Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being

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Human beings can be proactive and engaged or, alternatively, passive and alienated, largely as a function of the social conditions in which they develop and function. Accordingly, research guided by self-determination theory has focused on the social–contextual conditions that facilitate versus forestall the natural processes of self-motivation and healthy psychological development. Specifically, factors have been examined that enhance versus undermine intrinsic motivation, self-regulation, and well-being. The findings have led to the postulate of three innate psychological needs—competence, autonomy, and relatedness—which when satisfied yield enhanced self-motivation and mental health and when thwarted lead to diminished motivation and well-being. Also considered is the significance of these psychological needs and processes within domains such as health care, education, work, sport, religion, and psychotherapy.

The fullest representations of humanity show people to be curious, vital, and self-motivated. At their best, they are agentic and inspired, striving to learn; extend themselves; master new skills; and apply their talents responsibly. That most people show considerable effort, agency, and commitment in their lives appears, in fact, to be more normative than exceptional, suggesting some very positive and persistent features of human nature.

Yet, it is also clear that the human spirit can be diminished or crushed and that individuals sometimes reject growth and responsibility. Regardless of social strata or cultural origin, examples of both children and adults who are apathetic, alienated, and irresponsible are abundant. Such non-optimal human functioning can be observed not only in our psychological clinics but also among the millions who, for hours a day, sit passively before their televisions, stare blankly from the back of their classrooms, or wait listlessly for the weekend as they go about their jobs. The persistent, proactive, and positive tendencies of human nature are clearly not invariantly apparent.

The fact that human nature, phenotypically expressed, can be either active or passive, constructive or indolent, suggests more than mere dispositional differences and is a function of more than just biological endowments. It also bespeaks a wide range of reactions to social environments that is worthy of our most intense scientific investigation. Specifically, social contexts catalyze both within- and between-person differences in motivation and personal growth, resulting in people being more self-motivated, energized, and integrated in some situations, domains, and cultures than in others. Research on the conditions that foster versus undermine positive human potentials has both theoretical import and practical significance because it can contribute not only to formal knowledge of the causes of human behavior but also to the design of social environments that optimize people's development, performance, and well-being. Research guided by self-determination theory (SDT) has had an ongoing concern with precisely these issues (Deci & Ryan, 1985, 1991; Ryan, 1995).

Self-Determination Theory

SDT is an approach to human motivation and personality that uses traditional empirical methods while employing an organismic metatheory that highlights the importance of humans' evolved inner resources for personality development and behavioral self-regulation (Ryan, Kuhl, & Deci, 1997). Thus, its arena is the investigation of people's inherent growth tendencies and innate psychological needs that are the basis for their self-motivation and personality integration, as well as for the conditions that foster those positive processes. Inductively, using the empirical process, we have identified three such needs—the needs for competence (Harter, 1978; White, 1963), relatedness (Baumeister & Leary, 1995; Reis, 1994), and autonomy (deCharms, 1968; Deci, 1975)—that appear to be essential for facilitating optimal functioning of the natural propensities for growth and integration, as well as for constructive social development and personal well-being.

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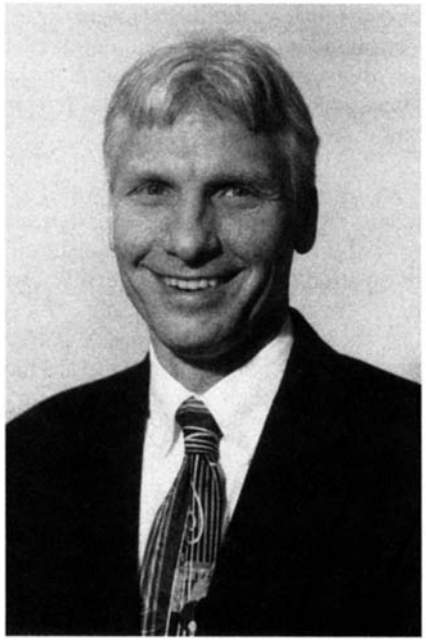

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Much of the research guided by SDT has also examined environmental factors that hinder or undermine self-motivation, social functioning, and personal well-being. Although many specific deleterious effects have been explored, the research suggests that these detriments can be most parsimoniously described in terms of thwarting the three basic psychological needs. Thus, SDT is concerned not only with the specific nature of positive developmental tendencies, but it also examines social environments that are antagonistic toward these tendencies.

The empirical methods used in much of the SDT research have been in the Baconian tradition, in that social contextual variables have been directly manipulated to examine their effects on both internal processes and behavioral manifestations. The use of experimental paradigms has allowed us to specify the conditions under which people's natural activity and constructiveness will flourish, as well as those that promote a lack of self-motivation and social integration. In this way, we have used experimental methods without accepting the mechanistic or efficient causal meta-theories that have typically been associated with those methods.

In this article we review work guided by SDT, addressing its implications for three important outcomes. We begin with an examination of intrinsic motivation, the prototypic manifestation of the human tendency toward learning and creativity, and we consider research specifying conditions that facilitate versus forestall this special type of motivation. Second, we present an analysis of self-regulation, which concerns how people take in social values and extrinsic contingencies and progressively transform them into personal values and self-motivations. In that discussion, we outline different forms of internalized motivation, addressing their behavioral and experiential correlates and the conditions that are likely to promote these different motivations. Third, we focus on studies that have directly examined the impact of psychological need fulfillment on health and well-being.

