemata involves the ever challenging and interesting task of assimilating more and more of what the environment affords, as well as accommodating to what it affords. Through continual interactions with the environment, the child's schemata grow in complexity as he or she constructs new ways of organizing and integrating the environment. But differentiation does not occur only with respect to the child's mastery of the external world. It also concerns

mastery of what Greenspan (1979) labeled *internal boundaries*. In other words, differentiation of capacities is also relevant to drives and affects. Variables such as physiological inputs, self and object representations, and emotions can be conceptualized as stimulus nutriments that children are intrinsically motivated to master, just as they are intrisically motivated to master form boards, pots and pans, and other tangible objects at their external boundaries. The differentiation that occurs at the internal boundaries results from the operation of the assimilatory schema and provides the basis for stable and flexible interactions of one's internal milieu with the interpersonal world.

Greenspan pointed out that the assimilations that occur with respect to the internal versus the external boundaries may proceed on different timetables. For one thing, the stimulus nutriments serving as inputs for structural development at the internal boundary are highly variable and complex. Furthermore, they are much less likely to be optimal when compared to activities in the impersonal world of objects; in other words, they often overwhelm the existing structures, being too far beyond the optimal challenge.

Psychodynamic theorists, such as Rapaport (1967) and White (1963), have also discussed the importance of differentiation of capacities at the internal boundaries. Rapaport suggested that people can be considered active when their structures regulate drives and emotions, whereas they would be considered passive when drives or emotions overpower structures. Differentiating elements of one's drives and emotions is part of the process of developing adequate structures, ones that will regulate the drives and emotions rather than be overpowered by them. Structural regulation of the internal as well as the external environment is the hallmark of autonomous ego functioning.

Elkind (1971), in the tradition of Piagetian thinking, elaborated the differentiation process in describing what he called *cognitive growth cycles*. These cycles, Elkind suggested, accompany the development of each cognitive ability and its associated behaviors. Cognitive growth cycles have several phases, beginning with the child's seeking stimulus inputs that provide the nutriments for further growth. Children can nourish their cognitive growth through a wide variety of stimulus inputs, and the ones that they encounter may be the basis for developing long-term preferences.

According to Elkind, children work with stimulus nutriments in characteristic ways that involve repeating actions, gating out irrelevant stimuli, storing relevant information, and playing with a newfound skill. When children have acquired a new cognitive ability, they tend to use it repeatedly until they grow tired of the activity. At that point, differentiation will be complete and the growth cycle will terminate.

It would of course be misleading to represent development as the simple elaboration of isolated capacities, because these capacities must be consistent and coordinated with one another if adaptive action is to occur. Developmental change, from an organismic perspective, represents synthetic alterations of structure, and *integration* is the process through which this synthesis occurs. In the example of the baby who differentiated mother into good and bad, the differentiated elements must move toward harmony for the growing child to develop the concept of mother as a person.

As with the concept of differentiation, we find multiple supports for the concept of integration among developmental theorists. Piaget proposed a second functional invariant of structural transformation that functions to integrate differentiated elements. He referred to this as *organization*, suggesting that the organism must be conceived of as a totality, within which there is a coordination of elements. Piaget (1952) stated it as follows:

> In short, the uniting of accommodation and assimilation presupposes an *organization*. Organization exists within each schema of assimilation. . . . But there is above all total organization; that is to say, coordination among the various schemata of assimilation. Now, as we have seen, this coordination is not formed differently from the simple schemata, except only that each one comprises the other in a reciprocal assimilation. (p. 142)

Through *reciprocal assimilation*, formerly separate schemata unite to form a new totality, superordinate to the previous one. The process is both microscopic and macroscopic because the organism tends toward increasing coordination within each element and among all the elements. It represents a holistic tendency within the organism.

In psychoanalytic theory, as well as in Piagetian theory, integration has a central place. Here it is generally referred to as the *synthetic function*. Freud (1923) introduced the construct in explicating what he saw to be the ego's remarkable tendency toward unity, though it received more specific attention from Nunberg (1931), who discussed how ego activity shows a pervasive tendency toward unification. This, he pointed out, can be seen in the ego's attempting to produce harmony among psychic structures and strivings; in its intolerance of contradiction; in the tendency toward causal thinking and organization of reality; and in creative activities, such as science and art. Nunberg suggested that the yardstick of psychological health is the degree to which the ego has developed unity among its elements.

Hartmann (1939), following Nunberg, gave the synthetic function a superordinate role in development. Adaptation, he suggested, results from the coordination of all one's functions. Through structuring the differentiated elements of one's inner and outer world, one is developing

a personality that helps to define the range of responses available to one (i.e., one's competencies), and the range of environments that one is likely to seek and explore.

The notion of personality development as the product of the synthetic function has been recently explicated in the work of Loevinger (1976a), who adopted a structural view of personality that is akin to Piaget's theory of cognitive development. Loevinger portrayed ego development as the progressive structuralization of drives, affects, and cognitions into a stable unity. "The organization of the synthetic function is not just another thing that the ego does, it is what the ego is" (1976a, p. 5). More recently, Loevinger (1984) stated that, in retrospect, she might better have referred to this functioning structure as the self than the ego, thereby further emphasizing its centrality.

Indeed, we suggest that it is the synthesis of elements into a unified superordinate structure that provides the sense of identity and coherence that we refer to as the *self* and that is the basis for self-determined functioning. We use the term integration to refer to those functions that Piagetians labeled organization and psychodynamic theorists called synthetic, and we use the term *integrative process* to refer to that ongoing process of differentiating and integrating one's experience into a unified sense of self.

Intrinsic Motivation and Development

We believe it is useful to view the integrative process as being intrinsically motivated. Although other organismic theories have not done this explicitly, the assertion is congruent with and an elaboration of their perspectives. As Greenspan (1979) explained, Piaget maintained that structures are "self-motivating"; in other words, it is in the nature of structures to function. Particularly germane to our point would be that it is in the nature of the assimilation schema to function, because integration results from the operation of the assimilation schema. Although, as Flavell (1963) pointed out, Piaget paid relatively little attention to the motivational or energization aspects of development, a translation of this latter statement into motivational terms would be consistent with our position. Further, Piaget (1981) suggested that the affective aspect of assimilation is interest, and that the assimilation schema functions with respect to optimally incongruous stimuli. Interest, of course, is central to our conception of intrinsic motivation, and the idea that organisms work to assimilate optimally incongruous stimuli is closely related to our hypothesis that intrinsically motivated activity involves seeking and conquering (i.e., integrating) optimal challenges. By failing

to make the motivational aspect of the process clear, however, and by treating the developmental process as occurring naturally or automatically, Piaget and other structural theorists have not fully captured the sense of personal agency or intentionality that we believe to be involved in development. Organisms work hard to differentiate and integrate aspects of their experience.

