

# Motivation: Effect of Extrinsic Factor on Intrinsic Motivation

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## Abstract—

*Doing an activity for its inherent satisfaction rather than for its consequences which is very crucial for open ended cognitive development is Intrinsic Motivation. To be motivated means to be moved to do something. A person who feels no impetus or inspiration to act is thus characterized as unmotivated, whereas someone who is energized or activated toward an end is considered motivated. Motives are reasons people hold for initiating and performing voluntary behavior. Motives often affect a person's perception, cognition, emotion, and behavior. It is the driver of spontaneous exploration and curiosity and also the realization for our own skills and abilities that help us again and again to draw our own source of inspiration. Our own inspiration starts to evolve to intrinsic motivation and this carries to a successful conclusion. There has been an intense debate on the effects of external rewards on intrinsic motivation. Extrinsic motivation is argued to vary considerably in its relative autonomy and thus can either reflect external control or true self-regulation. This paper presents a unified definition of intrinsic motivation and analyze the effects of extrinsic factors on intrinsic motivation and the relations of both classes of motives to basic human needs for autonomy, competence and relatedness*

**Keywords**— Motivation, Motives, Rewards, Intrinsic, Extrinsic

## I. INTRODUCTION

"The Potential of the Human Mind is subject to, and limited only by, our individual beliefs or un-belief as to whether we can accomplish a thing or not. Human Mind Power is evidenced in the fact that we always get to be right. Without question nearly everyone has at least heard something with regard to our Human Mind Power. The fact of the matter is, whether we are consciously aware of it or not, or ready to accept it or not, we are already using our mind power every second of every minute of everyday. Many, the vast majority in fact use theirs "unconsciously" with zero awareness of the incredible and awesome creative power they have been provided individually, all the while "perceiving" that they have no power at all. Choosing to develop the understanding to enhance our awareness with regard to how "true" that is combined with a willingness to consciously and consistently apply that understanding will enable and empower us to create a kind and quality of life for our self that transcends what's often referred to by the vast majority as "common logic"

Human mind power is unlimited in its potential to create the results we desire, whatever they might be. There are no limits with the exception of the limits we place on our self. When mind power is utilized "unconsciously" it's just as true that "undesirable results" can be and often are experienced as well. Unfortunately, that's how the vast majority utilize their individual power, unconsciously and as a result "perceive" themselves as "powerless." What makes this mind power real and how is it that we "truly can" utilize our individual mind power to make whatever desires we hold "real and tangible?" "its due to the infusion, integration and intricately interconnected nature of the conscious mind, the subconscious mind and the super conscious mind also referred to as Universal Consciousness.

There are actually two distinct and varying aspects of the mind which control various functions of our physical and Spiritual being, which are known as the conscious mind and the subconscious mind. Our individual mind power is all that is required to create and experience a kind and quality of life that we desire for our self once we become keenly and consciously aware of that fact and make a conscious and intentional choice to discover how to utilize the limitless creative power provided everyone on this planet in a way that harmonizes with whatever visions, hopes, dreams and desires we hold for our self.

People are so caught up in stress, busy lifestyles, etc. that they really do become unconscious of their consciousness

In order to grasp and fully comprehend the crucial nature of consciousness as it relates to the physical, financial, relational, emotional and spiritual aspects of our life and to establish the level of self awareness necessary to become a purposeful, intentional and conscious creator of the events, conditions and circumstances which make up the moment by moment experiences in our life, an understanding of this all pervasive creative force...this essence that we all engage in every second of every minute of every day, is absolutely essential for those who choose to master their game. In fact it's the seed that will both enable and empower you to begin consciously creating your reality in a far more desirable and predictable manner than the vast majority "perceive" as being possible.