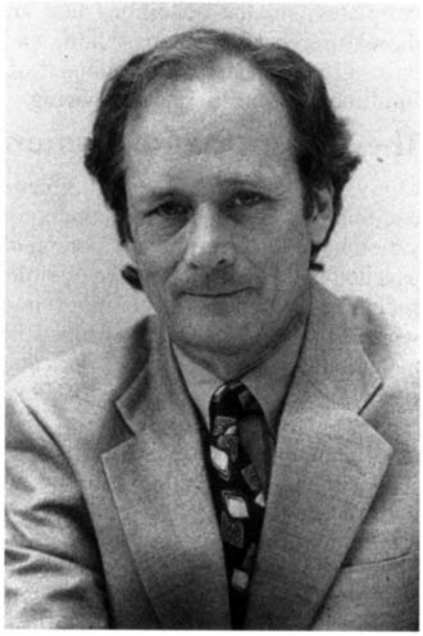
The Nature of Motivation

Motivation concerns energy, direction, persistence and equifinality—all aspects of activation and intention. Motivation has been a central and perennial issue in the field of psychology, for it is at the core of biological, cognitive, and social regulation. Perhaps more important, in the real world, motivation is highly valued because of its consequences: Motivation produces. It is therefore of preeminent concern to those in roles such as manager, teacher, religious leader, coach, health care provider, and parent that involve mobilizing others to act.

Although motivation is often treated as a singular construct, even superficial reflection suggests that people are moved to act by very different types of factors, with highly varied experiences and consequences. People can be motivated because they value an activity or because there is strong external coercion. They can be urged into action by an abiding interest or by a bribe. They can behave from a sense of personal commitment to excel or from fear of being surveilled. These contrasts between cases of having internal motivation versus being externally pressured are surely familiar to everyone. The issue of whether people stand behind a behavior out of their interests and values, or do it for reasons external to the self, is a matter of significance in every culture (e.g., Johnson, 1993) and represents a basic dimension by which people make sense of their own and others' behavior (deCharms, 1968; Heider, 1958; Ryan & Connell, 1989).

Comparisons between people whose motivation is authentic (literally, self-authored or endorsed) and those who are merely externally controlled for an action typically reveal that the former, relative to the latter, have more interest, excitement, and confidence, which in turn is manifest both as enhanced performance, persistence, and creativity (Deci & Ryan, 1991; Sheldon, Ryan, Rawsthorne, & Ilardi, 1997) and as heightened vitality (Nix, Ryan, Manly, & Deci, 1999), self-esteem (Deci & Ryan, 1995), and general well-being (Ryan, Deci, & Grolnick, 1995). This is so even when the people have the same level of perceived competence or self-efficacy for the activity.

Because of the functional and experiential differences between self-motivation and external regulation, a major focus of SDT has been to supply a more differentiated approach to motivation, by asking what kind of motivation is being exhibited at any given time. By considering the perceived forces that move a person to act, SDT has been able to identify several distinct types of motivation, each of which has specifiable consequences for learning, performance, personal experience, and well-being. Also, by articulating a set of principles concerning how each type of motivation is developed and sustained, or forestalled and undermined, SDT at once recognizes a positive thrust to human nature and provides an account of passivity, alienation, and psychopathology.



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Intrinsic Motivation

Perhaps no single phenomenon reflects the positive potential of human nature as much as intrinsic motivation, the inherent tendency to seek out novelty and challenges, to extend and exercise one's capacities, to explore, and to learn. Developmentalists acknowledge that from the time of birth, children, in their healthiest states, are active, inquisitive, curious, and playful, even in the absence of specific rewards (e.g., Harter, 1978). The construct of intrinsic motivation describes this natural inclination toward assimilation, mastery, spontaneous interest, and exploration that is so essential to cognitive and social development and that represents a principal source of enjoyment and vitality throughout life (Csikszentmihalyi & Rathunde, 1993; Ryan, 1995).

Yet, despite the fact that humans are liberally endowed with intrinsic motivational tendencies, the evidence is now clear that the maintenance and enhancement of this inherent propensity requires supportive conditions, as it can be fairly readily disrupted by various nonsupportive conditions. Thus, our theory of intrinsic motivation does not concern what causes intrinsic motivation (which we view as an evolved propensity; Ryan et al., 1997); rather, it examines the conditions that elicit and sustain, versus subdue and diminish, this innate propensity.

Cognitive evaluation theory (CET) was presented by Deci and Ryan (1985) as a subtheory within SDT that had the aim of specifying factors that explain variability in intrinsic motivation. CET is framed in terms of social and environmental factors that facilitate versus undermine intrinsic motivation, using language that reflects the assumption that intrinsic motivation, being inherent, will be catalyzed when individuals are in conditions that conduce toward its expression. In other words, it will flourish if circumstances permit. Put in this way, the study of conditions that facilitate versus undermine intrinsic motivation is an important first step in understanding sources of both alienation and liberation of the positive aspects of human nature.