Elkind (1971) was more explicit about motivation than Piaget, and suggested that cognitive growth cycles are motivated by intrinsic growth forces. Once a cycle has been completed and the new structure fully developed, he added, the corresponding behaviors will no longer be intrinsically motivated and will generally require extrinsic motivation to operate. Elkind, like Flavell and Wohlwill (1969), suggested that competence (i.e., development) should be distinguished from performance. The former has to do with the development of structures and is clearly intrinsically motivated, whereas the latter has to do with the utilization of fully differentiated structures and therefore generally requires extrinsic motivation. This implies that, for an activity to be intrinsically motivated, it must serve to promote developmental growth.

White (1963), working within the psychoanalytic tradition, had the concept of effectance motivation at the heart of his discussion of development. He suggested that the ego has independent energies, which he referred to as effectance motivation, and that there are natural satisfactions (i.e., feelings of efficacy) that result from the exercise of all one's capacities, including the synthetic function. Loevinger's (1976a) statement that "the striving to master, to integrate,and make sense of experience is . . . the essence of the ego" (p. 59) is of course congruent with, though less motivationally explicit than, White's statements.

In sum, we have seen that the various organismic theories all provide a central, though generally not explicit, place for intrinsic motivation in the differentiation and integration of organismic capacities. Indeed, the integrative process may be the prototype of the spontaneous activity, both psychological and behavioral, that occurs in the absence of extrinsic inducements.

Intrinsically Motivated Behavior

Thus far we have focused our attention on the integrative process itself. However, the functioning of the integrative process is intertwined with behavior; it requires behavior to provide nutriments for the development of competencies. Children learn through behaving—through thinking and acting—and much of this behavior, as well as the integrative process itself, is intrinsically motivated.

Children's natural curiosity leads them to engage in a wide range of exploratory, manipulatory, and experimental behaviors. Without prods or incentives, indeed frequently in the face of open discouragement, children work determinedly to figure out how things go together or what actions produce what effects. They are fascinated by the novel, and persistent in their attempts to make it familiar. Learning has often been said to be the central business of childhood.

Closely related to curiosity-based behaviors, in the sense of being active and natural, is play. Although play serves an important adaptive function, adaptation is not the goal of play. Indeed, a defining characteristic of play is precisely its absence of any goals (Garvey, 1977). Play is compelling and satisfying in its own right; it is, as Csikszentmihalyi (1975) put it, autotelic. It needs neither direction nor reinforcement; in fact, if it is not self-determined it is not play. Flavell (1977) said that to ask why a child plays is akin to asking why a child breathes. Children play for enjoyment, but this activity often has the side benefit of developing competencies.

Curiosity and play are fundamental features of children's behavior. They are involved in what Elkind (1971) called cognitive growth cycles, and they are classic examples of intrinsically motivated behavior. They are spontaneous, emanating from interest and internal proneness, and their occurrence requires no outside compulsions or constraints.

Discussions of curiosity and play are so intertwined with discussions of the integrative process throughout the developmental writings of organismic theorists that they are virtually inseparable. It is exploration, manipulation, and play that are the actions that produce much of the differentiation and integration. We have separated them here only so that we will be able to show how the intrinsically motivated integrative process is also germane to many extrinsically motivated behaviors. That point will be explicated in the second half of the chapter.

The Effects of the Environment

If we are correct in our assertions that the integrative process that characterizes development is intrinsically motivated, and that much of the child's development results from intrinsically motivated behaviors, it would follow straightforwardly that the principles of cognitive evaluation theory are directly applicable at both levels of developmental phenomena. Cognitive evaluation theory suggests that environments that provide optimal challenge, competence-promoting feedback, and support for autonomous activity will facilitate intrinsic motivation. They should accordingly facilitate development as well.

Optimal Challenge and Perceived Competence. One condition that is critical for effective development is adequate stimulation in the form of optimal challenges, given the child's capacities. In Piaget's words,the child must encounter stimuli that are moderately assimilable. When children are intrinsically motivated, they seek out optimal challenges, and their engagement with those challenges contributes to the continuing differentiation and integration of existing capacities and structures. The concept of optimal, when applied to challenge, must always be understood with respect to one's existing structures. As Montessori (1965) described it, the developing child needs to find stimulation in the environment that is "*organized* in direct relation to his internal organization which is developing by natural laws" (p. 70). Optimal challenge, therefore, involves elements that are slightly discrepant from, and can be assimilated into, one's existing, organized structures.

The principle of optimal challenge has also been discussed by Hunt (1966, 1975a) under the rubric of the "problem of match." His view suggests that the situations that are most intrinsically motivating are those that contain information relevant to structures already stored and mastered but that are discrepant enough to call forth adaptive modifications. Overly familiar or excessively repetitive tasks and tasks that greatly exceed existing capacities will call forth boredom and distress, respectively. They do not generate the feelings of competence or interest that are so essential to intrinsic motivation.

An empirical test of the hypothesis that challenges that provide an optimal level of incongruity are intrinsically motivating was provided recently by the Danner and Lonky (1981) study reviewed in Chapter 3. They used the Piagetian model for defining the cognitive complexity of three tasks intended to vary in difficulty: dichotomous sorting, class inclusion, and combinatorial reasoning. Children were pretested on their classification-ability levels and then divided into three groups on the basis of that assessment. The children were then introduced to the classification tasks and finally left alone with the tasks. The amount of time spent by each child on each task was recorded unobtrusively, and an additional interest rating for each was obtained. This free-choice time and interest rating served as measures of intrinsic motivation. The results demonstrated that children in each of the cognitive-ability groups spent the most time with and rated as most interesting the tasks that were one step ahead of their pretested skill level. The results supported the prediction, based on Deci's (1975) cognitive evaluation theory and Piaget's (1977) equilibration model, that children would choose to work on tasks that provide optimal stimulation for cognitive development.

Harter (1974) reported the complementary finding that children derived greater pleasure from optimal challenges than from ones that

were too easy or too hard. When the children worked on tasks that were moderately difficult given their capacities, they smiled more and expressed greater enjoyment of the task than when they worked on tasks that were either more or less difficult.

Under normal conditions, children self-regulate the optimal level of challenge. If an activity is not sufficiently challenging, the child will move to one that is more challenging, and if it is too challenging, the child will move to one that is easier. Children tend to engage in non-optimal activities only through the provision of external pressures. Organized environments, such as schools, often use external pressures rather than optimal challenges to motivate children to learn, and pressure motivates a different, and generally inferior, type of learning. It does not encourage the natural, integrative process; instead, it tends to encourage the adding on of facts.

Closely related to the idea of optimal challenge is that of perceived competence. Harter (1978a) emphasized the importance of perceived competence for effectance motivation, and Harter and Connell (1984) used structural modeling to support the view that children's perceived competence affects their level of intrinsic motivation, and thus, we would add, their development. To a large extent, perceived competence comes from success experiences and from positive feedback. When children are working with optimally challenging activities, perceived competence will tend to come naturally, for they will be having the experiences of success following concerted effort that lead to the perceptions of competence.

For infants, a positive sense of competence and intrinsic motivation seem to come primarily from the responsiveness of the environment. In research with infants, Yarrow, Klein, Lomonaco, and Morgan (1975) found that the responsiveness of both the inanimate and social environments was related to subsequent exploration. Lewis and Goldberg (1969) reported complementary findings from a study of mother–infant interactions, and both sets of authors concluded that environments that respond to infant's initiations will foster a sense of competence and mastery that will fuel further development.

