Self-Determination Theory

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Abstract

Self-determination Theory (SDT) is a motivational theory of personality, development, and social processes that examines how social contexts and individual differences facilitate different types of motivation, especially autonomous motivation and controlled motivation, and in turn predict learning, performance, experience, and psychological health. SDT proposes that all human beings have three basic psychological needs – the needs for competence, autonomy, and relatedness – the satisfaction of which are essential nutrients for effective functioning and wellness. Satisfaction of these basic needs promotes the optimal motivational traits and states of autonomous motivation and intrinsic aspirations, which facilitate psychological health and effective engagement with the world.

Self-determination Theory (SDT) is a theory of human motivation that examines a wide range of phenomena across gender, culture, age, and socioeconomic status. As a motivational theory, it addresses what energizes people's behavior and moves them into action, as well as how their behavior is regulated in the various domains of their lives. SDT's explanations are focused at the psychological level (rather than the sociological or physiological levels), thus using human perceptions, cognitions, emotions, and needs as predictors of regulatory, behavioral, developmental, and experiential outcomes (e.g., Ryan and Deci, 2000b).

Central to the theory is the important distinction between two types of motivation – *autonomous motivation* and *controlled motivation*. Traditionally, motivation theories have treated motivation as a unitary concept focusing just on the total amount of motivation people have for behaviors in order to predict how vigorously they will engage in those behaviors, and many contemporary theories of motivation still do. SDT, in contrast, has always put its primary emphasis on the types of motivation people have for various behaviors. The theory maintains that, although knowing the amount of motivation people have for behaviors may allow one to predict the amount or quantity of the behaviors they will exhibit, assessing types of motivation is necessary for predicting the quality and maintenance of those behaviors.

When people are autonomously motivated, they act with a full sense of willingness and volition, wholly endorsing that which they are doing because they find it either interesting and enjoyable, or consistent with their deeply held, integrated values. Autonomous motivation is typically accompanied by the experience of positive affect, flexibility, and choice. In contrast, when people's motivation is controlled, they act out of coercion, seduction, or obligation. They tend to experience pressure and compulsion, rather than concurrence and choice. Much of the self-determination research has examined either (1) antecedents of these types of motivation, at the developmental or the situation levels, or (2) the concomitants and consequences of the different types of motivation. We address these two types of motivation and their various subtypes in turn, although first we speak briefly about the philosophical assumptions upon which self-determination was built.

The Meta-Theory of SDT

Within psychology, the meta-theoretical assumptions underlying different theories tend to fall along a continuum from mechanistic to organismic. At one end, mechanistic meta-theories assume that humans are passive and thus require some force operating on them to move them into action. Classic theories of this sort include operant theory (Skinner, 1971), which assumes that external reinforcers, such as contingently provided food and water, as well as their derivatives such as money, are what move people into action. When reinforcers are provided after a person emits a behavior in the presence of a contingency, the reinforcer will strengthen the association between the contingency and behavior, making the behavior more likely to occur the next time the contingency is present.

At the other end of the continuum, organismic meta-theories assume that humans are by nature active organisms who can motivate themselves to act on their environment and elaborate and strengthen their understanding and behavioral repertoire. Piaget's (1971) theory of cognitive development is an example of a classic theory built upon organismic assumptions. This approach assumes that people are naturally inclined to expand their cognitive, knowledge structures by seeking stimuli that are optimally discrepant from their existing structures. The assimilation schema is the means through which these new schema are developed, and the organization principal is the process that integrates the new schema into people's existing structures.

Many current theories, such as the social cognitive and social learning theories (e.g., Bandura, 1996) fall somewhere between the ends of the continuum with some aspects of the theories reflecting somewhat mechanistic, and others reflecting somewhat organismic, meta-theoretical assumptions. However, the primary lacuna in these theories is the failure to recognize that people have an innate developmental tendency – that is, that they inherently act to elaborate themselves and to integrate these new experiences. Simply stated, from the organismic perspective, development is not something the environment does to people, although of course the environment does affect people's development; rather development is something that people do for themselves by acting on stimuli either that they seek out or that are thrust upon them.