CET, which focuses on the fundamental needs for competence and autonomy, was formulated to integrate results from initial laboratory experiments on the effects of rewards, feedback, and other external events on intrinsic motivation, and was subsequently tested and extended by field studies in various settings. The theory argues, first, that social–contextual events (e.g., feedback, communications, rewards) that conduce toward feelings of competence during action can enhance intrinsic motivation for that action. Accordingly, optimal challenges, effectance-promoting feedback, and freedom from demeaning evaluations were all found to facilitate intrinsic motivation. For example, early studies showed that positive performance feedback enhanced intrinsic motivation, whereas negative performance feedback diminished it (Deci, 1975), and research by Vallerand and Reid (1984) showed that these effects were mediated by perceived competence.

CET further specifies, and studies have shown (Fisher, 1978; Ryan, 1982), that feelings of competence will not enhance intrinsic motivation unless accompanied by a sense of autonomy or, in attributional terms, by an internal perceived locus of causality (deCharms, 1968). Thus, according to CET, people must not only experience competence or efficacy, they must also experience their behavior as self-determined for intrinsic motivation to be in evidence. This requires either immediate contextual supports for autonomy and competence or abiding inner resources (Reeve, 1996) that are typically the result of prior developmental supports for perceived autonomy and competence.

In fact, most of the research on the effects of environmental events in intrinsic motivation has focused on the issue of autonomy versus control rather than that of competence. Research on this issue has been considerably more controversial. It began with the repeated demonstration that extrinsic rewards can undermine intrinsic motivation. Deci (1975) interpreted these results in terms of rewards facilitating a more external perceived locus of causality (i.e., diminished autonomy). Although the issue of reward effects has been hotly debated, a recent, comprehensive meta-analysis (Deci, Koestner, & Ryan, 1999) confirmed, in spite of claims to the contrary by Eisenberger and Cameron (1996), that all expected tangible rewards made contingent on task performance do reliably undermine intrinsic motivation.

Also, research revealed that not only tangible rewards but also threats, deadlines, directives, pressured evaluations, and imposed goals diminish intrinsic motivation because, like tangible rewards, they conduce toward an external perceived locus of causality. In contrast, choice, acknowledgment of feelings, and opportunities for self-direction were found to enhance intrinsic motivation because they allow people a greater feeling of autonomy (Deci & Ryan, 1985). Field studies have further shown that

teachers who are autonomy supportive (in contrast to controlling) catalyze in their students greater intrinsic motivation, curiosity, and desire for challenge (e.g., Deci, Nezlek, & Sheinman, 1981; Flink, Boggiano, & Barrett, 1990; Ryan & Grolnick, 1986). Students taught with a more controlling approach not only lose initiative but learn less effectively, especially when learning requires conceptual, creative processing (Amabile, 1996; Grolnick & Ryan, 1987; Utman, 1997). Similarly, studies showed that autonomy-supportive parents, relative to controlling parents, have children who are more intrinsically motivated (Grolnick, Deci, & Ryan, 1997). Such findings generalized to other domains such as sport and music in which supports for autonomy and competence by parents and mentors incite more intrinsic motivation (e.g., Frederick & Ryan, 1995).

Although autonomy and competence supports are highly salient for producing variability in intrinsic motivation, a third factor, relatedness, also bears on its expression. In infancy, intrinsic motivation is readily observable as exploratory behavior and, as suggested by attachment theorists (e.g., Bowlby, 1979), it is more evident when the infant is securely attached to a parent. Studies of mothers and infants have, indeed, shown that both security and maternal autonomy support predict more exploratory behavior in the infants (e.g., Frodi, Bridges, & Grolnick, 1985). SDT hypothesizes that a similar dynamic occurs in interpersonal settings over the life span, with intrinsic motivation more likely to flourish in contexts characterized by a sense of security and relatedness. For example, Anderson, Manoogian, and Reznick (1976) found that when children worked on an interesting task in the presence of an adult stranger who ignored them and failed to respond to their initiations, a very low level of intrinsic motivation resulted, and Ryan and Grolnick (1986) observed lower intrinsic motivation in students who experienced their teachers as cold and uncaring. Of course, many intrinsically motivated behaviors are happily performed in isolation, suggesting that proximal relational supports may not be necessary for intrinsic motivation, but a secure relational base does seem to be important for the expression of intrinsic motivation to be in evidence.

To summarize, the CET framework suggests that social environments can facilitate or forestall intrinsic motivation by supporting versus thwarting people's innate psychological needs. Strong links between intrinsic motivation and satisfaction of the needs for autonomy and competence have been clearly demonstrated, and some work suggests that satisfaction of the need for relatedness, at least in a distal sense, may also be important for intrinsic motivation. It is critical to remember, however, that people will be intrinsically motivated only for activities that hold intrinsic interest for them, activities that have the appeal of novelty, challenge, or aesthetic value. For activities that do not hold such appeal, the principles of CET do not apply, because the activities will not be experienced as intrinsically motivated to begin with. To understand the motivation for those activities, we need to look more deeply into the nature and dynamics of extrinsic motivation.

