Can Creativity Be Purchased?

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Incentives are widely used to influence our behavior, including creativity. By incentive or reward I mean any outcome that people find attractive. For example, because I tend to work too hard and long and take too few vacations, the offer of a trip to New York to give this talk was a great incentive because it provided an enjoyable time. So incentives can be of various sorts, including material rewards (such as money), symbolic rewards (such as job titles), and social rewards (such as compliments and expressing of approval). Rewards exert a powerful influence over most people's lives, influencing the kinds of work they choose for a job, how they carry out their work, whom they prefer as friends, and their choice of a romantic partner.

The question I am raising by the title of my talk involves the effects of rewards on intrinsic interest (by which I mean enjoyment of a task for its own sake) and especially on creativity. Does reward increase interest in an activity and creativity? Many in the academic and business communities will tell you the answer is "obviously yes" and many others will tell you "obviously no." Even experts who have studied the matter disagree.

Many people feel that incentives are very powerful and "you get what you pay for." In this view, paying people to be creative or having them anticipate other desirable outcomes for creativity makes them more creative. The examples seem legion. A careful examination of many "basic" researchers and mathematicians from James Watson, the co-discoverer of the genetic mechanism of human heredity, to Albert Einstein, the great relativity theorist, indicates that their

resolve to do the hard necessary creative work was greatly enhanced by anticipated rewards from the scientific community or the public. The National Institutes of Health gives out billions of dollars in grants to encourage creativity in the biological sciences not on random projects but to help shape the direction of research along lines the scientific community perceives as promising. And, of course, anticipated rewards can be a great source of creative mischief. The near collapse of the American economic system was predicated on individuals figuring out ingenious, if ultimately destructive, financial instruments of minimal social worth.

On a more mundane level, at which the most of us lead our lives, ordinary employees rewarded for creativity seem to enhance their effectiveness. For example, Southwest Airlines rewards employees for taking the initiative to increase on-time service (saving fuel and reducing the number of planes needed) and to act in ways that increase customer satisfaction. Solutions to problems caused by weather delays can be worked out on the spot by lower level employees when useful. Employees are never punished for creative decisions that do not succeed.

Why then would anyone question the efficacy of rewards for creativity? The answer lies in powerful cross currents in Western culture that have been around since the European enlightenment. The Enlightenment emphasized the importance of individual thought and reason. And the 18th century Romantics pushed this view even further. Jean Jacques (1712–1778) assumed that every person is unique, having talents and interests that must be carefully nurtured for self-fulfillment. For Rousseau (1974), creativity depended on exploring imagination and pursuing momentary whim. Thus, he would frequently change plans, not thinking about what he would do from one day to the next. In Rousseau's view, any limitation on spontaneity would interfere with creativity. Accordingly, constraints on freedom such as a student's lesson plans or employees' detailed instructions as to how to deal with all contingencies stifle self-development

and are experienced as highly aversive. Such views have exerted a powerful influence on Western views of individualism as compared to more collectivistic societies that tend to be found in nations with Catholic religious traditions and Asian nations. Thus there is an expression in China that "the nail that sticks out gets pounded down.

Within limits, Western nations emphasize individualism and balk at constraints on free action. Although Rousseau did not specifically discuss incentives for creativity, it is clear that any constraint on doing what we want to do – such as being creative in an activity we do not like – should be aversive in this view. On the face of it this view seems to have merit. Most people, if they became wealthy, would not keep working at their same job. So, in a sense, pay as other incentives constrains people from what they would ordinarily do.

These romantic views took on contemporary urgency by researchers who in the 1980's claimed that rewards reduce interest in enjoyable activities and creative performance. Deci and Ryan (1985) asserted that rewards lessen "intrinsic interest" in an activity because such a constraint is experienced as aversive. Amabile (1983) and others additionally claimed that rewards reduces creativity because individuals lose interest in the activity and focus only on the rewards. Reward cause individuals to do the minimum required for the reward, losing focus on the nuances on the issue at hand. Thus, we have a double-barreled destruction of creativity by reward – a loss of interest and enjoyment in carrying out the activity and an increased goal focus that prompts fixation with the reward.

Before discussing the research we need to discuss how creativity is defined by researchers. By creativity I mean an accomplishment that is novel and has either high utility or quality. Utility refers to a practical use, as for example, a new electronic device or advertisement. Quality means a feature which must be judged qualitatively (e.g., art) or has only

potential practical application such as many scientific discoveries in their infancy. Novelty means statistical infrequency, and creativity is a matter of degree. Everyone can be creative by producing products that are novel and of high quality or utility relative to their standard performance.

EXAMPLE OF TYPICAL CREATIVITY STUDY (Kruglanski, Friedman, & Zeevi, 1971)

- College students asked to list possible titles for a paragraph.
- Experimental group was told that they would be rewarded for producing paragraph titles, there being no indication of the nature of titles that would be preferred.
- Control group given same instruction without promise of reward.

Rewarded group produced titles judged less creative than unrewarded group.

CONVENTIONAL INTERPRETATION:

Reward reduces self-determination and intrinsic interest (Deci & Ryan, 1985 and individuals focus on reward rather to the exclusion of creative thought.

Dozens of studies like these seem to confirm the initial arguments and lead to strong assertions about the damage done by rewards in everyday life:

"The preponderance of the evidence demonstrates that working for reward, under circumstances that are likely to occur naturally in classrooms and workplaces every day, can be damaging to both intrinsic interest and creativity" (Hennessey & Amabile, 1998).