## II. INTRINSIC MOTIVATION

Motivation can be defined as the intensity and direction of effort (McCullagh, 2005). Intensity refers to the quantity of effort, while direction refers to what you are drawn too. Motives are reasons people hold for initiating and performing

voluntary behavior. They indicate the meaning of human behavior, and they may reveal a person's values. Motives often affect a person's perception, cognition, emotion, and behavior. By defining motives as reasons, we do not imply that motives are primarily cognitive. A person can have a reason to behave, and thus a motive, without necessarily being aware of it. Aristotle (330 BCE/1953) divided motives into ends versus means on the basis of the individual's purpose for performing the behavior. Ends are indicated when a person engages in a behavior for no apparent reason other than that is what the person desires to do. Examples include a child playing ball for physical exercise and a student reading a book out of curiosity. In each of these examples, the goal is desired for its own sake. In contrast, means are indicated when a person performs an act for its instrumental value. Examples include a professional athlete who plays ball for a salary and a student who studies to improve a grade. In each of these examples, the goal (salary, grade) is desired because it produces something else. A person might seek a salary, for example, as a means of enhancing social status, or high grades as a means of pleasing a parent. An analysis of a person's behavior may identify a series of instrumental acts followed by one or more end goals that complete the "behavior chain."

Intrinsic motivation a concept of Psychology, which has been a topic of growing interest and argued, for open-ended cognitive development, is the mechanism that explains the spontaneous exploratory behaviors observed in humans, and infants in particular (Berlyne, 1965). Researchers in reinforcement learning have proposed that intrinsic motivation might allow the acquisition of general and re-usable skills (Barto et al., 2004), increase the efficiency of learning when considered as an active learning mechanism (Thrun, 1995), guide and structure exploration in large spaces (Oudeyer et al., 2007).

Intrinsic motivation has sometimes been confused with internal motivations. In fact, a unified definition does not seem to exist yet, and no framework exists that allows to relate easily different intrinsic motivation mechanisms to each others.

Intrinsic motivation is defined as the doing of an activity for its inherent satisfaction rather than for some separable consequence. When intrinsically motivated, a person is moved to act for the fun or challenge entailed rather than because of external products, pressures or reward.

Intrinsic is not a synonym of internal. Internal motivations involve reward that are produced within the organism, whichever they are. The intrinsic motivation, on the contrary, is not a distinction based on the location of origin of the reward, but on the kind of reward.

Intrinsic motivation can also be defined as an individual's need to feel competency and pride in something (McCullagh, 2005). Therefore, athletes who are intrinsically motivated participate in sports for no apparent reward other than the satisfaction and pleasure they get from the activity itself. There are 3 types of intrinsic motivations (Weinberg & Gould, 2003):

- Knowledge
- Accomplishment
- Stimulation

Being intrinsically motivated for knowledge occurs when athletes participate in activities because of the pleasure and satisfaction they get from learning, acquiring, and studying something new in their sport. This would include learning how to squat, or refining your pattern on dead lifts.

Being intrinsically motivated for accomplishments occurs when athletes participate in activities because of the pleasure and satisfaction they get from mastering various skills. For example, reaching a goal of squatting 400 pounds, or acquiring perfect form on dead lifts.

Being intrinsically motivated for stimulation occurs when athletes participate in activates because of pleasant sensations such as danger, pain, or excitement. For example, the rush you get when lifting heavy in the weight room, or posing down on stage.

In humans, intrinsic motivation is not the only form of motivation, or even of volitional activity, but it is a pervasive and important one. From birth onward, humans, in their healthiest states, are active, inquisitive, curious, and playful creatures, displaying a ubiquitous readiness to learn and explore, and they do not require extraneous incentives to do so. This natural motivational tendency is a critical element in cognitive, social, and physical development because it is through acting on one's inherent interests that one grows in knowledge and skills. The inclinations to take interest in novelty, to actively assimilate, and to creatively apply our skills is not limited to childhood, but is a significant feature of human nature that affects performance, persistence, and well-being across life's epochs (Ryan & LaGuardia, in press).

Although, in one sense, intrinsic motivation exists within individuals, in another sense intrinsic motivation exists in the relation between individuals and activities. People are intrinsically motivated for some activities and not others, and not everyone is intrinsically motivated for any particular task. Because intrinsic motivation exists in the nexus between a person and a task, some authors have defined intrinsic motivation in terms of the task being interesting while others have defined it in terms of the satisfactions a person gains from intrinsically motivated task engagement.