Self-Regulation of Extrinsic Motivation

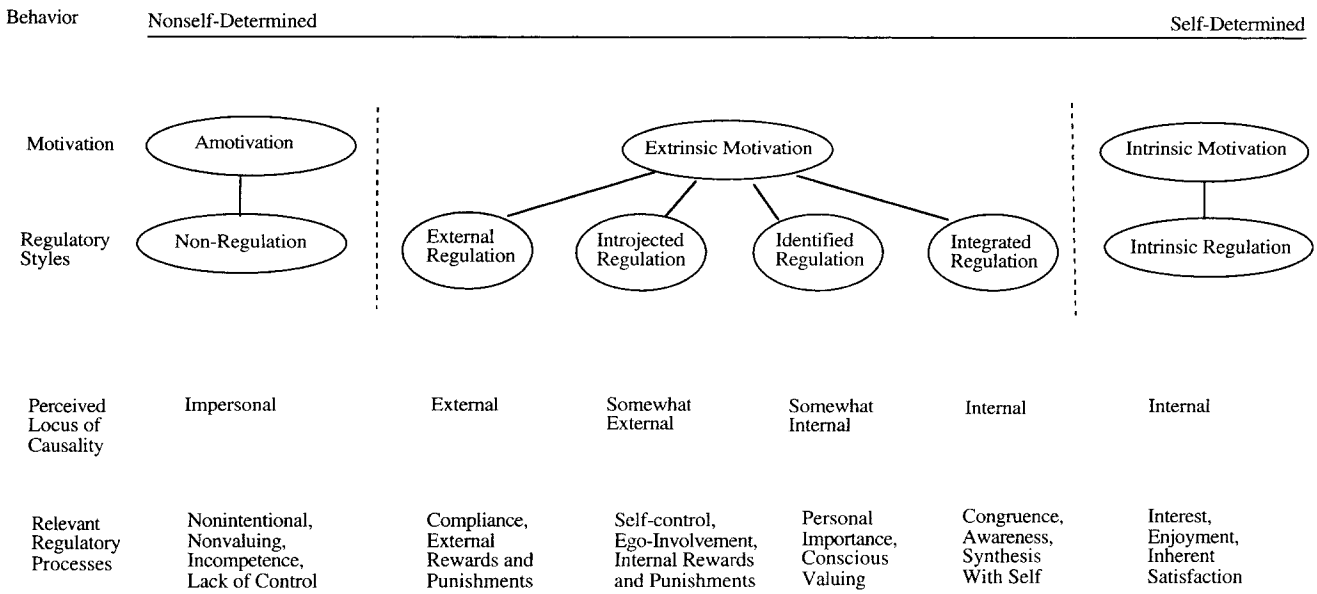
Although intrinsic motivation is an important type of motivation, it is not the only type or even the only type of self-determined motivation (Deci & Ryan, 1985). Indeed, much of what people do is not, strictly speaking, intrinsically motivated, especially after early childhood when the freedom to be intrinsically motivated is increasingly curtailed by social pressures to do activities that are not interesting and to assume a variety of new responsibilities (Ryan & La Guardia, in press).

The real question concerning nonintrinsically motivated practices is how individuals acquire the motivation to carry them out and how this motivation affects ongoing persistence, behavioral quality, and well-being. Whenever a person (be it a parent, teacher, boss, coach, or therapist) attempts to foster certain behaviors in others, the others' motivation for the behavior can range from amotivation or unwillingness, to passive compliance, to active personal commitment. According to SDT, these different motivations reflect differing degrees to which the value and regulation of the requested behavior have been internalized and integrated. Internalization refers to people's "taking in" a value or regulation, and integration refers to the further transformation of that regulation into their own so that, subsequently, it will emanate from their sense of self.

Internalization and integration are clearly central issues in childhood socialization, but they are also continually relevant for the regulation of behavior across the life span. In nearly every setting people enter, certain behaviors and values are prescribed, behaviors that are not interesting and values that are not spontaneously adopted. Accordingly, SDT has addressed the issues of (a) the processes through which such nonintrinsically motivated behaviors can become truly self-determined, and (b) the ways in which the social environment influences those processes.

The term *extrinsic motivation* refers to the performance of an activity in order to attain some separable outcome and, thus, contrasts with *intrinsic motivation,* which refers to doing an activity for the inherent satisfaction of the activity itself. Unlike some perspectives that view extrinsically motivated behavior as invariantly nonautonomous, SDT proposes that extrinsic motivation can vary greatly in its relative autonomy (Ryan & Connell, 1989; Vallerand, 1997). For example, students who do their homework because they personally grasp its value for their chosen career are extrinsically motivated, as are those who do the work only because they are adhering to their parents' control. Both examples involve instrumentalities rather than enjoyment of the work itself, yet the former case of extrinsic motivation entails personal endorsement and a feeling of choice, whereas the latter involves compliance with an external regulation. Both represent intentional behavior (Heider, 1958), but they vary in their relative autonomy. The former, of course, is the type of extrinsic motivation that is sought by astute socializing agents regardless of the applied domain.

Figure 1
The Self-Determination Continuum Showing Types of Motivation With Their Regulatory Styles, Loci of Causality, and Corresponding Processes



Within SDT, Deci and Ryan (1985) introduced a second subtheory, called organismic integration theory (OIT), to detail the different forms of extrinsic motivation and the contextual factors that either promote or hinder internalization and integration of the regulation for these behaviors. Figure 1 illustrates the OIT taxonomy of motivational types, arranged from left to right in terms of the degree to which the motivations emanate from the self (i.e., are self-determined).

