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Paid Volunteerism: The Effects of Monetary Rewards on University Students' Intrinsic Motivation to Participate in a Volunteerism Activity

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PAID VOLUNTEERISM: THE EFFECTS OF MONETARY REWARDS ON UNIVERSITY STUDENTS' INTRINSIC MOTIVATION TO PARTICIPATE IN A VOLUNTEERISM ACTIVITY

by

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GRADUATE COMMITTEE APPROVAL

of a thesis submitted by

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This thesis has been read by each member of the following graduate committee and by majority vote has been found to be satisfactory.

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BRIGHAM YOUNG UNIVERSITY

As chair of the candidate's graduate committee, I have read the thesis of Derence Walk in its final form and have found that (1) its format, citations, and bibliographical style are consistent and acceptable and fulfill university and department style requirements; (2) its illustrative materials including figures, tables, and charts are in place; and (3) the final manuscript is satisfactory to the graduate committee and is ready for submission to the university library.

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ABSTRACT

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Volunteerism is positively associated with various benefits to university students. Perhaps for this reason, some educational institutions are paying students to participate in volunteerism. Conversely, the cognitive evaluation theory suggests that monetary rewards may undermine intrinsic motivation and decrease the likelihood of future participation in volunteerism. However, there has been little empirical research done regarding this issue. Therefore, the purpose of this study was to examine the effects of monetary rewards on university students' intrinsic motivation to participate in a volunteerism activity. While the findings indicated a subtle trend supporting the cognitive evaluation theory, an analysis of the data demonstrated no statistical significance, thus suggesting that further research is needed in order to understand the application of the cognitive evaluation theory to volunteerism.

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Abstract

Volunteerism is positively associated with various benefits to university students. Perhaps for this reason, some educational institutions are paying students to participate in volunteerism. Conversely, the cognitive evaluation theory suggests that monetary rewards may undermine intrinsic motivation and decrease the likelihood of future participation in volunteerism. However, there has been little empirical research done regarding this issue. Therefore, the purpose of this study was to examine the effects of monetary rewards on university students' intrinsic motivation to participate in a volunteerism activity. While the findings indicated a subtle trend supporting the cognitive evaluation theory, an analysis of the data demonstrated no statistical significance, thus suggesting that further research is needed in order to understand the application of the cognitive evaluation theory to volunteerism.

Introduction

Participation in volunteerism has been empirically demonstrated to have both short- and long-term benefits for university students (Astin, Sax, & Avalos, 1999). Perhaps as a result of these findings, more and more universities are officially encouraging student volunteerism. Many schools have university-funded volunteerism centers with various options for service involvement (About Us, n.d.). Some schools are mandating participation in volunteerism as a requirement for graduation (Stukas, Snyder, & Clary, 1999). And although it may seem contrary to the essence of volunteerism, some organizations are even paying students to participate in volunteerism activities (Mesch, Tschirhart, Perry, & Lee, 1998).

How do these methods of encouraging volunteerism affect motivation to volunteer? Do students who are paid to volunteer continue to volunteer when the compensation is removed? An understanding of the effects of monetary rewards on intrinsic motivation is needed in order to more fully understand the long-term implications of using monetary rewards as an incentive to participate in volunteerism. The focus of this study, therefore, was to examine the effects of monetary rewards on university students' intrinsic motivation to participate in volunteerism activities.

Review of the Literature

The Value of Intrinsic Motivation

Intrinsic motivation may be defined as a natural inclination to participate in an activity, independent of external pressure (Deci, 1971; Rummel & Feinberg, 1988; Ryan & Deci, 2000b). "Intrinsic motivation involves people doing an activity because they find

it interesting and derive spontaneous satisfaction from the activity itself" (Gagné & Deci, 2005, p. 331). Ryan and Deci (2000a) explained that an intrinsically motivated person "is moved to act for the fun or challenge entailed rather than because of external prods, pressures, or rewards" (p. 56). In other words, intrinsically motivated people act because "they value an activity," independent of "external coercion" (Ryan & Deci, 2000b, p. 69).

Perhaps an indication of its intuitive importance, the construct of intrinsic motivation has been the focus of substantial scholarly attention over multiple decades. Commenting on the vast amount of research revolving around the issue, Deci (1982) shared his opinion that "the concept of intrinsic motivation is a very compelling one that has a lot of relevance to people's lives" (p. 18). Deci and Ryan (1985) claim that intrinsic motivation is "an important motivator of the learning, adaptation, and growth in competencies that characterize human development" (p. 43). Ryan and Deci (2000b) also refer to intrinsic motivation as a "vital expression of the human growth tendency" (p. 76). Almost universally, intrinsic motivation is accepted to be important.