Self-determination theory (SDT) is decidedly organismic at its core. It assumes that humans are active, working to integrate new material into their own sense of self, but also, and importantly, that the environment can either provide nutrients for this integrative process, or can disrupt and impair the process. Thus, it is the dialectic between the active, growth-oriented organism and the social context that is the central explanatory nexus for motivation, behavior, and development. The degree to which people's motivation is autonomous versus controlled, at either the developmental or situation level, depends on the degree to which the active integrative process functions more versus less successfully, in part depending on whether the social environment supports versus thwarts the integration.

Autonomous Motivation

The early motivation research that led directly to SDT differentiated intrinsic motivation from extrinsic motivation (e.g., Deci, 1971). Intrinsic motivation means people are engaging in an activity because they find it interesting, enjoyable, or fun. The play of young children is a perfect example of intrinsically motivated behavior. The children are active and engaged in a very natural way. They will often be working out some inner agenda, such as expressing feelings, albeit without any deliberate intention to do so. They are simply doing what they find interesting to do, and in the process they are learning and growing. Adults are also intrinsically motivated for some activities, typically their leisure-time pursuits. Because intrinsic motivation is a natural internal motivation involving interest and enjoyment, it is not necessary to motivate people to do what they find intrinsically interesting. They simply do those behaviors and this intrinsic motivation is the prototype of autonomous motivation.

Intrinsic motivation is often discussed in contrast to extrinsic motivation. The latter type of motivation involves a contingency between the target behavior and some separable consequence desired by the individual. What are referred to as reinforcers in operant theory can be thought of as extrinsic motivators. People are often extrinsically motivated by the pursuit of rewards such as money or prizes, the avoidance of noxious stimuli, or the desire for social approval. Colloquially, the classic extrinsic motivators are the 'carrot and stick.'

Intrinsic and Extrinsic Motivation

Early intrinsic motivation research examined the effects of extrinsic rewards on intrinsic motivation. At issue is whether giving extrinsic rewards to people who are intrinsically motivated for an activity would enhance their intrinsic motivation for the activity. That of course would be desirable. Perhaps, however, the two are additive in which case the motivations would not affect each other but would add together to form total motivation. That too would be a good outcome. But the third option is that there is a negative interactive effect between extrinsic rewards and intrinsic motivation. That would mean that giving extrinsic rewards to someone doing an interesting activity would actually diminish the person's intrinsic motivation for the activity.

The initial research indicated that in fact extrinsic rewards do undermine intrinsic motivation (Deci, 1971). People who did an interesting activity to get a monetary reward were subsequently less intrinsically motivated than others who did the same activity without getting the reward. This was a very controversial finding because it highlighted negative effects of rewards, which is no doubt the archetype of motivation in most people's minds, and of course in the behavioral psychologies. So, in the subsequent decades there were many additional tests of this phenomenon. A meta-analysis of more than 100 experiments confirmed that tangible rewards do in fact undermine intrinsic motivation for a behavior, especially if the rewards are contingent on the behavior, expected while doing it, and relatively salient (Deci et al., 1999). On the other hand, the research and meta-analysis also showed that positive feedback enhanced intrinsic motivation. Additional experiments showed, as summarized by Ryan and Deci (2000a), that threats of punishment, deadlines, evaluations, and surveillance all undermined intrinsic motivation, whereas providing people with choice, as well as acknowledging their feelings and perspectives, tended to enhance their intrinsic motivation.

In drawing these findings together and providing a theoretical account, Deci and Ryan (1985) posited that integral to intrinsic motivation are two fundamental psychological needs – that is, the needs for autonomy and competence. Stated differently, people have inherent psychological needs, just as they have basic physiological needs (e.g., oxygen, food, and water), and satisfaction versus thwarting of the basic psychological needs can have a range of positive versus negative consequences. Specifically, people may become dependent on and controlled by external events such as tangible rewards, threats, deadlines, and surveillance, thus having their need for autonomy thwarted and their intrinsic motivation undermined by these events. In contrast, choice and the acknowledgment of their internal perspective have been found to increase people's sense of autonomy, thus enhancing their intrinsic motivation. Concerning feedback, positive feedback tends to affirm people's sense of effectance, thus satisfying their need for competence and enhancing their intrinsic motivation; whereas, negative feedback, which has been found to diminish intrinsic motivation, is thought to have its effects by thwarting the need for competence.