These views expressed have grown into popularizations of science and opinion pieces concerning the appropriate nature of education and public policy (Pink, 2009). Nevertheless, beginning in the 1980's there have been dissenting voices who noted that the research came from laboratory studies that might not be representative of everyday life situations.

The topic first came to my attention when a student, Mike Selbst, who came into my office in the mid 1980's at the university where I was teaching, told me he was an educational psychology student, and that he would like to study how reward destroys creativity. I asked Mike how he knew that reward destroyed creativity and he told me that he learned it in his social psychology class. He accepted the standard view that reward reduced perceived self-determination and caused individuals to focus on the reward rather the task at hand, both of which reduced creativity. I told him not to assume it was a proven fact but that we should instead look at the literature on the supposed decremental effects of reward on intrinsic interest and creativity. We started doing research together.

In looking at this literature I noticed two things. First, hardly any of the studies actually asked participants whether they felt "controlled." That is, there was no assessment of whether giving reward (in comparison to no reward) for a task was experienced as a loss of freedom. Second I noticed that in the great majority of studies the reward was given in a very unnatural way – participants were given reward regardless of how they performed. Thus, students showing a loss of intrinsic interest and creativity on the basis of reward were receiving reward in a very unusual way.

Now, all of this struck me as very odd. First, why would scientific studies fail to assess the key mechanism of perceived loss of freedom as a result of reward? This suggested to me that one of two things was happening. Either it was so obvious that individuals were experiencing a perceived loss of freedom and control that there was no reason to examine the issue. Or, perhaps more likely, many studies were assessing the perceived loss of freed and not obtaining the predicted result and so not reporting it. It is a common tendency to bury unpredicted results. In fact, when I did a statistical accumulation of the few studies that had reported the effects of

reward in perceived control (meta-analysis), I found that reward actually *increased* the participant's sense of control (Eisenberger, Pierce, & Cameron, 1999).

How this might be explained? Consider the example the offer of pay if you will take on some assignment or perform the assignment more creatively. From the viewpoint of the recipient, there is now increased choice because the individual offering you the reward is making it optional and feels the need to entice you into the behavior. At any rate, the finding that reward increased perceived control is exactly the opposite of romanticist ideas about control.

Now let's consider the second issue, the unusual way in which reward was provided in these studies. If you want to change a person's behavior, why would you provide reward independent of the person's performance (noncontingent reward)? In law firms, would you announce to lawyers that we are going pay you and make you a partner regardless of how well you represent our clients? In a medical clinic, would you announce to the staff that bonuses are to be administered regardless of whether you do a competent or incompetent job with your patients? So why was this same unusual procedure used over and over again, rather than making performance contingent on high performance? I believe the answer is because the initial worked well. Other researchers just jumped on the bandwagon rather than asking critical questions.

Now let us think about why many studies show a decreased in creativity produced by noncontingent reward. On reading the research findings, I found that the great majority of studies were carried out on school children who were given a simple instruction about what they were supposed to do to get reward. Children in one group might be told that they were to draw a picture. Children in a second group might be told that they would receive a reward for drawing a picture. Now, what kinds of art are most students encouraged to carry out in their regular classwork? It seems likely that early on, representative art is stressed. Teachers consciously or

unconsciously favor pictures that look like real things rather than favoring creativity. So, when offered reward for drawing, the children focus on what they have learned teachers want: representation. In fact that's what a study by Amabile (1982) found: when children were offered a reward for constructing a collage, without any indication that unusual performance would be rewarded, the children constructed collages judged less creative, though better planned and organized, and more representational than the collages produced by a control group that received no promise of reward. Lacking cues that creative performance was desirable, the children may have attempted to obtain reward by conventional performance that had produced reward in the past.

What does this suggest about the effects of reward on intrinsic interest and creativity? First, there may be very different results when individuals are rewarded for high performance, including creativity, rather than noncontingent reward. Second, people often respond conventionally to reward because they think that is what is expected of them.

Let me talk a bit about my own research, which addresses these issues. I suggest that making reward clearly contingent on creativity increases: the understanding that creativity is desired, the motivation to be creative, perceived self-determination, intrinsic interest in the task and creativity. For example, Eisenberger and Rhoades (2001) asked college students to generate creative story titles, with or without the promise of reward. Students promised reward for creativity produced story titles that were rated as more creative by judges than did students given the same instructions without the promise of reward.

Further, another study shows that children who have been rewarded for creativity in the past generalize to new situations. Eisenberger, Armeli, and Pretz (1998) and Eisenberger, Haskins, and Gambleton (1999) asked different groups of children to generate usual uses or

unusual uses for common objects (e.g., hat, pencil, rubber band). Next, the children were given a drawing task, with half the children being promised a reward for nonspecific performance. The nonspecific promise of reward increased the novelty of drawings by children who had previously been trained to generate unusual object uses. This finding suggests that whether people respond with creative or conventional performance to the promise of reward depends on their construal of the reward contingency. The promise of reward increases creativity when either instructions or prior experience conveys the necessity of creative performance.

Some of my recent work concerns how rewards and expected rewards for high performance can increase both perceived self-determination and performance pressure (a negative orientation toward inadequate performance, a negative emotional response) that goads the individual toward increased performance and high creativity. Eisenberger and Aselage (2009) found with both college students and employees that expected reward leads to both perceived self-determination and self-pressure to perform well, both of which lead to increased intrinsic interest and creativity. So, in sum, reward for high performance, and especially for reward specified for creativity, tends to have positive effects on intrinsic interest and creativity.

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