These different definitions derive from the fact that the concept of intrinsic motivation

was proposed as a critical reaction to the two behavioral theories that were dominant in empirical psychology from the 1940s to the 1960s. Specifically, because operant theory (Skinner, 1953) maintained that all behaviors are motivated by rewards (i.e., by separable consequence such as food or money), intrinsically motivated activities were said to be ones for which the reward was in the activity itself. Thus, researchers investigated what task characteristics make an activity interesting. In contrast, because learning theory Hull, 1943) asserted that all behaviors are motivated by physiological drives (and their derivatives), intrinsically motivated activities were said to be ones that provided satisfaction of innate psychological needs. Thus, researchers explored what basic needs are satisfied by intrinsically motivated behaviors.

Our own approach focuses primarily on psychological needs—namely, the innate needs for competence, autonomy, and relatedness—but we of course recognize that basic need satisfaction accrues in part from engaging in interesting activities. Thus, we do sometimes speak of intrinsically interesting activities, but when we do so we are really only talking about tasks that, on average, many people find to be intrinsically interesting. There is considerable practical utility in focusing on task properties and their potential intrinsic interest, as it leads toward improved task design or selection to enhance motivation.

By intrinsic motivation we mean a process of arousal and satisfaction in which the rewards come from carrying out an activity rather from a result of the activity. We speak of the rewards being intrinsic to a task rather than the task being a means to an end that is rewarded or satisfying. By contrast, one might work hard at a task in order to eat or gain social approval. Such work, undertaken as a means to an end, is typically deficit motivated behaviour, in which there is a reward as a consequence of effort to reach a goal where the deficit is reduced. Intrinsic motivation tends more to be appetitive, new information arousing a slight interest leading to an appetite for more.

The term “intrinsic” sometimes also occurs with a different connotation in reference to incentives which are consistent with personal qualities, intentions and values. Satisfaction gained from such incentives may be seen as intrinsic to the person rather than to the task. It can be the case that behaviour such as undertaking a scientific research project can assist in the satisfaction of personal development goals while it is also intrinsically rewarding in itself. The micro sense of intrinsic interest in the task is the primary meaning, but satisfaction intrinsic to the person in the macro sense carries some of the same meaning, especially in regard to the processes of integration which will be considered further below. However, while the two can work together, intrinsic motivation in the primary sense is vulnerable to being inhibited by the use of extrinsic rewards in ways which do not give the secondary type of intrinsic satisfaction but are experienced as alien to the person. The work of several investigators in recent years points to the importance of the secondary or macro type of intrinsic satisfaction from extrinsic rewards as the clue to managing the effects of extrinsic rewards in ways which do not inhibit the operation of intrinsic motivation for engagement in the task.

### **III. INTRINSIC AND EXTRINSIC REWARD ON MOTIVATION**

The centre of the debate about the effects of extrinsic rewards on intrinsic motivation is the question of how making a task into a means to an end reduces the sense people can have of being an effective agent in what is important to them. In this way it is a component in worker alienation. There have been a number of theories which use the value of freedom and autonomy to explain the negative effects. They predict that when extrinsic rewards are used to harness work for some purpose that is not in harmony with the interests of the worker, it will be experienced as a loss of freedom. Power has moved from the person who undertakes the task to some other person or impersonal agency which defines or controls the rewards. In general, successful strategies have been claimed to include some means of integrating the rewarded behaviour and the rewards with personal goals and development processes.

Deci and Ryan (Deci and Ryan 1985) have written in terms a theory of self determination which says people typically gain pleasure and satisfaction from the sheer sense of being able to do something, to be effective in it, whether it be in play or work, physical or mental. In his later work, while still retaining the value of people feeling effective in what they did, DeCharmes dropped the motivational quality and saw personal causation more simply: “personal causation means doing something intentionally to produce a change”. It was described largely in term of a personal experience of people having a sense of being the origin of their own actions.