At the far left of the self-determination continuum is amotivation, the state of lacking the intention to act. When amotivated, people either do not act at all or act without intent—they just go through the motions. Amotivation results from not valuing an activity (Ryan, 1995), not feeling competent to do it (Bandura, 1986), or not expecting it to yield a desired outcome (Seligman, 1975). To the right of amotivation in Figure 1 are five classifications of motivated behavior. Although many theorists have treated motivation as a unitary concept, each of the categories identified within OIT describes theoretically, experientially, and functionally distinct types of motivation. At the far right of the continuum is the classic state of intrinsic motivation, the doing of an activity for its inherent satisfactions. It is highly autonomous and represents the prototypic instance of self-determination. Extrinsically motivated behaviors, by contrast, cover the continuum between amotivation and intrinsic motivation, varying in the extent to which their regulation is autonomous.

The extrinsically motivated behaviors that are least autonomous are referred to as *externally regulated*. Such behaviors are performed to satisfy an external demand or reward contingency. Individuals typically experience externally regulated behavior as controlled or alienated, and their actions have an external perceived locus of causality (deCharms, 1968). External regulation is the type of motivation focused on by operant theorists (e.g., Skinner, 1953), and it is external regulation that was typically contrasted with intrinsic motivation in early laboratory and field studies.

A second type of extrinsic motivation is labeled *introjected regulation*. Introjection involves taking in a regulation but not fully accepting it as one's own. It is a relatively controlled form of regulation in which behaviors are performed to avoid guilt or anxiety or to attain ego enhancements such as pride. Put differently, introjection represents regulation by contingent self-esteem (Deci & Ryan, 1995). A classic form of introjection is ego involvement (deCharms, 1968; Nicholls, 1984; Ryan, 1982), in which people are motivated to demonstrate ability (or avoid failure) in order to maintain feelings of worth. Although internally driven, introjected behaviors still have an external perceived locus of causality and are not really experienced as part of the self. Thus, in some studies, external regulation (being interpersonally controlled) and introjected regulation (being intrapersonally controlled) have been combined to form a controlled motivation composite (e.g., Williams, Grow, Freedman, Ryan, & Deci, 1996).

A more autonomous, or self-determined, form of extrinsic motivation is *regulation through identification*. Identification reflects a conscious valuing of a behavioral goal or regulation, such that the action is accepted or owned as personally important. Finally, the most autono-

mous form of extrinsic motivation is *integrated regulation.* Integration occurs when identified regulations are fully assimilated to the self, which means they have been evaluated and brought into congruence with one's other values and needs. Actions characterized by integrated motivation share many qualities with intrinsic motivation, although they are still considered extrinsic because they are done to attain separable outcomes rather than for their inherent enjoyment. In some studies, identified, integrated, and intrinsic forms of regulation have been combined to form an autonomous motivation composite.

As people internalize regulations and assimilate them to the self, they experience greater autonomy in action. This process may occur in stages, over time, but we are not suggesting that it is a developmental continuum in the sense that people must progress through each stage of internalization with respect to a particular regulation. Rather, they can relatively readily internalize a new behavioral regulation at any point along this continuum depending on both prior experiences and current situational factors (Ryan, 1995). Nonetheless, the range of behaviors that can be assimilated to the self increases over time with increased cognitive capacities and ego development (Loevinger & Blasi, 1991), and there is evidence that children's general regulatory style does tend to become more internalized or self-regulated over time (e.g., Chandler & Connell, 1987).

Ryan and Connell (1989) tested the formulation that these different types of motivation, with their distinct properties, lie along a continuum of relative autonomy. They investigated achievement behaviors among school children and found that external, introjected, identified, and intrinsic regulatory styles were intercorrelated according to a quasi-simplex pattern, thus providing evidence for an underlying continuum. Furthermore, differences in the type of extrinsic motivation were associated with different experiences and outcomes. For example, the more students were externally regulated the less they showed interest, value, and effort toward achievement and the more they tended to disown responsibility for negative outcomes, blaming others such as the teacher. Introjected regulation was positively related to expending more effort, but it was also related to feeling more anxiety and coping more poorly with failures. In contrast, identified regulation was associated with more interest and enjoyment of school and with more positive coping styles, as well as with expending more effort.

Other studies in education extended these findings, showing that more autonomous extrinsic motivation was associated with more engagement (Connell & Wellborn, 1991), better performance (Miserandino, 1996), lower dropout (Vallerand & Bissonnette, 1992), higher quality learning (Grolnick & Ryan, 1987), and better teacher ratings (Hayamizu, 1997), among other outcomes.

In the realm of health care, greater internalization has been associated with greater adherence to medications among people with chronic illnesses (Williams, Rodin, Ryan, Grolnick, & Deci, 1998), better long-term maintenance of weight loss among morbidly obese patients (Williams et al., 1996), improved glucose control among diabetics (Williams, Freedman, & Deci, 1998), and greater attendance and involvement in an addiction-treatment program (Ryan, Plant, & O'Malley, 1995).