It seems, then, that much of the necessary feedback for children's perceived competence can come directly from the responsiveness of tasks or people in their environments, yet specific positive feedback from others if often important as well. Several lines of research, much of it reviewed in Chapters 3 and 4, provide support for this later point. Experimental studies by Boggiano and Ruble (1979) and numerous others, for example, have demonstrated that positive feedback to children tends to enhance their intrinsic motivation, although as we saw repeatedly,

when the positive feedback takes on controlling tones, it can have a detrimental effect on intrinsic motivation.

The Interpersonal Context. Our view of human development leads to the assertion that differentiation and integration processes will occur naturally in interpersonal environments that are informational rather than controlling, environments where adults avoid controlling the child's intrinsic activity. Untimely interference and direction by adults can be a disturbing influence on a child's developing mastery, and the use of rewards, deadlines, and controlling communications will undoubtedly be detrimental. These influences are likely to take children away from the tasks that are optimally challenging and thus necessary for natural development, and they are also likely to undermine the children's intrinsic motivation even if they are working at an optimal level.

The former point was demonstrated in a study by Shapira (1976), although he used college student subjects. He found that when subjects were free from the offer of rewards, they selected challenging activities, but when rewards were introduced, they selected very easy ones. The second point, that rewards to children for working on optimally challenging tasks will decrease their intrinsic motivation for those tasks, was confirmed by Danner and Lonky (1981). They reported that when children were rewarded for working on the optimal activities that they had selected themselves, they lost intrinsic motivation for the activities, relative to children who were not rewarded.

It appears, then, that rewards may be detrimental to development because they tend to be experienced as controlling and to foster an external locus of causality, thereby undermining intrinsic motivation. A similar point can be made for all interpersonal communications. The more controlling they are, the more likely it is that they will impede the developmental process. Two studies of family interactions provide support for this conclusion. In the first, Grolnick, Frodi, and Bridges (1984) observed mothers interacting with their babies and rated the mothers' behaviors in terms of the degree to which they were controlling (versus oriented toward supporting autonomy). The researchers then assessed the mastery motivation of the babies using a procedure developed by Morgan, Harmon, Gaiter, Jennings, Gist, and Yarrow (1977) and found that the babies of controlling mothers tended to display less persistence and competence than those of the mothers who were less controlling.

Chandler (1981), in a cross-sectional investigation of children's motivational orientations, also examined the impact of parental intervention on children's motivation for mastery oriented behaviors. Among the types of behaviors included in her measures were building something with toys, playing a ball game, playing with friends, and reading books.

In general, children had reported that they tend to do these activities for fun, interest, and challenge.

Chandler obtained self-report data from mothers of the 121 children in her sample concerning their parenting interactions. Of present interest is mothers' reports about how they and the fathers respond to their children's successes and failures on each of these mastery behaviors. From factor analyses, Chandler found that following both successes and failures there was a factor that she labeled instruct and model. She then examined the relationship between these responses and the intrinsic motivation of children for the mastery behaviors. For failure experiences the instruct-model style had no significant effect on children's intrinsic motivation; however, modeling and instruction following success had a significant detrimental impact on the children's intrinsic motivation. This apparently untimely intrusion of instructing a child after he or she has just succeeded at a mastery attempt impeded continuing intrinsic interest and exercise of structures.

The results of the Grolnick *et al.* and the Chandler studies are, of course, congruent with a host of data and with the general conclusion that undue control or pressure will decrease intrinsic motivation and negatively affect related affective, cognitive, and behavioral variables. These two studies are particularly important, however, in that the data were obtained from actual family interactions.

Are we suggesting that parents and educators stay out of the way completely? Not wholly so, of course. Chandler's data suggested that following failure, instruction was not detrimental, and may have been helpful, for intrinsic motivation. Further, cognitive evaluation theory suggests, and numerous studies have confirmed, that effectance-relevant information is important for intrinsic motivation, so long as it is made available within the context of self-determination or choice (e.g., Fisher, 1978). In other words, the children must feel free (rather than pressured) to use the competence-relevant information. Furthermore, there are also times when intrinsic development could lead to socially intolerable activities. Children may love to paint, bang pots and pans, play with hot water spigots, and do a variety of annoying and perhaps dangerous (but intrinsically motivated) actions. In such situations, limit setting may be entirely appropriate, and as the Koestner *et al.* (1984) study described in Chapter 4 revealed, limits can be set effectively without undermining intrinsic motivation if they are conveyed in a manner that does not threaten the child's self-determination and self-esteem.

As a general rule, of course, parents do need to be involved with their children. They need to show concern and to provide informational structures. Limit setting is one aspect of providing the needed informational structures, and as Coopersmith (1967) concluded, when the

limits are clear and provide the opportunity for choice they will tend to promote high self-esteem. Further, from the Koestner *et al.* study, we can conclude that limit setting will tend to support children's intrinsic motivation, if the limit setting includes three important elements. First, it needs to provide as much choice as possible and refrain from conveying unnecessary pressure—even the pressure that is implicit in the word *should*. Limits need to allow the child to be as self-determining as possible. Second, they need to include some mechanism that provides nonevaluative feedback, feedback that does not call the child's self-esteem into question. Third, because setting limits invariably presents the child with a conflict between what he or she wants or feels and what the limits require, it is important that the child's needs or feelings be acknowledged and accepted so the child will be able to integrate the seemingly conflicting elements. Otherwise, the conflict will tend to diminish the child's self-esteem and forestall a self-determined accommodation to those limits.

The Development of Intrinsic Motivation

Babies are interested in a wide range of novel stimuli, and as they develop into young children they seem interested in learning about all aspects of their environment. Their general need for competence and self-determination operates globally, and they orient to all sorts of inputs. Gradually, however, they develop preferences and behave more selectively, and their competencies tend either to flourish or to atrophy depending on whether they are accompanied by interest.

The processes through which one's interests (in other words, one's intrinsic motivation) develop are, we suggest, the same as those through which all development proceeds. At the beginning interests are relatively undifferentiated, and gradually through accumulated experiences they become more differentiated. Deci (1975) spoke of this as the differentiation of motives, because the term *motive* describes where one's energy is directed and pertains to one's interests and competencies (i.e., to structures).

Deci (1975) suggested that the differentiation of activities that people find intrinsically motivating is the function of two things: what Woodworth (1918) referred to as a child's native equipment (i.e., innate abilities); and the experiences that the child has with various activities. The first of these will certainly have a strong influence. There are clear differences in children's innate talents, and children seem more interested in things they are able to master than things they are not. However, as Hunt (1975b) suggested, there is a wide "range of reaction" in the expression of innate abilities, and the areas where one applies one's

competencies will depend on what is available and on the quality of the circumstances that surround what is available. Thus one's innate capacities are intertwined with experience, and the two begin to interact very quickly to influence the expression of one's inherent capacities. In this interaction, the factors that affect the differentiation of interests are hypothesized to be those described by cognitive evaluation theory.