Internalization of Motivation

The fact that the most typical extrinsic motivators have been reliably found to decrease intrinsic motivation – humans' natural, inherent type of autonomous motivation – raises the question of whether it is possible for people to be autonomous while being extrinsically motivated. Ryan et al. (1985) addressed that issue with the concept of internalization, which had been an important concept in developmental psychology for many years, and they suggested that people tend to internalize material endorsed by significant others in order to satisfy a basic psychological need for relatedness. The Ryan et al. idea was that extrinsic contingencies, which are external to people, could be taken in by the individuals and integrated into their sense of self. If that were to happen, people could behave from their own sense of self and thus be autonomous with respect to motivations that had originally been external.

However, the researchers pointed out that internalization, which is a natural part of the integrative process, may not always function wholly effectively so motivations sometimes get only partially internalized and thus not fully integrated. Therefore, they suggested, internalization can be understood in terms of a continuum of autonomy, in which the more fully some value or regulation is internalized the more the accompanying behavior will be enacted autonomously. They discussed four types of extrinsic motivation that resulted from different degrees of internalization.

External regulation is the classic type of extrinsic motivation. People behave because of external contingencies that have not been internalized. Thus, external regulation is the least autonomous and most controlled form of extrinsic motivation. *Introjected regulation* results from people having partially internalized an extrinsic motivation – that is, having taken it in but not really accepted it as their own. Introjection includes being motivated by contingent self-esteem, guilt, or ego-involvement. Introjected regulation has been found empirically to be accompanied by experiences and consequences similar to those associated with external regulation. Thus, although this type of extrinsic motivation is internal to the person, it is still quite controlling. A more fully internalized form of extrinsic motivation is referred to as *identified regulation* because it involves people identifying with the personal value and importance of the behavior for themselves and thus accepting it as their own. Subsequently, they will regulate themselves for related behaviors relatively autonomously. Finally, the fullest type of internalized extrinsic motivation is labeled *integrated regulation*. It involves people having integrated new identifications with other aspects of their own integrated sense of self – that is, with other identifications, values, and needs. With integrated regulation, people act with a full sense of volition and choice. Empirically, identified regulation is more closely related to integrated regulation than it is to introjected regulation. Thus, identified and integrated regulations, as well as intrinsic motivation, are all considered relatively autonomous forms of motivation.

With the elaboration of extrinsic motivation in terms of the degree of internalization, and thus of autonomy, it became clear that the distinction between autonomous and controlled motivation was the most useful and appropriate as the primary distinction in SDT. Accordingly, autonomous motivation comprises external and introjected forms of extrinsic motivation, whereas controlled motivation comprises identified and integrated forms of extrinsic motivation, along with intrinsic motivation. In this, one sees that some types of extrinsic motivation (identified and integrated) are relatively autonomous along with intrinsic motivation and one type of internal motivation (introjected) is relatively controlled. As such, neither the intrinsic–extrinsic distinction, nor the internal–external distinction works as cleanly and effectively as the autonomous-controlled distinction.

Autonomy across Cultures

Various psychologists have argued that the concept of autonomy is a Western concept that is not relevant to Eastern cultures (e.g., Iyengar and DeVoe, 2003); however, numerous studies have shown that the experience of autonomy is also essential in various Eastern cultures such as South Korea, China, and Japan. For example, Chirkov et al. (2003) did a study in Korea, Russia, Turkey, and the United States, finding that when people enacted behaviors consistent with either individualism or collectivism and did so autonomously, they evidenced high well-being, but when their enactment was prompted by controlled motivation, they evidenced poor well-being, regardless of the culture or the values. In other words, autonomy is necessary for a high level of psychological wellness in Eastern as well as Western cultures.

