Intrinsic and Extrinsic Motivation

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Individuals are motivated for different reasons. Throughout the day, and over a lifetime, individuals act and behave differently depending on the circumstances surrounding their decisions. One who feels supported in an educational environment might feel satisfied and challenged with a difficult class project. On the other hand, one who feels controlled in an educational setting might consequently miss a lot of classes and appear disengaged while in class. When one feels supported and engaged, positive forms of motivation such as intrinsic motivation are likely to be sustained. In a supportive context, individuals are more likely to value what they do and feel satisfied while doing the activity. In contrast, when one feels controlled and pressured, negative forms of motivation such as external regulation are likely to be triggered. In a controlling context, individuals are more likely to do only what they are told and feel dissatisfied and disengaged while doing so.

The difference between intrinsic and extrinsic motivation is a well-known dichotomy between motivational types that has been discussed in the psychology literature for almost four decades. The following examples illustrate this dichotomy. Tommy likes reading, and he reads every chance he gets. His room is filled with books! Tommy's parents encourage his reading and get involved whenever they can. On the other hand, Melanie does not like to read, and she only does so when she is forced by her teacher and parents to read for an upcoming book report. The difference in their environments fosters different types of motivation which supports different learning outcomes.
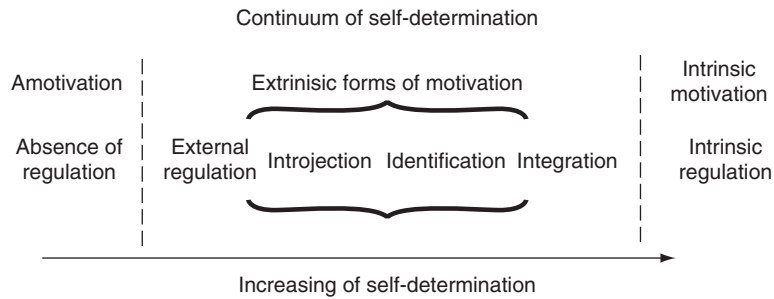
Intrinsic Motivation

Intrinsic motivation is the most self-determined, or autonomous, form of motivation. It underlies activities that are performed purely for the joy gained from the activities themselves. In other words, individuals who are intrinsically motivated choose to engage in activities solely for the pleasure, interest, enjoyment, and satisfaction derived from performing those very activities. A child who plays with construction blocks for hours at a time, fully absorbed in the process of building towers and houses, is intrinsically motivated toward that activity (Deci, 1971, 1975). He does not do it in order to gain something from it, but only for the simple, pure pleasure of the activity itself.

deCharms's (1968) notion of perceived locus of causality speaks directly to the autonomous nature of intrinsic motivation as it describes the tendency of individuals to be motivated to feel like they are at the origin of their behaviors. That is, individuals want to perceive themselves as choosing to perform behaviors out of their own volition. For example, students are more likely to feel like the behavior originated from within if they were encouraged to develop their projects and worked on them at their own pace. In contrast, students are more likely to feel their behavior is controlled if a certain project topic were imposed upon them with a very strict deadline. deCharms' concept of perceived locus of causality is, furthermore, linked to the basic psychological need for autonomy discussed in self-determination theory (SDT) (Deci and Ryan, 1985, 2000). The need for autonomy does not signify independence. Autonomy signifies choice and volition. The need for autonomy is satisfied when individuals feel they have choice and volition while engaging in a particular behavior. The need for autonomy underlies the development of intrinsic motivation.

Another basic need that supports intrinsic motivation is the need for competence. The concept of competence derives from White's (1959) assertion that people often engage in activities simply because they want to experience themselves as competent or efficacious. This is linked to the basic psychological need for competence as described in the SDT (Deci and Ryan, 1985, 2000). The need for competence is satisfied when individuals feel like they are developing skills and mastering the activities they are performing.