The interaction of capacities and environments begins with innate abilities that affect one's mastery attempts, resulting in successes and failures that in turn affect one's perceived competence and intrinsic interest. Further, the ambient opportunities that are available to offer optimal challenges will also be important in one's developing preferences. Only some types of activities are available to children—music, for example, is widely available in some homes and not at all in others—and this availability is surely a factor in the development of their interests and capacities. A boy who grows up on a small island is more likely to become interested in and competent at fishing than basketball, though the opposite is likely to be true for the boy brought up in a city. The environment presents affordances, and the child goes to the optimally challenging ones. Furthermore, children tend to use affordances to do the activities that they observe to be socially valued. Thus, for example, the children of the Dakota tribe described by Erikson (1950) chased roosters in mimic of the hunt—an activity that was clearly valued by their elders.

Finally, although challenging affordances affect the differentiation of intrinsic interest, they are not the only factors that do. All boys in the island village do not become interested in fishing, for example. Another significant factor that we hypothesize to affect the differentiation of interests is the degree to which one's opportunity to interact with the affordances is self-determined. The pressures and controls of adults, as we have seen over and over, can alienate the developing interests even for talented children. One wonders, for example, how many potential Arthur Rubensteins have turned away from the piano to preserve their sense of self-determination when their lessons become overly controlled.

The interaction of the environment and one's innate capacities is thus central to the development of intrinsic motivation. The differentiation of one's interests is, like other developmental processes, an opening out or unfolding that is influenced by what the environment affords and permits. Difficult as it may be for parents and educators to provide the conditions that will allow this natural developmental process to occur with respect to things children find intrinsically interesting, the difficulties are even far greater when they face the task of promoting the

development of regulations for behaviors that have no inherent interest. There, the issues become more complex and necessitate the use of extrinsic motivators to facilitate the developmental process.

Extrinsic Motivation and Development

Although differentiation and integration occur naturally with respect to activities or inputs that interest children, there are many behaviors that do not naturally interest them but that the social world deems necessary for them to learn. As children grow older, the social environment, and particularly caretakers, place increasing demands and limits on the exercise of their capacities. Caretakers feel the need to prohibit or redirect children's activity so that children will engage in behaviors that they would not otherwise do, but that ensure their safety, conform with cultural values, or in some way gratify the caretakers' needs.

There is, therefore, an expectable but critical opposition between children's active nature and the values and conditions of social life, a developmental conflict (or series of conflicts) often described as *socialization*. The concept of socialization gives recognition to the fact that there are many behaviors, attitudes, and values that are neither natural nor intrinsically motivated, but that are important for effective functioning in the social world. Similarly, there are many behaviors that children find intrinsically interesting but that adults find painful, intrusive, or disagreeable. In both cases, the adults are faced with the responsibility of externally regulating the children's behavior so the children will do certain things that are neither spontaneous nor intrinsically motivating. Caretakers, however, are not merely interested in eliciting those behaviors, they generally desire that the children accept responsibility for them. This shift in the locus of regulation for those behaviors frees the adults of the responsibility and prepares the children for participation in the cultural milieu.

Because these new behaviors—whether they be acquisitions or abstentions—do not occur spontaneously out of interest, they require the provision of extrinsic factors if they are to occur at all. The problem, then, is one of regulating a child's behavior with extrinsic contingencies in such a way that the regulating will gradually be accepted by the child as his or her own and the use of the controls will not have detrimental effects on related, intrinsically motivated behaviors. Thus, an important problem for adaptation and development is the promotion of a shift from regulation by external factors to self-regulation by internal factors in a variety of behavioral domains. This is the issue of internalization.

The term *internalization* refers to the process through which an individual acquires an attitude, belief, or behavioral regulation and progressively transforms it into a personal value, goal, or organization. It is the developmental process by which a child integrates the demands and values of the socializing environment.

The concept of internalization is by no means new. It has enjoyed currency in psychology for most of this century, though different psychologists have treated the concept quite differently. Hartmann and Loewenstein (1962), for example, used the term to describe regulations that were initially based in interaction with the external world and have become internal, whereas Schafer (1968) defined it as the process by which subjects transform real or imagined external regulations into internal regulations. Numerous authors outside of psychoanalytic theory (e.g., Collins, 1977; English & English, 1958) have also used the term to describe the change from outer to inner regulation.

In our view internalization is an active process. Transforming an outer regulation into an inner one requires that one reorganize one's capacities and propensities, and it may require that one shift one's perspective or values. Such modifications, like all developmental acquisitions, require active work. When the organism is passive or resistent, the modifications are unlikely to occur. We therefore believe that internalization is an aspect of the active-organism side of the organism–environment dialectic. As such, internalization is not something that gets done to the organism by the environment, it is something the organism does actively to accommodate the environment, unless the environment overpowers the organism.

Because the domain of internalization consists of all those behaviors that do not occur spontaneously but are required by the social world, the process of internalization involves developing the capacities for mastering external demands and, in appropriate instances, for taking them on as one's own. This in turn allows for greater autonomy and more effective functioning (e.g., Ryan, Avery, & Grolnick, 1985).

We are now in a position to assert that the process by which this internalization occurs is not different in kind from the integration of capacities that were differentiated through purely intrinsic motivation. It is, however, more complex, for it involves the resolution of the inherent conflict between what one would do naturally and what one is being asked to do. It requires a greater degree of accommodation. The basic similarity is the tendency for the integrative process to function—in this case resulting in the integration of extrinsically motivated regulations—in the service of one's movement toward greater competence and self-determination. Whether in the case of intrinsically motivated behaviors

or extrinsically motivated behaviors, the natural (i.e., intrinsically motivated) processes of differentiation and integration will function toward the development of structures that allow competence and self-determination. With intrinsically motivated behaviors, we emphasized the differentiation aspect because the opening out metaphor applies and the integration occurs quite naturally. With extrinsically motivated behavior, however, we will emphasize the integration aspect because the taking in of a conflicting force requires substantial integration. Still, differentiation and integration are necessary within both classes of behaviors.

Internalization, then, is asserted to be a constructive process aimed at allowing one to be more competently self-determining in the social world, even though the goals of the specific behaviors are extrinsic. The concept of self-determination is particularly important with respect to internalization, because the intrinsic need for competent self-determination is theorized to motivate the internalization process, and because the concept of self-determination describes the ideal outcome of the internalization process. As we saw in Chapter 4, not all forms of internal regulation constitute self-determination. Ego-involvement, for example, is often the basis for regulation that is inside the person but that neither represents self-determination nor has an internal locus of causality. Internalization poses the important problem not merely of moving the regulation of extrinsically motivated behavior inside the person, but of integrating external motivation into a unified system of structures and motives so that the extrinsic regulation that is internalized will eventually be experienced as self-determined. It is only when the cultural values become the child's values and are smoothly and unconflictfully exercised that internalization is complete.