Amotivation

Clearly, both autonomous and controlled motivations are types of motivation, so to whatever degree people have one or the other or both of these, the people will be motivated. In contrast, the concept of *amotivation* refers to people having no intentionality or motivation. People tend to be amotivated for a behavior when they do not feel competent to do it or when they do not value the outcomes that are likely to follow from the behaviors.

Many motivation theories use as their primary distinction: being motivated versus unmotivated. SDT, however, has a tripartite differentiation of autonomous motivation, controlled motivation, and amotivation. Considerable research has used questionnaires that assess these concepts at the levels of specific behaviors, such as stopping tobacco use, or of domains, such as doing schoolwork. However, the tripartite conceptualization has also been examined at the more general personality level.

Causality Orientations

The concept of general causality orientations refers to three individual difference variables related to people's understanding of the causality for their behaviors and the degrees to which, motivationally, they are generally oriented in these ways. The three causality orientation dimensions are the autonomous orientation, the controlled orientation, and the impersonal orientation (Deci and Ryan, 1985). When people are high in the autonomous orientation, they tend to focus on information in the environment and within themselves that they can use in making choices, and they tend to have a high level of autonomous motivation. When people are high in the controlled orientation, they tend to focus on controls and pressures in the environment and within themselves that tell them what they should do, and to a substantial degree their behavior is controlled. When people are high in the impersonal orientation, they tend to focus on cues in the environment and within themselves that signify their incompetence and inability to obtain desired outcomes, and they tend to be amotivated a good deal of the time.

Each person has each of these orientations to some degree, so people are not categorized as being one type of person or another. Rather, the three orientations are all operative to differing degrees, and each orientation influences some of their behaviors and experiences. The autonomous orientation is related to self-esteem and self-actualization; the controlled

orientation is related to public self-consciousness and the type-A coronary-prone behavior pattern; and the impersonal orientation is related to self-derogation and depressive symptoms.

Basic Psychological Needs

Earlier we introduced the concept of fundamental psychological needs, which refers to essential, universal nutrients for psychological health and well-being. We mentioned that satisfying the needs for competence and autonomy appeared to be particularly important for maintaining intrinsic motivation, and also that people tend to internalize extrinsic motivation in order to experience satisfaction not only of these needs but also the need for relatedness.

Indeed, the concept of basic psychological needs is central to SDT because it specifies the nutrients that are essential in the environment to support and facilitate people becoming more autonomously motivated, experiencing greater psychological and physiological wellness, and performing more effectively (Gagné and Deci, 2005; Ryan et al., 2008b). Many dozens of studies, summarized in a recent meta-analysis (Ng et al., 2012) have confirmed that, across cultures, genders, and circumstances, when people experience satisfaction of the three basic psychological needs, they do indeed evidence greater health and well-being.

The importance of supports for psychological need satisfaction has been shown concurrently and developmentally. First, some studies have shown that when the current social environment supports one or more of the basic needs, people tend to be more autonomously motivated in that situation. Examples of this are the experiments showing that both choice and acknowledging people's feelings in a particular situation enhanced their intrinsic motivation for the target activity at that time (Deci et al., 1999). When environments supported people's autonomy, they became more intrinsically motivated. Similarly, an experiment (Deci et al., 1994) showed that supports for autonomy in a particular situation facilitated internalization and integration in that situation.

Second, the promotion of autonomous motivation and wellness has been shown developmentally. For example, studies have shown that when the social contexts of either homes or classrooms were autonomy supportive of young students, the students tended, over time, to develop stronger identifications with the importance of doing schoolwork – that is, they internalized this value and regulation more fully (Grolnick and Ryan, 1989). As noted already, the concept of general causality orientations concerns people's general individual differences with regard to autonomous and controlled motivation and amotivation. This concept of causality orientations is viewed as a developmental outcome – that is, it is said to result from the mix of supporting versus thwarting of the basic psychological needs during one's developmental years. When all of the needs are satisfied over time, in homes, schools, and elsewhere, while children are growing up, they tend to develop a relatively strong autonomy orientation. When the competence and relatedness needs are supported, but the need for autonomy is thwarted, people tend to develop a fairly strong controlled orientation, and when all of the needs are relatively thwarted, people tend to develop a high level of the impersonal orientation. In short, the satisfaction versus thwarting of the basic psychological needs for autonomy, competence, and relatedness explains the enhancement versus undermining of intrinsic motivation, the internalization of extrinsic motivation, and the development of general causality orientations.