Demonstrations of positive outcomes being associated with more internalized motivation have also emerged in other diverse domains, including religion (Ryan, Rigby, & King, 1993), physical exercise (Chatzisarantis, Biddle, & Meek, 1997), political activity (Koestner, Losier, Vallerand, & Carducci, 1996), environmental activism (Green-Demers, Pelletier, & Menard, 1997), and intimate relationships (Blais, Sabourin, Boucher, & Vallerand, 1990), among others.

The advantages of greater internalization appear, then, to be manifold (Ryan et al., 1997), including more behavioral effectiveness, greater volitional persistence, enhanced subjective well-being, and better assimilation of the individual within his or her social group.

Facilitating Integration of Extrinsic Motivation

Given the significance of internalization for personal experience and behavioral outcomes, the critical issue becomes how to promote autonomous regulation for extrinsically motivated behaviors. That is, what are the social conditions that nurture versus inhibit internalization and integration?

Because extrinsically motivated behaviors are not typically interesting, the primary reason people initially perform such actions is because the behaviors are prompted, modeled, or valued by significant others to whom they feel (or want to feel) attached or related. This suggests that relatedness, the need to feel belongingess and connectedness with others, is centrally important for internalization. Thus, OIT proposes that internalization is more likely to be in evidence when there are ambient supports for feelings of relatedness. For example, Ryan, Stiller, and Lynch (1994) showed that the children who had more fully internalized the regulation for positive school-related behaviors were those who felt securely connected to, and cared for by, their parents and teachers.

The relative internalization of extrinsically motivated activities is also a function of perceived competence. People are more likely to adopt activities that relevant social groups value when they feel efficacious with respect to those activities. As is the case with all intentional action, OIT suggests that supports for competence should facilitate internalization (Vallerand, 1997). Thus, for example, children who are directed to perform behaviors before they are developmentally ready to master them or understand their rationale would be predicted, at best, only to partially internalize the regulations, remaining either externally regulated or introjected.

Finally, the experience of autonomy facilitates internalization and, in particular, is a critical element for a regulation to be integrated. Contexts can yield external regulation if there are salient rewards or threats and the person feels competent enough to comply; contexts can yield introjected regulation if a relevant reference group endorses the activity and the person feels competent and related; but contexts can yield autonomous regulation only

if they are autonomy supportive, thus allowing the person to feel competent, related, and autonomous. To integrate a regulation, people must grasp its meaning and synthesize that meaning with respect to their other goals and values. Such deep, holistic processing (Kuhl & Fuhrmann, 1998) is facilitated by a sense of choice, volition, and freedom from excessive external pressure toward behaving or thinking a certain way. In this sense, support for autonomy allows individuals to actively transform values into their own.

Again, research results have supported this reasoning. For example, Deci, Eghrari, Patrick, and Leone (1994) demonstrated in a laboratory experiment that providing a meaningful rationale for an uninteresting behavior, along with supports for autonomy and relatedness, promoted its internalization and integration. Controlling contexts yielded less overall internalization, and the internalization that did occur in those contexts tended to be only introjected. Using parent interviews, Grolnick and Ryan (1989) found greater internalization of school-related values among children whose parents were more supportive of autonomy and relatedness. Strahan (1995) found that parents who were more autonomy-supportive promoted greater religious identification, as opposed to introjection, in their offspring. Williams and Deci (1996), using a longitudinal design, demonstrated greater internalization of biopsychosocial values and practices among medical students whose instructors were more autonomy-supportive. These are but a few of the many findings suggesting that supports for relatedness and competence facilitate internalization and that supports for autonomy also facilitate integration of behavioral regulations. When that occurs, people feel not only competent and related but also autonomous as they carry out culturally valued activities.

One further point needs to be made regarding the controversial issue of human autonomy. The concept of autonomy has often been portrayed as being antagonistic to relatedness or community. In fact, some theories equate autonomy with concepts such as individualism and independence (e.g., Steinberg & Silverberg, 1986), which do indeed imply low relatedness. But, within SDT, autonomy refers not to being independent, detached, or selfish but rather to the feeling of volition that can accompany any act, whether dependent or independent, collectivist or individualist. In fact, recent research in Korean and U.S. samples has found a more positive relation between autonomy and collectivistic attitudes than between autonomy and individualistic attitudes (Kim, Butzel, & Ryan, 1998). Furthermore, research has shown positive, rather than negative, links between relatedness to parents and autonomy in teenagers (Ryan & Lynch, 1989; Ryan et al., 1994). Clearly, then, we do not equate autonomy with independence or individualism.

Alienation and Its Prevention

SDT aims to specify factors that nurture the innate human potentials entailed in growth, integration, and well-being, and to explore the processes and conditions that foster the healthy development and effective functioning of individuals, groups, and communities. But a positive approach cannot ignore pathology or close its eyes to the alienation and inauthenticity that are prevalent in our society and in others. Accordingly, we investigate nonoptimal (as well as optimal) developmental trajectories, much as is done in the field of developmental psychopathology (e.g., Cicchetti, 1991). We now turn to a brief consideration of that issue.