In addition, intrinsic motivation has been demonstrated in many studies to be positively associated with benefits. Ryan and Deci (2000a) commented that "intrinsic motivation results in high-quality learning and creativity" (p. 55). Furthermore, Sheldon, Ryan, Rawsthorne, and Ilardi (1997) demonstrated that the related constructs of "authenticity and autonomy are associated with being a more fully functioning person" (p. 1391). These studies, among others, maintain a robust paradigm regarding the value of intrinsic motivation. However, while the value of intrinsic motivation is generally

accepted, there has been a considerable amount of debate regarding its cultivation and preservation.

The Effects of External Rewards

Perhaps a result of the long established behaviorist ideology, it is a common practice among employers, educators, and leaders in general to offer extrinsic motivations in order to encourage desired behaviors. In contrast to intrinsic motivation, extrinsic motivation "requires an instrumentality between the activity and some separable consequence such as tangible or verbal rewards" (Gagné & Deci, 2005). Essentially, extrinsic motivation encourages activity that would not normally occur.

In 1971, Edward Deci conducted an experiment to measure the effects of externally administered rewards on intrinsic motivation. In three 13-minute sessions, subjects were instructed to play with a puzzle that was deemed to be intrinsically interesting. After each session, subjects were given a free choice of activity for eight minutes while the researcher left the room. As the subjects were secretly observed through a one-way window, intrinsic motivation was measured based on the amount of time that subjects spent playing with the puzzle during the free choice time. During the first session, the control and experimental groups were identical, as both participated in the activity for no external reward. During the second session, however, the experimental group was informed that they would receive a monetary reward for each puzzle solution that they found. During the third session, both groups again participated in the activity for no external reward.

The results confirmed Deci's hypothesis that external rewards would decrease intrinsic motivation to participate in an activity. In the experimental group, the external rewards had a significant effect on the amount of free time subjects spent engaged in the activity. While the motivation to participate in the activity increased after the second session (in which monetary rewards were contingently administered), the motivation to participate dropped down below original interest levels once the external rewards were no longer offered. Conversely, in the control group, motivation stayed relatively constant across all three sessions. While the robustness of the findings was hampered by the small sample size ($n = 24$) and slightly high p-value ($p < .10$), the results were nonetheless important.

In the years immediately following the study by Deci (1971), there were a plethora of similar studies replicating the undermining effects of external rewards on motivation (Anderson, Manoogian, & Reznick, 1976; Calder & Straw, 1975; Eden, 1975; Pinder, 1976; Pritchard, Campbell, & Campbell, 1977; Yoshimura, 1979). As Deci and Ryan (1985) observed, "the weight of evidence from these studies seems clear: when subjects received monetary rewards for working on a variety of activities, under a variety of circumstances in and out of the laboratory, their intrinsic motivation for the rewarded activity decreased" (p. 48).

The Development and Application of the Cognitive Evaluation Theory

In an attempt to provide a framework to understand the observed phenomena of the intrinsic motivations studies, Deci, Cascio, and Krusell (1975) introduced the cognitive evaluation theory. The cognitive evaluation theory "assumes that intrinsically

motivated behavior is behavior which allows a person to feel competent and self-determining" (Deci et al., p. 82). As explained by Deci et al., there are basically two aspects to the cognitive evaluation theory: competence and autonomy. Ryan and Deci (2000a) elaborated that "interpersonal events and structures (e.g., rewards, communications, feedback) that conduce toward *feelings of competence* during action can enhance intrinsic motivation for that action because they allow satisfaction of the basic psychological need for competence" (p. 58). On the other hand, "feelings of competence will *not* enhance intrinsic motivation unless they are accompanied by a *sense of autonomy* or, in attributional terms, by an *internal perceived locus of causality*" (Ryan & Deci, p. 58). The cognitive evaluation theory provides a framework in which to understand the effect of different types of external events (such as monetary rewards) on intrinsic motivation based on perceptions of competence and autonomy.[1]