Let us summarize our argument thus far. The organismic tendency toward expanded harmony (i.e., the intrinsically motivated integrative process) leads children to master and incorporate many behaviors that are not themselves intrinsically motivated but are valued by the social environment and thus are instrumental for the children's long-term effectiveness. Behaviors that the organism would not do naturally will have to be extrinsically motivated, but these behaviors may be integrated into the realm of self-determination (i.e., they can be valued and done willingly), even though they will never become intrinsically motivated.

Our assertion that the process of internalization is part of the organismic integration process implies, of course, that one should see the process occurring naturally (unless the environment impedes it), and thus that one would observe more internalized regulation as children grow older. Because this represents an essential part of our argument,

we will review evidence in support of this hypothesis before moving on to a more detailed description of the internalization process and to a consideration of the role played by the environment.

Evidence for Internalization

Chandler and Connell (1984) investigated the hypothesis that extrinsically motivated behaviors would exhibit a developmental trend toward increasingly internalized regulation. They studied chore behaviors (things like following parental requests, picking up one's room, doing homework, and going to bed on time), that were initially disliked by children and were in need of extrinsic, parentally provided supports for their occurrence. They asked children of ages from 6 to 13 to describe the reasons why they did these target behaviors, and the children's responses were recorded verbatim. A pretested coding system with high reliability was then used to classify their responses into various categories. For our current purposes there were two categories of particular interest. The *extrinsic* category included those motivational responses that indicated that the behavior in question could be elicited only by extrinsic cues (e.g., an extrinsic reward or punishment). The extrinsic response category included gaining or maintaining peer or sibling approval; avoiding peer or sibling disapproval; gaining or maintaining adult approval; avoiding adult disapproval; gaining or losing a specific tangible reward; and following specific rules. The *internalized* category included motivational responses that indicated that the child had an understanding of the internalized consequences of performing a behavior, thus indicating that the behavior was self-motivated, though of course not intrinsically motivated. These were achievement of a self-selected goal; avoidance of a self-selected consequence; and altruism. Altruistic responses were included here because they tend to reflect an internalized goal of making someone else happy, although they had a very low frequency of occurrence.

Chandler and Connell reported that extrinsic responses were negatively correlated with age, whereas internalized responses were positively correlated with age. This supports our hypothesis of a developmental process leading to an internalized orientation for performing behaviors such as chores. One can assume that when children first begin learning how to do chores, they are likely to be motivated to perform them only by extrinsic factors administered by parents. With development, children incorporate the parental values and standards such that they become internalized values and standards. The data gathered here suggest that, when children are able to understand and accept that the consequences of performing behaviors such as chores can be

beneficial to their own goals, internalization can be said to have occurred. The children would then be expected to motivate themselves to engage in these chore behaviors. Further research, particularly longitudinal rather than cross-sectional and including children younger and older than those in the Chandler and Connell sample, would aid in adding detail to an understanding of the internalization process. But their data are among the first to demonstrate the developmental process of extrinsic regulation moving toward self-determined regulation.

There was an important attitude change that accompanied the change in motivational orientation across these ages. Older children rated the chore behaviors as more important than younger children, and the attitude of importance was significantly related to the children's use of internalized responses. The more the children felt it was important to do chores and to follow parental rules, the more likely they were to give internalized reasons for performing them, and the less likely they were to give extrinsic reasons. These two findings suggest that an aspect of the developmental process of internalizing the regulation of specific behaviors is their becoming valued or viewed as important by the children.

Evidence that relates to our hypothesis of a developmental trend from heteronomy toward autonomy with respect to extrinsic motivation can also be inferred from Loevinger's (1976a,b) research on ego development. Through the use of various psychometric instruments she has traced the stages of ego development, noting a progression from depending entirely on the environment for regulation, toward autonomous regulation through the use of what she called *mature conscience*. This type of regulation, which is free of guilt and self-condemnation, represents the archetype of self-determined responding. Although her research indicates that few people function in that manner a great deal of the time, the developmental trend is clearly toward autonomous self-regulation.

Internalization and the Integrative Process

A basic premise of organismic integration theory is that there is developmental movement from the nonregulation of behaviors that do not interest one, toward self-determined regulation of the subset of those behaviors that are useful for one's effective adaptation. Having reviewed some preliminary evidence in support of this, we move on to a more detailed description of the internalization process.

Nonregulation of behavior is most clearly evident in newborns. Insofar as caretakers desire anything that does not come naturally for the infant, they must make it happen. Caretakers move the child by picking

him or her up; they give the child a bottle or breast; and they bathe and change the child. Regulation of nonspontaneous activities is not mediated by processes internal to the child, for the child does not have the necessary capacities. The regulation itself is impersonal with respect to the child, even though it may occur in response to the child's having cried or signaled. During these early months the child lacks the requisite capacities for mastering social demands.

Perhaps the most fundamental skill that must be differentiated for such mastery to occur is anticipation, a skill that is likely to have developed by the time of the child's first birthday (Hunt, 1965). The child will have engaged in a number of actions and perceptual activities in which contingent relationships occurred between his or her actions and a response from the environment. Observation of children in activities such as peek-a-boo or playing with mobiles suggests that contingently responsive environments are stimulating and interesting for the child and foster development of the capacity for predicting outcomes where contingencies exist. In fact, a number of researchers, such as Ainsworth, Blehar, Waters, and Wall (1978) have shown that responsive environments are extremely important for children's effective development in general. When children are deprived of regularity, lawfulness, and contingency in their environments, they tend to lag developmentally.

A second capacity necessary for mastery of external demands is control of one's own actions and affects, at least in a primitive form. The initiation and inhibition of action, which is essential for all voluntary behavior, becomes increasingly involved in a child's behavior as the child progresses through the second half of his or her first year. Thus, by the end of the first year, most children will have developed the two most critical skills that constitute the groundwork for internalization.

Internalization, then, begins with the child's using his or her primitive capacities to respond to external demands. Initially, this means that the child applies the developing functions of *anticipation* and *self-control* to respond to external cues. Thus, for example, a boy, as early as in his second year, might anticipate his mother's angry response as he reaches for an expensive glass elephant on the end table and then control (inhibit) his behavior. This would be an early form of what we call *external regulation*, which is the most basic form of extrinsic motivation; the child behaves (i.e., refrains from touching the elephant) in order to attain or avoid immediate consequences administered by another. This external form of self-regulation becomes increasingly refined during the first few years of life as the child becomes more adept at anticipating consequences and controlling him or herself, even when the consequences are more distant and there are other potentially distracting stimuli in the immediate situation.

In a recent study by Vaughn, Kopp, and Krakow (1984), children between 18 and 30 months were asked to display self-control. Either their mothers asked them to pick up some toys or the experimenter asked them to refrain from touching attractive objects, and in both cases the degree to which they complied was measured. Results indicated that the behaviors indicative of self-control increased with age over this period, thereby indicating a greater mastery of the skills necessary to engage in what we have called the external form of self-regulation.