By definition, intrinsically motivated behaviors, the prototype of self-determined actions, stem from the self. They are unalienated and authentic in the fullest sense of those terms. But, as already noted, SDT recognizes that extrinsically motivated actions can also become self-determined as individuals identify with and fully assimilate their regulation. Thus, it is through internalization and integration that individuals can be extrinsically motivated and still be committed and authentic. Accumulated research now suggests that the commitment and authenticity reflected in intrinsic motivation and integrated extrinsic motivation are most likely to be evident when individuals experience supports for competence, autonomy, and relatedness.

It is the flip side of this coin, however, that speaks directly to the issues of alienation and inauthenticity and is relevant to such questions as why employees show no initiative, why teenagers reject their schools' values, and why patients adhere so poorly to treatment. SDT understands such occurrences in terms of the undermining of intrinsic motivation and, perhaps even more typically, the failure of internalization. To explain the causes of such diminished functioning, SDT suggests turning first to individuals' immediate social contexts and then to their developmental environments to examine the degree to which their needs for competence, autonomy, and relatedness are being or have been thwarted. We maintain that by failing to provide supports for competence, autonomy, and relatedness, not only of children but also of students, employees, patients, and athletes, socializing agents and organizations contribute to alienation and ill-being. The fact that psychological-need deprivation appears to be a principal source of human distress suggests that assessments and interventions would do well to target these primary foundations of mental health.

Psychological Needs and Mental Health

As we have seen, both the cognitive evaluation and organismic integration components of SDT have led us to posit a parsimonious list of three basic psychological needs as a means of organizing and interpreting a wide array of empirical results, results that seemed not to be readily and satisfactorily interpretable without the concept of needs. Much of our more recent work has used the concept of three basic psychological needs to address new phenomena and, more particularly, to evaluate the postulate that these three needs are innate, essential, and universal.

By our definition, a basic need, whether it be a physiological need (Hull, 1943) or a psychological need, is an energizing state that, if satisfied, conduces toward health and well-being but, if not satisfied, contributes to pathology and ill-being. We have thus proposed that the basic needs for competence, autonomy, and relatedness must be satis-

fied across the life span for an individual to experience an ongoing sense of integrity and well-being or "eudaimonia" (Ryan & Frederick, 1997; Waterman, 1993). Accordingly, much of our research now focuses on the link between satisfaction of the basic psychological needs and the experience of well-being.

Specifying psychological needs as essential nutriments implies that individuals cannot thrive without satisfying all of them, any more than people can thrive with water but not food. Thus, for example, a social environment that affords competence but fails to nurture relatedness is expected to result in some impoverishment of well-being. Worse yet, social contexts that engender conflicts between basic needs set up the conditions for alienation and psychopathology (Ryan et al., 1995), as when a child is required by parents to give up autonomy in order to feel loved.

To suggest that the three needs are universal and developmentally persistent does not imply that their relative salience and their avenues for satisfaction are unchanging across the life span or that their modes of expression are the same in all cultures. The very fact that need satisfaction is facilitated by the internalization and integration of culturally endorsed values and behaviors suggests that individuals are likely to express their competence, autonomy, and relatedness differently within cultures that hold different values. Indeed, the mode and degree of people's psychological-need satisfaction is theorized to be influenced not only by their own competencies but, even more important, by the ambient demands, obstacles, and affordances in their sociocultural contexts. Thus, to posit universal psychological needs does not diminish the importance of variability in goals and orientations at different developmental epochs or in different cultures, but it does suggest similarities in underlying processes that lead to the development and expression of those differences.

Our recent investigations of the importance of basic psychological needs have addressed three questions: Are the pursuit and attainment of all culturally congruent aspirations and life values associated with well-being? Do need-related processes operate similarly within different cultural circumstances? Is within-person variability in basic need satisfaction related to variability in well-being indicators? We briefly consider some of this work.

First, we discuss the relation of personal goals to well-being. We have hypothesized that the pursuit and attainment of some life goals will provide relatively direct satisfaction of the basic needs, thus enhancing well-being (Ryan, Sheldon, Kasser, & Deci, 1996), whereas the pursuit and attainment of other goals does not contribute to and may even detract from basic need satisfactions, leading to ill-being. In accord with this reasoning, T. Kasser and Ryan (1993, 1996) examined individual differences in the emphasis people place on intrinsic aspirations (goals such as affiliation, personal growth, and community that directly satisfy basic needs) compared with extrinsic aspirations (goals such as wealth, fame, and image that at best indirectly satisfy the needs). They found, first, that placing strong relative importance on intrinsic aspirations was positively associated with well-being indicators such as self-esteem, self-actualization, and the inverse of depression and anxiety, whereas placing strong relative importance on extrinsic aspirations was negatively related to these well-being indicators. Ryan, Chirkov, Little, Sheldon, Timoshina, and Deci (1999) replicated these findings in a Russian sample, attesting to the potential generalizability of the findings across cultures.

These findings go beyond goal importance per se. Both Ryan, Chirkov, et al. and T. Kasser and Ryan (in press) have found that whereas self-reported attainment of intrinsic aspirations was positively associated with well-being, attainment of extrinsic aspirations was not. Further, Sheldon and Kasser (1998) found in a longitudinal study that well-being was enhanced by attainment of intrinsic goals, whereas success at extrinsic goals provided little benefit. Together, these results suggest that even highly efficacious people may experience less than optimal well-being if they pursue and successfully attain goals that do not fulfill basic psychological needs. We hasten to add, however, that the meaning of specific goals is culturally influenced, so that how specific goals relate to well-being can vary across cultures, although the relation between underlying need satisfaction and well-being is theorized to be invariant.