The satisfaction of the basic psychological needs for autonomy and competence are instrumental for the maintenance and enhancement of intrinsic motivation. Environments that provide support for competence and autonomy will foster intrinsic motivation. For example, a classroom environment that encourages students to become involved in how they will learn new materials and that provides them with the opportunity to frequently experience small successes will foster intrinsic motivation. In contrast, a classroom environment that is dictated, and, therefore, does not provide support for autonomy and competence will diminish intrinsic motivation and not encourage student involvement. The provision of rewards has been found to decrease an individual's level of intrinsic motivation when the rewards are salient and given for performing an activity that the individual finds interesting. This is the case because rewards are usually seen as an attempt to control one's behavior, thus jeopardizing one's sense of autonomy. Take

Continuum of self-determination

| Amotivation | Extrinisic forms of motivation | | | Intrinsic motivation |
| Absence of regulation | External regulation | Introjection Identification Integration | | Intrinsic regulation |

Increasing of self-determination

Figure 1   Visual representation of the self-determination continuum.

for example 6-year-old Lisa who really likes to read *The Cat in the Hat* book. Just to showcase her reading skills at the next family reunion, Aunt Sally begins to give money to Lisa for reading the book to family and friends. After a few family reunions and a few dollars spent, Lisa does not want to read *The Cat in the Hat* on her own anymore. She will only read it if she is given money for doing so. This is a book that Lisa used to enjoy reading, on her own, without any external incentives. In other words, she was intrinsically motivated toward reading the book. From a motivational perspective, the provision of the reward for doing an enjoyable activity shifted the perceived locus of causality from internal to external, making Lisa feel less autonomous about reading the book – feeling less like an originator of her behavior. Lisa is no longer doing the activity because she enjoys it but because she wants to obtain the reward. Reading this book is now more extrinsically motivated than intrinsically motivated, and it was her environment that triggered this change.

Extrinsic Motivation

Extrinsic motivation refers to the forms of regulation that underlie activities that are performed as a means to an end. Little Lisa who is now reading *The Cat in the Hat* because she wants the money is extrinsically motivated toward reading that book. A fifth grader who does his homework in order to gain the privilege to go see a movie at his friend's house afterward is extrinsically motivated toward doing his homework. This child is doing homework in order to obtain a reward. The same would be true of a teenage girl who cleans her room in order to avoid losing car privileges over the weekend. She is cleaning her room because she does not want to lose the car for the weekend, not because she just wants to clean and because she enjoys a clean room. Taken as a whole, extrinsically motivated activities are performed to attain a goal, to obtain a reward, or to avoid a penalty or a negative consequence. When extrinsically motivated, individuals perform the activities not because they simply derive enjoyment from them, but because the activities are instrumental in reaching a goal, or avoiding an undesirable outcome or

consequence. The activities may still be valuable to the person engaging in them, but the motivator is not the enjoyment but rather what can be obtained by engaging in the activity.

Although motivation can be dichotomized as intrinsic and extrinsic, SDT (Deci and Ryan, 1985, 2000) further specifies four types of extrinsic motivation. The different types of extrinsic motivation vary in terms of the degree to which they have been internalized and thus are self-determined. Figure 1 depicts the placement of the four forms of extrinsic motivation and the one form of intrinsic motivation along a continuum of self-determination.

External Regulation

This is the form of motivation commonly referred to as extrinsic motivation, for it involves behaving to obtain a reward or avoid a punishment. This form of extrinsic motivation is the least self-determined and is thus located on the far left end of the continuum. Behaviors that are externally regulated are performed because of pressures, obligations, and constraints coming from external sources. When externally regulated, individuals try to obtain a reward or positive consequence, or they try to avoid some undesirable consequence. Externally regulated behaviors are only performed in the presence of specific external contingencies, such as controlling teachers, strict school requirements, and pressures from peers that are maintaining the behaviors themselves. In the absence of these contingencies, individuals will not remain engaged in the activity, will eventually quit or abandon the activity, or will not be able to persist when the task becomes more difficult. For example, students who show up for an eight o'clock physics test may do so because they do not want to fail the class and are trying to get a good grade on the test. If external regulation is their main motivation for being in class at eight in the morning, many students will not show up for class unless attendance is required or there is a test on a certain day. As constraints, pressures, and rewards shift the perceived locus of causality outside of the individual, external regulation is opposite to intrinsic motivation and consequently not self-determined (Deci *et al.*, 1999).