Much research has been published on topics pertaining to the cognitive evaluation theory in a variety of situations and including many different types of rewards. The effects of external rewards on intrinsic motivation have been studied in the context of work (Kunz & Pfaff, 2002), school (Greene, Sternberg, & Lepper, 1976; Ross, 1975), and sports and fitness (Dyrlund & Wininger, 2006; Ferrer-Caja & Weiss, 2000; Frederick & Ryan, 1995; Mandigo & Holt, 2000; Vallerand, Deci, & Ryan 1987). Empirical studies have sought to understand the effects of both task-noncontingent rewards and task-contingent rewards (including engagement-contingent rewards, completion-contingent rewards, and performance-contingent rewards). In addition, researchers have studied the

[1] The cognitive evaluation theory is now a sub-theory of the self-determination theory in that the cognitive evaluation theory is wholly contained within the self-determination theory.

effects of expected rewards versus nonexpected rewards. A comprehensive list of studies in each category can be found in a meta-analysis by Deci, Koestner, and Ryan (2001), in which previous meta-analyses are also reviewed and critiqued. Overall, externally administered rewards (when they do not enhance competence and support autonomy) have been demonstrated to significantly undermine intrinsic motivation (Deci, Koestner, & Ryan).

Volunteerism

A decade review of the volunteerism literature from 1990-1999 reported that there were at least 2,558 publications involving volunteerism (Perry & Imperial, 2001). These studies have generally demonstrated volunteerism to be beneficial to the volunteer. Some benefits that have been associated with volunteerism in various populations include increased citizenship, decreased antisocial behaviors, improved physical health, improved mental health, and enhanced socioeconomic achievement (Wilson, 2000). In addition, those who participate in volunteerism in earlier stages in life tend to continue to participate in volunteerism in later stages in the life course (Perry & Imperial).

Perhaps as a result of the associated benefits, many educational institutions are now encouraging volunteerism. In fact, over 1,100 schools are members of the campus compact, which is a nation-wide coalition to encourage volunteerism and other forms of civic engagement in institutions of higher education (About Us, n.d.). Some educational institutions have coerced student participation in volunteerism by incorporating community service into the curriculum (Stukas, Snyder, & Clary, 1999). And, although it may seem contrary to the essence of volunteerism, some institutions have resorted to

offering monetary rewards to encourage students to participate in volunteerism (Mesch, Tschirhart, Perry, & Lee, 1998).

Researchers have suggested that the motivations of paid volunteers may be different than those of normal volunteers. Because of these differences, "research findings regarding uncompensated volunteers may not generalize to the stipended volunteer" (Mesch, Tschirhart, Perry, & Lee, 1998, p. 5). However, as the practice of paying volunteers is relatively new, there has been very little empirical research in this area (Mesch, et al.). Accordingly, there has been a call for research studying paid volunteerism, "particularly in the area of retention" (Mesch, et al, p. 5).

Summary

Intrinsic motivation is "an important motivator of the learning, adaptation, and growth in competencies that characterize human development" (Deci & Ryan, 1985, p. 43). When intrinsic motivation is preserved, participants tend to have an enhanced experience and an increased likelihood of future participation. Although it is a common practice to offer rewards in order to encourage a desired behavior, evidence from many empirical studies has demonstrated that externally mediated rewards generally undermine intrinsic motivation, thus reducing the likelihood of future participation in the activity.

Participation in volunteerism activities is positively associated with short- and long-term benefits in students, such as leadership ability, critical thinking skills, and conflict resolution skills (Astin, Sax, & Avalos, 1999). Perhaps for this reason, some educational institutions are paying students in order to encourage participation in volunteerism. The cognitive evaluation theory would suggest that monetary rewards for

participation in volunteerism may undermine intrinsic motivation and decrease the likelihood of future participation in volunteerism (Ryan & Deci, 2000a); however, paid volunteerism is an area that has received little empirical attention. Therefore, the purpose of this study was to examine the effects of monetary rewards on intrinsic motivation to volunteer. It was hypothesized that monetary rewards would undermine university students' intrinsic motivation to participate in a volunteerism activity. Conversely, the null hypothesis was that monetary rewards would have no effect on university students' intrinsic motivation to participate in a volunteerism activity.

Methods

The focus of this study was to examine the effects of monetary rewards on university students' intrinsic motivation to participate in volunteerism activities. In order to examine this, a laboratory experiment was conducted similar to the Deci (1971) study on externally mediated rewards and intrinsic motivation.