Hedonic and Eudaimonic Wellness

Basic psychological needs theory was developed initially to address the issue of psychological wellness, although it has a central role in all of SDT, for satisfaction of the psychological needs has been shown to maintain and enhance intrinsic motivation, to promote internalization of extrinsic motivation, and to facilitate development of the causality orientations. As well, it has consistently been shown to promote well-being. Within that field, a distinction is frequently made between hedonic well-being and eudaimonic well-being (Ryan et al., 2008a). Hedonic well-being refers to being happy, to having high positive affect and low negative affect. Eudaimonic well-being, in contrast, refers to living one's life in a full and deeply satisfying way, actualizing one's human potentials. Eudaimonic living will often be accompanied by positive affect, but people will also experience negative affect when that is appropriate to the moment, as when something sad has just happened. Satisfaction of the basic psychological needs has been shown to be crucial for eudaimonic well-being.

Need Support, Motivation, and Outcomes

Much of the research examining the consequences of autonomous motivation, controlled motivation, and amotivation has been done in various applied settings, including homes, schools, workplaces, medical clinics, athletic settings, psychotherapy offices, and virtual worlds. In short, many hundreds of studies have shown that, across these domains in many countries, outcomes tend to be most positive when the social environment has been supportive of the basic needs and when the target individuals have been autonomously motivated.

For example, when elementary school teachers were more need supportive, their students were more intrinsically motivated and showed higher self-esteem; when instructors in a college course were more need supportive the students became more autonomously motivated for the course over the semester, understood the material better, and received higher grades in the course. And a study of medical students showed that when their instructors were more need supportive, the students internalized the course material more fully. In general, when the social context is more need supportive and people are more autonomously motivated for learning, they learn in a deeper more conceptual way, whereas, when the context is controlling or the learners are controlled in their motivation, they tend to do well at memorizing facts, but they show low levels of conceptual understanding (Ryan and Deci, 2009).

A study of employees in a work setting showed that when managers became more need supportive the employees were more satisfied with their jobs and more trusting of the company. A study of investment bankers showed that when

managers were more autonomy supportive, their employees performed better at their jobs and also showed better psychological well-being. These employees having higher autonomous causality orientations also contributed to their performing well and feeling good. In general, work settings that are more need supportive and workers who are more autonomously motivated have been found to yield more positive work outcomes (e.g., Baard et al., 2004).

In the domain of health care, for example, research has found that when physicians were need supportive, the patients were more autonomously motivated to take their medications and in turn showed greater medication adherence. Other research showed that when medical practitioners were more need supportive for diabetic patients, the patents' health improved (Ryan et al., 2008b).

In research on virtual worlds, results indicate that when players experience more satisfaction of the basic psychological needs while playing the games they are more intrinsically motivated for and more immersed in the games (Rigby and Ryan, 2011). They have also shown that much of the basis for players' aggression during or following game play is a function of their needs having been thwarted while playing.

Goals and Aspirations

The concept of goals has been perhaps the most common motivational concept in the psychological literature on motivation since the 1960s, when cognitive processes have been the central explanatory approach to psychology. Goals are outcomes that people value and hope to attain when engaging in particular behaviors. In SDT, although psychological needs is the most important explanatory concept, goals also have an important place. Specifically, SDT has focused on the degree to which people place value on what are called extrinsic life goals or aspirations, such as wealth, fame, and image, relative to intrinsic life goals such as personal growth, relationships, and community.