The beneficial effects of a sense of being the origin of one’s action, are not due simply to an interest in achievement or the exercise of power. This is important in fields like education and health today because we often hear talk of empowerment in the context of creativity and personal development, but in so far as these things are intrinsically motivated, it is not simply a matter of acquiring or defending personal power.

The relationship of conditions which enhance rather suppress intrinsic motivation to those which enable satisfaction of need for achievement requires more study in detail, but the key point of similarity is in McClelland's description of need for achievement in terms of competition with an internalized standard of excellence. So, in so far as the function of an

extrinsic reward is to provide evidence relevant to the attainment of such a standard, it will have positive effects. The person whose behaviour is being rewarded needs to feel responsible for the outcome as a free agent who is achieving his or her own goals and who is the origin of the achieving behaviour. Responsibility is a related concept that has been studied in this context.

Two theories were offered to explain why extrinsic rewards undermine intrinsic motivation. Lepper and his colleagues (Lepper, Greene, and Nisbett, 1973; Lepper and Greene, 1975) argued that when both an extrinsic reward and intrinsic motivation are present for the same activity, the reason for engaging in the activity is over determined (which they called the “over justification effect”). In such circumstances, the extrinsic reward may supplant intrinsic motivation as the perceived purpose for engaging in the

activity because the extrinsic reward is the more salient of the two motivators. Deci and his colleagues (Deci, 1975; Deci, Cascio, and Krusell, 1975), using Cognitive Evaluation Theory (CET), also suggested that when individuals who are initially intrinsically motivated to perform an activity are confronted with an additional extrinsic reward, they eventually ask themselves why they are engaging in the activity. This evaluation of their purposes leads them to choose the more salient of the two reasons, extrinsic rewards, resulting in a reduction of intrinsic motivation. If the individual is later asked to engage in the same activity without the extrinsic reward, overall motivation decreases because intrinsic motivation for the activity was supplanted by extrinsic rewards. Shah and Kruglanski propose that activities can be associated with both extrinsic and intrinsic goals. If the extrinsic goal becomes dominant and breaks the association between the intrinsic goal and the activity, removing the extrinsic reward should produce a disinclination to engage in the activity because the activity is now “goal-less”.

Behavioral psychologists sharply disagree that extrinsic rewards undermine intrinsic motivation. They argued that the evidence of negative effects of extrinsic rewards on intrinsic motivation were artifacts of “poor operationalizations” of the reward as reinforce, a focus on short-term effects without consideration of overall reinforcement history, and neglect for the enormous amount of research showing that reinforcement makes behavior more, not less, likely to occur.

The question of whether extrinsic rewards undermine intrinsic motivation has two important sub-questions. First, do extrinsic rewards always undermine intrinsic motivation? Second, assuming the answer to the first question is “no,” when or under what conditions do extrinsic rewards reduce intrinsic motivation? The answer to the first question is, and always has been, no. As Lepper and Henderlong note, even the earliest studies clearly established that some extrinsic rewards do not undermine intrinsic motivation, such as when the rewards are not expected, not tangible, and are perceived as informative rather than coercive. Ryan and Deci, note that extrinsic rewards do not undermine intrinsic motivation when there is little intrinsic motivation to begin with. Indeed, when initial interest in an activity is low, extrinsic rewards may lead individuals to develop an internalized valuing of the activity that becomes virtually auto telic in time.

Now the primary controversies revolve around the question of when extrinsic rewards and performance goals undermine intrinsic motivation. Despite hundreds of studies on intrinsic motivation and achievement goals, the answer to this question is complex. Research has revealed that the effects of extrinsic rewards (and performance goals) on intrinsic motivation depend on a number of personal, situational, and definitional variables. For example, the relatively recent attention given to the distinction between performance-approach and performance-avoidance goals has revealed that the effect of performance goals on intrinsic motivation depends on how one defines performance goals. Performance-avoidance goals generally have a negative effect, and performance-approach goals generally have a positive or null effect. Similarly, the effect of extrinsic rewards on intrinsic motivation depends on how one defines extrinsic rewards. Tangible rewards, like money, generally have a more deleterious effect on intrinsic motivation than less tangible rewards, like verbal praise. Verbal rewards, praise and the like, tended to have a positively reinforcing effect on both free time on the task and attitudes to the task.