External regulation, then, involves the imposition by another person of external contingencies to which the child responds. Often these have tangible consequences for the very young child; they might, for example, be avoidance of a scolding or receipt of a reward such as food or physical contact. With time, however, the focus of interest for the child is increasingly social. What matters, and therefore what motivates external self-regulation, are social rewards and contingencies. Such factors as praise, disapproval, and esteem from others become progressively more potent sanctions that promote certain otherwise nonspontaneous behaviors. At this point the external self-regulation is a reflection of primitive internalization. The behaviors are maintained (unstably) through external supports, but they are internalizations by virtue of the fact that the child anticipates the consequences of action, and self-regulates with respect to what is anticipated. What has been internalized is a conception of the external regulatory forces as they still exist.

We have said several times that the important developmental problem for self-regulation is not merely one of learning and responding to external contingencies however, it is one of moving beyond external regulation to the point where one takes on the control of those behaviors and can perform them in the absence of immediate external consequences. Ultimately, of course, the issue is promoting self-determination of those behaviors.

According to organismic integration theory, the developmental movement beyond external regulation can be described with three processes and three corresponding types of self-regulation. After children have learned to regulate themselves in the presence of relatively immediate extrinsic contingencies, one sees increasing evidence of their being able to do those behaviors when the contingencies become more and more distant and are eventually removed. This occurs following the process of introjection.

We use the term *introjection* to refer to the process whereby a regulation is internalized in essentially its original form; children regulate themselves by carrying on a relationship with an internal representation of the previously external contingencies. That is, children establish an internal representation (i.e., a structure) that is essentially isomorphic

with the formerly external controls, and then act in accord with the now internalized demands. They then apply approval and disapproval to themselves, contingent on their actions. Consider for instance the example of a boy just learning to regulate the expression of his play. He finds his red rubber ball on the floor and experiences the impulse to throw it, but he inhibits the action. The inner form of the inhibition might be a thought or maxim such as, "Good boys don't throw balls in the house." Through introjection, the boy has established an internal version of his mother's contingent evaluation of his behavior (i.e., a self-administered version of what was originally her approval and disapproval). The child is now engaging in *introjected self-regulation*. In practice, the regulatory thoughts are usually not so explicit, and the regulation is more affective than cognitive, but the explicit cognitions presented above describe the form of the regulation.

In a sense, introjected self-regulation represents the first evidence of what might properly be termed self-control, as that term has come to be used in the cognitive-behavioral literature (e.g., Kanfer, 1975), for the child is doing the monitoring and is administering the sanctions to him or herself.

Introjected regulation involves the management of conflicting impulses (to do or not to do; to refrain or not to refrain) and requires the superordinate support of cognitive-affective consequences. Introjected regulation is, of course, more stable than external regulation because it does not require the presence of external contingencies; the contingencies are now within the child and thus continuously present. However, introjected regulation does share many characteristics with external regulation, most notably the conflictful controller–controlled relationship and all that that entails. Whereas with external regulation, the controller and the controlled are separate people, with introjected regulation they are now aspects of the same person. In both cases, however, there is the tension inherent in being controlled.

An example of introjected regulation that has persisted beyond the point where it is age-appropriate can be seen in what Ryan (1982) and Nicholls (1984) have called ego-involvement, where people regulate their performance in anticipation of either disparaging or inflating self-attributions about their abilities. More appropriate, in a sense, would be the term *superego-involvement*, because internal evaluation accompanied by affective consequences is more a function of what psychoanalytic theorists call the superego than of the ego. In children, however, where the concept of ability is not well differentiated, the specific state of ego-involvement may not apply, but analagous forms of contingent self-evaluation with affective consequences (i.e., superego controls) do

apply. Shame and guilt are the most common hallmarks of introjected regulation.

In our theory, introjected self-regulation is not self-determined, for it lacks the unity of action that characterizes self-determination. The next point along the internalization continuum, however, moves the child a step closer to self-determination with respect to internalized regulation. Gradually, as the child works to master the demands of the social world, he or she will increasingly identify with the behavioral outcomes (e.g., with keeping one's room clean) and with the regulations that yield them. Through *identification* the child accepts the regulation as his or her own. Thus the conflict is largely dissipated, and we find integration within this differentiated element of self-regulation. With introjected self-regulation a boy might clean his room because "children should—good children have clean rooms," but with self-regulation through identification he might clean it because "I like my room clean—it lets me find things easier."

The concept of identification has been used widely in the psychological literature. In areas as diverse as psychoanalytic theory (e.g., Hartmann & Loewenstein, 1962) and attitude change (e.g., Kelman, 1961) the focus of one's identification is always another person. For us, however, although identification may very well involve internal representations of another person, the focus of identification is the regulation and its outcome rather than the person. One values the outcome (i.e., the clean room) and feels that it is important to do the behavior that produces the outcome. The need for self-determination is the force that gives value to the self-regulation of those outcomes that have social utility. By focusing on the regulations, values, and outcomes rather than significant others as that with which one identifies, we are in a better position to explain why children internalize some, though not all, of the regulations and values held by the significant others.

Developmentally, introjections may, but do not necessarily, move on to the level of identification. As we will see later in the chapter, this is hypothesized to depend on the environmental conditions within which the introjection occurred; on the internal conditions (e.g., the level of anxiety) that accompany the introjections; and on the environmental conditions that exist as the child functions with those introjections.

As the child identifies with a regulation, the support of cognitive and affective consequences such as self-aggrandizement and self-disparagement become increasingly less essential. The child experiences less pressure and greater flexibility, the two being inversely related. We do not mean to imply that a regulation with which a child has identified involves a total absence of conflict. There may be some conflict between

it and other aspects of the child's internal structure, but there is a relative absence of conflict within the regulatory schema itself.

The final step along the internalization continuum is necessary before the conflict will be fully minimized and the person will be fully self-determined with respect to the nonspontaneous, but now chosen, behavior. This involves integration of the regulation into one's developing sense of self. Here we see the integrative process being completed, as the self-regulation becomes integrated with other identifications into a coherent, conflict-free hierarchy. With identification there is consistency within a regulatory schema and with integration there is consistency between it and other regulatory schemata with which one has identified. At this point, one's internal unified structure will actually have been transformed rather than merely added onto, and one's self-regulation will be fully self-determined. If, as the boy in our earlier example grows older, he achieves integration with respect to not throwing the ball in the house, he would understand the consequences of his actions (e.g., refraining would prevent things from getting broken) and believing that to be important, he would choose to refrain. When a regulation has been integrated, previously conflicting thoughts like, "It's fun to throw the ball in the house," and "My mother gets upset when I throw the ball in the house," could exist in pressure-free juxtapostion, and neither one would determine his behavior. Instead, his behavior would be determined by choices made flexibly on the basis of consequences and values. He would typically choose to refrain, but he might choose to throw the ball in the house if the circumstances were appropriate and he was willing to accept responsibility for whatever consequences might occur.

According to organismic integration theory, integrated self-regulation is the natural outcome of internalization that is not impeded or thwarted by environmental influences. It represents the true meaning of socialization; one does not simply do what one thinks the social values dictate, one behaves, feels, and thinks in a way that is congruent with the social values because one has accepted them as one's own. The internalization continuum appears schematically in Figure 1.