Clearly, there are many factors that lead people to emphasize certain life goals that may not be need fulfilling. For example, exposure to the commercial media can prompt a focus on materialism (Richins, 1987), which provides only fleeting satisfactions and could actually detract from basic need fulfillment and, thus, well-being. Prior deficits in need fulfillment (e.g., from poor caregiving) might also lead individuals to yearn for more extrinsic goals as a substitute or compensatory mechanism. In fact, T. Kasser, Ryan, Zax, and Sameroff (1995) found that teens who had been exposed to cold, controlling maternal care (as assessed with ratings by the teens, mothers, and observers) were more likely to develop materialistic orientations, compared with better nurtured teens who more strongly valued the intrinsic goals of personal growth, relationships, and community. In short, cultural and developmental influences produce variations in the importance of goals, the pursuit of which, in turn, yields different satisfaction of basic needs and different levels of well-being.

In other research, we have examined the relations of people's reports of need satisfaction to indicators of well-being in various settings. For example, V. Kasser and Ryan (in press) found that supports for autonomy and relatedness predicted greater well-being among nursing home residents. Baard, Deci, and Ryan (1998) showed that employees' experiences of satisfaction of the needs for autonomy, competence, and relatedness in the workplace predicted their performance and well-being at work. Such research shows that within specific domains, especially those central to the lives of individuals, need satisfaction is correlated with improved well-being.

A more compelling way of demonstrating the essential relations between need fulfillments and mental health has been the examination of role-to-role and day-to-day fluc-

tuations in basic need satisfaction and their direct effects on variability in well-being, while controlling for individual differences and various confounding variables. For example, Sheldon et al. (1997) demonstrated that satisfaction in each of several life roles (e.g., student, employee, friend), relative to the individual's own mean satisfaction, was attributable to the degree to which that role supports authenticity and autonomous functioning. Similarly, in a study that examined daily variations in well-being, Sheldon, Reis, and Ryan (1996) used hierarchical linear modeling to show that within-person daily fluctuations in the satisfaction of autonomy and competence needs predicted within-person fluctuations in outcomes such as mood, vitality, physical symptoms, and self-esteem. In a more recent study, Reis, Sheldon, Gable, Roscoe, and Ryan (in press) found that variations in the fulfillment of each of the three needs (i.e., competence, autonomy, and relatedness) independently predicted variability in daily well-being. These studies support the view that basic psychological needs are determinative with regard to optimal experience and well-being in daily life.

Conclusions

Debates concerning the activity or passivity, responsibility or indolence, of human beings have been perennial (Kohn, 1990). As psychology has become more advanced, both in terms of our understanding of evolution and neurobiology and of social behavior and its causation, ample support for both perspectives could be garnered. SDT addresses this issue by attempting to account for both the activity and the passivity, the responsibility and the indolence. To do this, we have assumed that humans have an inclination toward activity and integration, but also have a vulnerability to passivity. Our focus, accordingly, has been to specify the conditions that tend to support people's natural activity versus elicit or exploit their vulnerability.

Our early investigations focused on the social conditions that enhance versus diminish a very positive feature of human nature, namely, the natural activity and curiosity referred to as intrinsic motivation. We found that conditions supportive of autonomy and competence reliably facilitated this vital expression of the human growth tendency, whereas conditions that controlled behavior and hindered perceived effectance undermined its expression. Subsequently, we investigated the acquisition and regulation of nonintrinsically motivated behaviors and, here too, we found evidence of the dramatic power of social contexts to enhance or hinder the organismic tendency to integrate ambient social values and responsibilities. Contexts supportive of autonomy, competence, and relatedness were found to foster greater internalization and integration than contexts that thwart satisfaction of these needs. This latter finding, we argue, is of great significance for individuals who wish to motivate others in a way that engenders commitment, effort, and high-quality performance.

Yet, our primary concern throughout this program of research has been the well-being of individuals, whether they are students in classrooms, patients in clinics, athletes on the playing field, or employees in the workplace. As formulated by SDT, if the social contexts in which such individuals are embedded are responsive to basic psychological needs, they provide the appropriate developmental lattice upon which an active, assimilative, and integrated nature can ascend. Excessive control, nonoptimal challenges, and lack of connectedness, on the other hand, disrupt the inherent actualizing and organizational tendencies endowed by nature, and thus such factors result not only in the lack of initiative and responsibility but also in distress and psychopathology.

Knowledge concerning the nutriments essential for positive motivation and experience and, in turn, for enhanced performance and well-being has broad significance. It is relevant to parents and educators concerned with cognitive and personality development because it speaks to the conditions that promote the assimilation of both information and behavioral regulations. It is also relevant to managers who want to facilitate motivation and commitment on the job, and it is relevant to psychotherapists and health professionals because motivation is perhaps the critical variable in producing maintained change. Thus, by attending to the relative presence or deprivation of supports for basic psychological needs, practitioners are better able to diagnose sources of alienation versus engagement, and facilitate both enhanced human achievements and well-being.

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