It is a relevant consideration to ask in regard to the conditions under which praise has an enhancing effect on intrinsic motivation whether praise is properly described as an extrinsic reward when it is given in a way which functions as helpful feedback on behaviour that is directed towards personally meaningful and intrinsically satisfying goals. Is the effect due to whatever happens in the emotional influence of praise or to the information value of praise that is effective in pointing to things a person can do? Perhaps the emotion and the information value cannot be neatly separated, and that is a topic for another day, but the completion of a process of developing a new order in one’s cognitive map could have signals in which emotion is not so much an externally managed reward as a sign of what is effective in a process of internal integration.

The evidence from many studies of the effects of praise appears to be that a great deal depends upon how the information in the praise communication equips recipients to take actions for which they are responsible and also which are at their disposal, so that the person receiving this kind of praise is an effective agent.

Managers generally, and anyone formally or informally responsible for oversight of others who are engaged in work or learning tasks, will be aware that some people are participating more out of interest in the task than others are. Others gain their satisfaction principally out the way in which their performance on the task leads to rewards like pay or status or good grades in a course. But typically there is a mixture of motives for which a range of different incentives is relevant.

Most people will find at least some satisfaction in simply doing the work. They might say, for example, that they found it "interesting". For most people there is also some satisfaction in rewards which are contingent upon performance in the task. The balance of these intrinsic and extrinsic sources of satisfaction varies from one person to another and between different situations. Some people indeed are highly motivated by both intrinsic interest and extrinsic rewards.

Managers are usually aware to some extent of the ways in which both intrinsic and extrinsic types of motivation affect performance and work satisfaction, but there are many complexities in how these different types of motivations and their relevant rewards affect behaviour. One of the most subtle and demanding complexities has been found to occur when extrinsic rewards are given for performance in a task which would otherwise have been undertaken purely out of interest. But effects of the interaction are not simple and have been a subject of extensive debate in recent years. How extrinsic rewards affect intrinsic motivation obviously has many implications for the management of incentives for work and study where both extrinsic rewards and intrinsic motivation are very often found together.

Extrinsic rewards have been found to reduce intrinsic motivation, but not in all circumstances. When people are intrinsically motivated they tend to be more aware of a wide range of phenomena, while giving careful attention to complexities, inconsistencies, novel events and unexpected possibilities. They need time and freedom to make choices, to gather and process information, and have an appreciation of well finished and integrated products, all of which may lead to a greater depth of learning and more creative output. Extrinsic rewards tend to focus attention more narrowly and to shorten time perspectives, which may result in more efficient production of predefined or standardized products. Job satisfaction and long term commitment to a task may also be affected.

#### **IV. CONCLUSION**

In a field as complicated as motivation, with such important implications and applications, additional research always can yield new information. Developing more precise definitions of goals, intrinsic motivation, and extrinsic rewards is a constant task, as is identifying the precise conditions under which extrinsic rewards and performance goals affect intrinsic motivation. Intrinsically motivated behaviors, which are performed out of interest and satisfy the innate psychological needs for competence and autonomy are the prototype of self-determined behavior. Extrinsic motivators those that are executed because they are instrumental to some separable consequence can vary in the extent to which they represent self-determination. Internalization and integration are the processes through which extrinsically motivated behaviors become more self-determined.

The social contextual conditions that support one's feelings of competence, autonomy, and relatedness are the basis for one maintaining intrinsic motivation and becoming more self determined with respect to extrinsic motivation. We pointed out that in schools, the facilitation of more self-determined learning requires classroom conditions that allow satisfaction of these three basic human needs—that is that support the innate needs to feel connected, effective, and agented as one is exposed to new ideas and exercises new skills.

It has also been suggested that the effects of rewards on intrinsic motivation may be transitory. But their results indicated they were long lasting. It is suggested that verbal rewards are effective, in part because they are unexpected rewards. Self Determination Theory is very helpful in explaining the results of goal orientations and competition on intrinsic motivation.

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