Research has shown that when people value the extrinsic aspirations more strongly than the intrinsic aspirations, they tend also to display poor psychological health, whereas when they value the intrinsic aspirations more strongly, they are psychologically healthier (Kasser and Ryan, 1996). These results have been consistently replicated in varied groups and cultures, and the explanation of the findings supported by SDT research is that the pursuit and attainments of the intrinsic goals of self-exploration, meaningful relationships, and community contributions tend to provide direct satisfaction of the basic psychological needs, whereas pursuit and attainment of the extrinsic goals of material possessions, social recognition, and attractive image are at best indirectly satisfying of the basic needs and may even be antagonistic to them.

Furthermore, research has shown that people tend to value the extrinsic aspirations when they have had a low level of basic psychological need satisfaction during their years as children, but they tend to value intrinsic aspirations when they have had a high level of basic satisfaction during those years (Kasser et al., 1995).

As well, studies found that if people's goals are manipulated experimentally, having intrinsic goals made salient led to better learning and performance than having extrinsic goals made salient. When, for example, business students who were learning about communications were told that it would help them learn about themselves, which is an intrinsic goal, their learning and performance was better than when the students were told that it would help them make more money, which is an extrinsic goal (Vansteenkiste et al., 2004).

Close Relationships

The concepts of SDT have also been used to examine close personal relationships such as best friends and romantic partners. Much of the SDT research has focused on the importance of autonomy in close relationships. Some theorists have argued that to have a satisfying close relationship people need to give up autonomy in service of the dyad, but SDT has argued that autonomy, as well as relatedness and competence, must be satisfied within a relationship in order for the relationship to be high quality and truly satisfying.

Studies have shown that indeed the degree to which people experience autonomy in a particular relationship predicts the degree of attachment security in that relationship. Across several relationships (e.g., mother, father, best friend, romantic partner) people experience considerable variability in the degree to which their need for autonomy is satisfied with different partners, and similarly they experience different degrees of attachment security. For each of the partners, autonomy need satisfaction directly predicted security of attachment in the relationship (La Guardia et al., 2000).

A different study examined best friend relationships and found that mutuality of providing autonomy support was important for satisfying friendships. In other words, when a person received autonomy support from a friend it contributed to the person's attachment security, emotional reliance, relationship satisfaction, and well-being, a set of findings that was true for each partner. Further, however, when a person gave autonomy support to the friend, not only did the friend benefit, but the person actually benefitted from the giving to the partner. So, both receiving autonomy support and giving autonomy support within a friendship benefits each partner in that relationship (Deci et al., 2006).

Summary

SDT is a motivational theory that differentiates between autonomous and controlled types of motivation and proposes that autonomous motivation leads to higher quality behavior and experience, especially for heuristic activities. It also differentiates between intrinsic and extrinsic aspirations and proposes that intrinsic aspirations are associated with greater well-being and better performance. Further, the theory specifies three basic psychological needs, those for autonomy, competence, and relatedness, which have been found to be universally essential for psychological health and well-being. Further, satisfaction of the basic needs not only promotes psychological health but also enhances intrinsic motivation, facilitates internalization of extrinsic motivation, supports the development of autonomous causality orientations, and strengthens intrinsic

relative to extrinsic aspirations. Across the domains of people's lives, the people are more optimally motivated, perform better, and feel healthier if their basic psychological needs are satisfied.

See also: Affect-Regulation Motivation; Avoidance and Approach Motivation: A Brief History; Control Behavior: Psychological Perspectives; Eudaemonism; Expectancy-Value-Cost Model of Motivation; Gender and Academic Motivation; Grit; Interest, Psychology of; Motivation and Actions, Psychology of; Motivation in Australian Aboriginal Populations; Motivation in Youth Sport and Physical Activity: Developmental Perspectives; Motivation, Learning, and Instruction; Personal Projects; Race and Academic Motivation; School Achievement: Motivational Determinants and Processes; School Burnout and Engagement: Lessons from a Longitudinal Study in Finland; Schooling: Impact on Cognitive and Motivational Development; Self and Emotional Development in Adulthood and Later Life; Self-Regulation in Adulthood; Teacher Motivation.

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