Introjected Regulation

This underlies behaviors that are performed out of guilt, ego involvement, or other kinds of internal pressures. Similar to external regulation, powerful pressures maintain these behaviors; however, unlike external regulation, the pressures associated with introjection are internal as opposed to external. Introjected regulation is not self-determined because the behaviors are pressured and controlled even though that pressure and control come from an internal source. Individuals who behave mainly out of introjection engage in behaviors because they want to avoid feeling guilty or bad about themselves or because performing the behavior will allow them to aggrandize themselves. For example, a young man is asked to perform in a spelling bee because of how well he would represent the school. Although he does not feel very comfortable with the idea of competing in front of a lot of people, he accepts because he would feel guilty for not participating. He does not want to disappoint his teacher. With introjection, the contingencies maintaining the behaviors have been partially internalized. That is, they are within the person but not fully endorsed by the self. The regulation of the behavior is not yet fully integrated with the individual's motivations, cognitions, and affects into a coherent whole, reflected by the fact that the individual does not really want to perform the activity and does not choose to do it.

Identified Regulation

This exists when the contingencies maintaining a certain behavior become endorsed by the self and the behavior itself becomes valued, thus no longer requiring the specific contingencies. At this point, the behavior is said to be regulated through identification. When individuals are motivated mostly out of identification, they identify with their behaviors, value them, and find them important. The identified regulations are endorsed by the self, which means that although the behaviors are still instrumental in attaining goals (thus still extrinsic), the goals are valued by the individual who identifies with the importance of the activities performed. At this point, the behaviors are considered to be self-determined or autonomous though they are not considered intrinsically motivated. For example, a student might be working on an extracurricular project requiring him to stay after school 3 nights a week. Even though the activity is demanding and might interfere with other things going on at that time, he gladly participates because this extracurricular project is important to him. He does not necessarily find it interesting (and thus not intrinsically motivated) but it is valued.

Integrated Regulation

This is the form of motivation that represents the most self-determined form of extrinsic motivation. When a behavior is regulated though integration, it is not only valued but also integrated within the self and is in harmony and coherence with other aspects of the self. A graduating senior might talk about her academic experience by discussing the growth she has experienced over the years, the friends she has made, the connections she now has with faculty members, and how all these experiences will benefit her in her chosen career and in becoming the person she aspires to be. The motivation that underlies such statements is a fully self-determined extrinsic motivation. The motivation is still extrinsic because the experiences discussed are in the service of the goal of her future life and career, but these experiences are fully integrated within the self.

By further examining the continuum of self-determination, one can see that intrinsic motivation is located at the far right of the continuum and is also separated from the other types of motivation on the continuum. This is so because intrinsic motivation is inherent to the person rather than resulting from internalization and is based on interest in the activity itself rather than on the importance of the activity for self-selected values and goals. Intrinsic motivation is the prototype of self-determination signifying engagement in activities because the activities themselves are rewarding.

Process of Internalization

Considering the various forms of motivation, including intrinsic and extrinsic motivation, is very useful when trying to explain why someone would behave or act a certain way. Distinctions between the different types of motivation allow researchers to explain a considerable range of human behaviors and experiences. Understanding these various forms of motivation also enables researchers and practitioners to identify antecedents that will foster these different types of motivations and the consequences that may follow these motivated behaviors.