To summarize, our theory suggests that in addition to the nonregulation characteristic of infancy there are four styles of regulating nonspontaneous behavior. The first, involving the presence of external contingencies, is external regulation; it follows from the processes of anticipation and self-control. The second, based in internal prescriptions, is introjected regulation; it results when external regulations have been introjected. The third, involving less internal conflict, is self-regulation through identification; it occurs when the child has identified with the

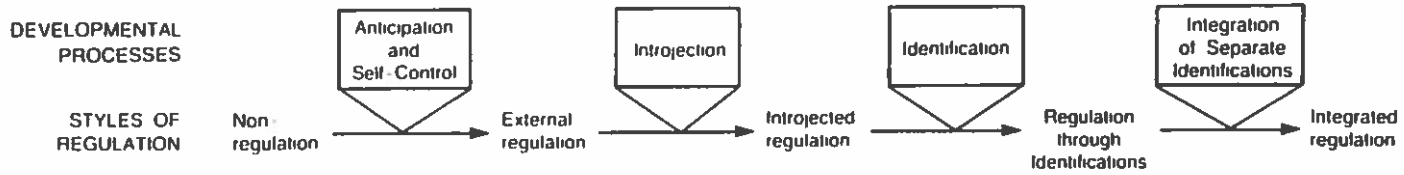

FIGURE 1. The internalization continuum of organismic integration theory representing the movement from nonregulation to fully self-determined regulation, as well as the developmental processes involved in the transitions.

behavioral outcome and its regulation. And the fourth, representing full self-determination, is integrated self-regulation; it results from the integration of the identification into one's unified sense of self.

Previous theories of internalization, particularly in the social-cognitive tradition of empirical psychology (e.g., Collins, 1977; Lepper, 1983) have typically failed to differentiate the degree to which an internalization has been integrated into the self and therefore represents self-determination. Further, cognitive-behavioral theories of self-control (e.g., Bandura, 1977b; Kanfer, 1975) have made no attempt to distinguish among the different forms of self-regulation that result when the internalization process has achieved different degrees of integration. Consequently, our theory represents a more differentiated (and, we hope, integrated) view of the internalization process and the styles of self-regulation that accompany different degrees of internalization.

Individual Differences in Children's Self-Regulation

Thus far, in presenting the organismic integration view of internalization, we have focused on the natural, or average, expectable developmental progression through infancy and childhood. We intended to convey that different styles of regulation require the development of certain competencies and that these competencies develop sequentially as the child grows older. This does not, however, imply that every internalized regulation goes through each phase invariantly. When children are older or when there is less inherent conflict between regulations and the children's desires, for example, internalization may be easier and may essentially bypass the earlier emerging modes of regulation. In essence, then, the developmental emergence of capacities represents a set of prototypes for regulatory styles.

We further suggest that children progress through these phases of development at different paces and achieve different degrees of integration, both within and between regulatory schemata. Thus, one can view regulatory styles as an issue of individual differences in children as well as an issue of development. The cross-sectional study of individual differences can help to shed light on the developmental process, though of course longitudinal work is necessary for a truly satisfactory study of development. Furthermore, the cross-sectional study of individual differences in motivational orientations (i.e., regulatory styles) can be the basis for inferences about environmental influences on the development of individual differences, though longitudinal work would be the most satisfactory way of studying this issue as well.

In this section, we will review the first steps in the empirical validation of the organismic integration view of internalization by describing cross-sectional research done with a new scale to assess self-regulatory styles in children. We will then move on to a discussion of environmental influences.

The new scale was developed by Connell and Ryan (1985) to assess children's internalization in the domain of schoolwork. Because it was thought that the 8- to 12-year-old children for whom the scale was developed would not yet have achieved a full integration of the regulations regarding schoolwork, the scale did not include the full-integration style of regulation. Thus, it assesses the degree to which regulation for school work is extrinsic (i.e., external), introjected, and identified-with. In addition, the scale assesses children's intrinsic motivation for school work, as that is also relevant to learning (Connell & Ryan, 1984).

The Connell–Ryan self-report questionnaire focuses on why children do various aspects of their school work. In completing the scale, children indicate the degree to which they do school-related behaviors for various reasons that are grouped into the categories labeled extrinsic (e.g., to get praise), introjected (e.g., to avoid guilt), and identified (e.g., to understand the material better), corresponding to the three types of self-regulation relevant to internalization. Although all three styles actually represent different forms of extrinsic motivation, the label extrinsic regulation refers to the case where actual external contingencies are perceived to be the reasons for the behavior. It is what, in this chapter, we have called external regulation. The fourth subscale, measuring the intrinsic regulatory style, included items like doing homework because it is interesting or fun. To validate the scale, Connell and Ryan related children's scores on the various subscales to theoretically relevant constructs. We will now focus on the three subscales representing degrees of internalization and explore their relationship to various aspects of adjustment and performance.

Consider first the extrinsic style of regulation. Various data sets from fourth- through sixth-grade children in urban and suburban schools indicate consistently negative relationships between extrinsic regulation and mastery motivation (Harter, 1981b), or intrinsic motivation as measured by the Connell–Ryan questionnaire. Further, the more extrinsically oriented the children were, the less competent they saw themselves in the cognitive domain and the lower their perceived self-worth (Harter, 1982). Consistent with this has been the findings of a positive relationship between extrinsic regulation and anxiety (Buhrmester, 1980), anxiety amplification (Tero & Connell, 1983), and the importance of being liked. In terms of school work, the extrinsic style of regulation

involved poorer conceptual learning (Grolnick & Ryan, 1985) and lower standardized achievement scores (Ryan, Connell, & Deci, 1985).

To the degree that the children had introjected the regulatory processes, they apparently pressured themselves to do as they should, for there were positive correlations between introjection and various anxiety measures. Children who had introjected the regulatory process no longer saw powerful others as responsible for their achievement outcomes (Connell, in press), but rather reported more internal control over outcomes. Further, introjection was unrelated to mastery motivation and to perceived competence and had a slightly negative relation to self-esteem. Presumably the instability of having one's esteem hinged on success is a somewhat negative factor, and may be responsible for the negative relationship.

Self-regulation through identification implies that the conflict inherent in the controller–controlled relationship has dissipated, and accordingly Connell and Ryan found no correlation between regulation through identification and the measures of anxiety and negative coping. Instead, they found a relationship with positive coping (i.e., with doing something active to cope with failure), and with perceived cognitive competence, general self-worth, and mastery motivation. Apparently, as a child's identifications become stronger, his or her sense of self and action strategies are clearer and less conflicted.

Although extrinsic regulation was negatively related to learning, neither introjection nor identification was. Parenthetically, the intrinsic orientation was positively related to learning. It appears that looking to extrinsic factors for regulating one's learning behaviors interferes with effective learning. We would also speculate that as the introjected regulation becomes increasingly less age appropriate, it too would be negatively related to learning.