According to SDT, individuals have a natural inclination toward growth and toward integrating the different aspects of the self into a single unified sense of self. The process of internalization is an example of the functioning of this natural movement toward a greater integration of the self and toward more self-determined forms of extrinsic motivation to accompany people's intrinsic motivation. Integration refers to the natural propensity of individuals to take in or internalize the contingencies underlying their behaviors and then to integrate them into their core self.

Antecedents of the Development of Intrinsic and Extrinsic Motivation

Certain social and environmental contexts provide what is essential for the development of self-determination and

intrinsic motivation. In addition to individuals' natural propensity toward internalization, autonomy-supportive settings foster the development of intrinsic motivation. Social and environmental contexts that are autonomy supportive acknowledge people's perspective and provide them with choices and encouragement. Such settings allow self-initiative and provide a rationale for performing requested behaviors. In addition, and very importantly, settings that are autonomy supportive rarely use pressures, controlling strategies, and external contingencies to motivate behaviors; rather, in these settings, empathy for others is frequently expressed and appropriate and timely feedback is offered in order to confirm competence within behaviors or tasks.

Controlling contexts make use of explicitly pressuring and coercive strategies to motivate behavior. For example, these strategies may include salient rewards, competition, deadlines, the threat of punishment, imposed goals, surveillance, and controlling language such as words and phrases like should, have to, and ought to (see Deci et al. (1999) for a review). These strategies are most often perceived as controlling because they force individuals to engage in behaviors rather than inviting their engagement. They shift the locus of causality from being perceived as internal to external leading the individual to no longer perceive himself or herself as the causal agent of the behavior.

Environmental factors and social contexts that foster the development of intrinsic motivation and self-determination are also the ones that satisfy the basic psychological needs for autonomy, competence, and relatedness. To be psychologically healthy, individuals must be engaged on a daily basis in activities that contribute to the satisfaction of these three needs.

As mentioned earlier, autonomy signifies choice and volition rather than independence. Autonomy means the endorsement of one's behaviors even though these behaviors might not reflect independence. A girl could decide to get involved in a group project where she will have to share the decision-making power. She will be working with others, not independently, and yet because it is by her own choice, she may feel completely volitional about her decision. In contrast, a boy could feel pressured to study by himself in the library for an important test. Though this behavior would be done independently, he would not want to perform it and would, therefore, not feel a sense of autonomy while doing so.

Competence refers to a sense of mastery. Students need to feel competent while engaged in various academic and nonacademic activities. A sense of competence increases the level of interest and involvement in the activities performed. The need for competence is most likely to be satisfied when students work on developing and mastering skills. An adequate level of challenge, often referred to as an optimal level of challenge, is also necessary in order to satisfy the need for competence. Again, when this need is satisfied, as when any of the three needs are satisfied, the development of intrinsic motivation and self-determination is furthered.

Relatedness refers to the need to connect with and relate to other people. Students derive a lot of satisfaction from seeing their friends at school everyday, meeting new people, and getting to know their professors. Being with friends in school becomes an important part of going to school and contributes to the extent to which students find school satisfying and enjoyable (Ryan et al., 1994). Furthermore, when students develop healthy relationships with their teachers and other staff members, their productivity and interest level in the classroom improves. This also leads to greater satisfaction and actual enjoyment within a student's academic experience.

Consequences of Intrinsic and Extrinsic Motivation

In general, individuals who behave out of intrinsic motivation or self-determined extrinsic motivation (identification and integration) have been found to experience a greater proportion of positive outcomes with their behaviors. In contrast, individuals who mostly behave out of non-self-determined extrinsic motivation (introjection and external regulation) have been found to experience a much greater proportion of negative outcomes. For example, intrinsic motivation, integration, and identification have been associated with a variety of benefits including academic achievement, school competence, and in general, higher levels of well-being (Boggiano et al., 1993; Levesque et al., 2004; Soenens and Vansteenkiste, 2005). In contrast, introjected regulation and external regulation have been found to lead to a host of negative outcomes including anxiety, burnout, school dropout, and in general, lower levels of well-being and vitality. Paradoxically, the harder the teachers and parents attempt to push students to do their homework, perform well in school, and achieve, the more negative outcomes are experienced without improvements in academic achievement (Deci and Ryan, 2002). By trying to force and push students to perform in school, the opposite results are often obtained. When parents and teachers are autonomy supportive, however, and foster choice and self-determination regarding school-work, students then tend to be more creative, perform better in school, and achieve more academically.