Looking over the pattern of results we can draw some interesting conclusions, tentative though they be, about social adjustment and the development of self-esteem. White (1963) linked self-esteem to a sense of competence, suggesting that it springs from one's successful attempts to make the environment respond. The current results emphasize how important it is for those competent interactions to be self-initiated. Repeatedly, we have seen positive correlations between intrinsic motivation and self-esteem (e.g., Harter, 1982), and now we see that the more internalized one's extrinsic motivation, and thus the more self-determined, the more it seems to contribute to positive self-esteem. Strong and stable self-esteem seems to emanate from a strong sense of self, which motivationally means intrinsic motivation and more integrated internalization of extrinsic motivation. In general, then, the picture that emerges is one in which, as children accept the regulation of

nonspontaneous behaviors as their own, they are developing a stronger sense of self, are more internally motivated for those behaviors, and perceive themselves to be more competent. Their anxiety about school dissipates somewhat and they are less worried about how much they are liked. These findings of course reflect exactly what we would expect given our theoretical analysis of internalization. Further, the pattern of correlations among the subscales supports the continuum quality of the internalization process.

Internalization and the Environment

The internalization processes described in Figure 1 represent the paradigmatic case of development in which a child progresses toward self-determined regulation. Many regulations are never integrated; however, they are internalized only to the degree represented by one of the less developmentally advanced styles of regulation. How, then, is one to account for differences in the degree to which any particular regulation is internalized? The answer to this question falls straightforwardly out of our motivational analysis. Recall that the movement of regulation away from external contingencies and towards self-determination is a function of integration, and that theoretically the integrative process is itself motivated by the intrinsic need for competence and self-determination. This suggests,then, that individual differences in the integration of values, goals, and regulations is a function largely of whether the environment supports or thwarts the integrative process as it functions with respect to those values, goals, or regulations. Stated in this way, we can apply and extend our previous work on environmental influences to the question under current consideration. Specifically, we hypothesize that the outcome of the developmental process toward integrated internalizations is a function of three classes of factors: the first relates to competence; the second, to the conflict between the organism and the behavior requested; the third, to the degree that the situation is controlling.

Competence. The factor of competency is a significant though not particularly controversial one. The integration of various cultural regulations, for example, involves various degrees of cognitive complexity, and the developing child will be able to integrate only that material for which he or she has the requisite structures. It would be impossible, for example, to internalize and integrate even a primitive sense of mutual responsibility without a minimum of concrete operational reasoning, and a full understanding would require formal operations. Motivationally, this point would be stated in terms of optimal challenge. The internalization of regulations, like any other intrinsically motivated activity,

necessitates a challenge that is optimal given the person's competencies. There must be a match between what the person is able to do and what is required of him or her by the task at hand. A person cannot integrate a regulation if the regulation is not sufficiently close to his or her existing structures for the natural developmental processes to incorporate it.

In addition to having optimal challenge, positive-competence feedback is hypothesized to be extremely important for the internalization process. Because the child has no inherent interest in the behavior itself, the feeling of support and recognition that comes from the feedback would perhaps be more important than if the behavior itself were intrinsically motivated. Inasmuch as the behavior is extrinsically motivated and is done because the social world requests it, recognition of one's effectiveness by that social world is important.

The nature of negative feedback is also, of course, important for internalization. Negative feedback decreases intrinsic motivation if it implies incompetence; but if it provides useful, nonevaluative information about how to do better next time it will typically not be detrimental to intrinsic motivation, for it can facilitate one's having an effective impact on the environment. One can learn from that type of feedback. Thus, we suggest, the internalization process will be facilitated by positive feedback or by the type of supportive negative feedback that helps a person learn how to do better.

Conflict. The second issue regarding the degree to which a value and regulation will be internalized relates to the inherent conflict between the required behavior and relevant organismic tendencies. We addressed this issue in its simpler form earlier in the chapter when we discussed limit setting around intrinsically motivated activities, and pointed out that limits typically create a conflict between what the child would like and what is being asked. Because these natural inclinations conflict with what is being requested, the conflict needs to be acknowledged and accepted so that the child can develop a harmony between seemingly conflicting forces. Otherwise, the child may resort to blocking the conflicting needs or feelings from awareness, believing that he or she is worthy only when he or she wants and feels what is expected. Alternatively, the child may end up defying the request and devaluing the social context. Neither outcome, of course, is desirable.

When the issue involves internalizing the regulation of a behavior that is not intrinsically interesting, the issue becomes even more complex, for it raises the question of whether the behavior is congruent with one's organismic nature. Clearly, organisms are not infinitely maleable, and thus some behaviors are not integratable. Neither prodding nor support will lead to the integration of regulations such as "boys must not cry" or "people must not feel sexual," for these regulations are

inherently conflictful with the nature of people. It is in people's nature to cry and to feel sexual.

Further, we do not expect that people will identify with empty, meaningless jobs, nor do we expect them to value ideals that are contradicted, exploited, or consumerized in other aspects of the culture. Regulations that are foreign to one's organismic nature will never be integrated. At most, they will be introjected and will result in the types of rigidities, inflexibilities, and fragmentations that characterize internally controlling regulation in adults.

It may be that one way to understand human nature is to look at those values and regulations that never get fully integrated or self-determined. From that, one could understand those aspects of culture that are alien to human nature and therefore productive of ill-being. Given the mechanistic metatheory that has characterized American psychology, this issue has been irrelevant. It seems to us, however, that it is an interesting and important, albeit politically controversial, issue, and that, contrary to popular opinion, it is empirically researchable. By developing and improving methods for studying the integration of regulations and values, we may have the possibility of exploring aspects of human beings' organismic nature.

Control. The final set of factors that affects the degree to which a regulation will be internalized is the extent to which the external regulator pressures the child to engage in the behaviors. Because we have asserted that the internalization process (although not the particular behavior being regulated) is intrinsically motivated, it follows that the internalization process will function satisfactorily only in those conditions that facilitate the intrinsic motivation that underlies the process. The key to this, of course, is the absence of undue pressure and control, so the child can gain an experience of self-determination. Surplus social controls exacerbate conflict and tend to result in either compliance or defiance, both of which forestall development and preclude integration. With reactive defiance, one does not even get the desired behavior, and with compliance, one gets the behavior but not the desire to become self-determined with respect to it.

Although introjection is part of the natural developmental progression toward integration, its occurrence in the presence of too much social control could arrest the natural progression. For integration to occur, the child must be free to try out the self-regulaton, to succeed or fail, and to understand its utility experientially. The child must experience self-determination with respect to the regulation.

Lepper (1983), in an interesting essay, made a similar point. Referring to the "minimal sufficiency principle," he suggested that internalization of a regulation (rather than mere compliance with the external

to regulation through identification with the goals and values of the regulation, in which case the inherent conflict will be largely dissipated; to integrated regulation where the regulation itself has become integrated with other regulations into the unified sense of self that is the basis for true self-determination. We hypothesized that internalization is actually a function of the intrinsically motivated integrative process and we discussed the environmental conditions that facilitate integrated internalization. Our foci were perceived competence and optimal challenge, the recognition of inherent conflicts between the person's organismic tendencies and the required behaviors, and the minimization of controls and pressures.

CHAPTER 4

Intrinsic Motivation and Self-Determination in Human Behavior

Edward L. Deci
and
Richard M. Ryan
University of Rochester
Rochester, New York

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This ch...
of internal versus external causality and of self-determination.