Interplay Between Intrinsic and Extrinsic Motivation

If the movement toward greater internalization and more self-determination is innate, why is it that we do not see

self-determined behaviors to a greater extent in school? A recent meta-analysis summarizing the literature on the effects of rewards on intrinsic motivation highlighted the powerful effects of using rewards to motivate behavior (Deci *et al.*, 1999). Providing rewards for behaviors that are intrinsically motivated or self-determined has been found to undermine the motivation for the activity by shifting the locus of causality outside the self (Deci *et al.*, 1999). To illustrate this process, take the example of Mary, a 5-year-old girl about to begin kindergarten. She has been talking about going to school for the past year, and she is very excited about finally being able to go to school everyday. After her first day at school, she can not stop talking about all the fun games, the school, the teachers, and all that she has done that day. She can't wait to go back! Mary shows intrinsic interest in school for the entire year and is very excited to go back to school and start first grade the following year. However, during that year, something changes. Her teacher begins talking about doing well more often. She makes use of conditional regard in the classroom and has a tendency to compare the students with one another. The teacher offers plenty of rewards for good behaviors and at the beginning of the year instituted a strict behavior-management plan in order to prevent bad behavior in the classroom. Good behavior is rewarded and bad behavior punished. In third grade, Mary is introduced to standardized tests and is constantly reminded by her teacher how important it is to do well on these tests. If asked, Mary would now say that she does not like school and does not want to go anymore. She is afraid and worried on test dates and becomes physically ill sometimes. More generally, the emphasis on standardized tests is perceived as controlling and fosters an external locus of causality, thus the development of non-self-determined extrinsic motivation. The students in Mary's class are criticized when they attempt to find the solution to a problem in a way that differs from the teacher's expectations or the predetermined answer in the textbook. Students in this class feel forced to perform well on assignments and tests, but they do not yet fully understand the concepts they need to apply. As a result, they do not feel comfortable asking questions. They refrain from asking for help because they are afraid they will be perceived negatively. This dynamics will obviously lead to poor performance on assignments and/or tests.

The emphasis on rewards in the traditional school system often works to undermine students' level of intrinsic motivation and self-determination toward school. There is less room for creative activities and exploration because the emphasis is on teaching the standardized tests to the students. The creation of autonomy-supportive learning environments, where choices and options are offered and where creativity is encouraged, would foster the development and maintenance of intrinsic motivation and self-determination (Levesque *et al.*, 2006). Autonomy supportive environments would enable satisfaction of the needs for autonomy, competence, and relatedness which would then help students to better engage in materials, feel better about themselves, and perform better in the long run (Boggiano *et al.*, 1993; Grolnick *et al.*, 1991). The connection with teachers that is fostered in an autonomy-supportive environment allows students to feel comfortable asking more questions which then leads to overall better performance.

Looking Ahead

There is no doubt that within our education system there is an environment that is inherently restricted by rules and regulations. Grades need to be assigned, skills need to be mastered, and performance needs to meet certain standards of proficiency. However, if the environment in which these constraints are present is consciously crafted to be more autonomy supportive, then intrinsic motivation and self-determination will be more likely to flourish. This in turn will allow students to grow and develop, to reach their potential, and to experience greater levels of well-being (see Vansteenkiste *et al.*, 2006, for a review).

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Further Reading

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