Sample

A convenience sample of university students (n = 44) was obtained on a purely voluntary basis. Similar to real-life volunteer opportunities at universities, research subjects were recruited by way of a booth near the student center. At the booth, there was a poster advertising the opportunity to participate in a volunteerism activity as part of a research study and an attendant to recruit participants and answer questions. Volunteers were assigned alternately into either the control group or one of the experimental groups and directed immediately to one of several experiment rooms in a nearby building.

In order to avoid potentially confounding variables, the specific research question was not disclosed to research subjects. The attendant at the recruitment booth provided information about logistical details (i.e., location, time commitment, nature of volunteerism activity, etc.); however, further information was not disclosed. Although research subjects were aware that they were participating in a research study, they were unaware that they were being observed via hidden camera.

Procedures

Research subjects participated individually in three 13-minute sessions of volunteerism. After each session, the intrinsic motivation inventory (see Appendix A-1) was administered and there was an 8-minute period of free choice time. The subjects were secretly observed during the 8-minute free choice periods to see how much time they devoted to participating in the volunteerism activity. The research subjects in the experimental group were compensated with either $1 or $10 for their participation in the second 13-minute session of volunteer activity, while the participants in the control group received no compensation. In order to examine the effects of externally mediated rewards on intrinsic motivation, the amount of time spent participating in volunteerism during the three 8-minute periods of free choice time were observed and compared.

Experiment room setup. The research subject entered an experiment room in which the volunteerism activity was performed. The experiment room contained a table with materials for the volunteerism activity, a screen to view prerecorded messages from the experimenter (all communications to the research participants were via video recordings to avoid researcher inconsistency), a computer with internet connection, and a

collection of assorted magazines and newspapers. The computer was powered-up and current copies of *The Daily Universe*, *Newsweek, Ensign, and Utah Valley* were visible and accessible.

Volunteerism activity. The volunteerism activity consisted of making hats for newborn babies. The subject was informed that the hats would be sent via LDS Humanitarian Services to parts of the world where newborn babies are known to die from exposure. The subject was shown an instructional video on how to perform the hat making activity before the first volunteerism session. Printed instructions were also accessible throughout the experiment.

Monetary compensation. Before the second 13-minute volunteerism activity session, research subjects in the experimental group were shown a video in which the researcher informed them that they would receive a monetary compensation for their participation in the volunteerism activity. The monetary reward was administered in cash at the end of the 13-minute session.

Two different reward amounts were used. A $1.00 compensation amount was awarded to one experimental group. This amount is roughly equivalent to the hourly rate paid to AmeriCorps volunteers at Brigham Young University. The second experimental group received a compensation of $10.00. This amount was deemed by the researcher to be a substantial reward for participation in the 13-minute volunteerism activity, thus addressing any issues of the award amount not seeming significant to the participant. Participants in the control group received no compensation and had no knowledge of any other participants being compensated.

Before the third 13-minute volunteerism activity, research subjects in the experimental groups were shown a video informing them that they would no longer receive compensation for their participation in the volunteerism activity.

Demographic variables. After the subjects had participated in all three 13-minute volunteerism sessions and 8-minute free choice periods, a brief questionnaire was administered to participants in order to ascertain their gender, age, ethnicity, year in school, and grade point average.

Instrumentation

Intrinsic motivation inventory. Because the cognitive evaluation theory is only intended for application with activities that are already intrinsically interesting to the participant (in other words, external rewards cannot have an undermining affect on intrinsic motivation if intrinsic motivation is not present), it was necessary to verify that the activity was indeed interesting to the participants (Deci, 1971; Deci, Koestner, & Ryan 2001). For this reason, the researcher administered a paper version of the interest/enjoyment subscale of the intrinsic motivation inventory at the end of each 13-minute volunteerism session. The seven item questionnaire allowed research subjects to rate their level of intrinsic interest for a given activity on a seven-point Likert scale. As explained on the official Self-Determination Web site **(**IMI, n.d.), "the interest/enjoyment subscale [of the Intrinsic Motivation Inventory] is considered the self-report measure of intrinsic motivation" and has been demonstrated to be reliable and valid (McAuley, Duncan, & Tammen, 1989; Tsigilis & Theodosiou, 2003). Additionally, a reliability

analysis was run on the intrinsic motivation inventory, which yielded a Cronbach's alpha level of 0.865.

Free choice measure of behavior. After the intrinsic motivation inventory had been completed by the participant at the end of each 13-minute volunteerism session, a video was shown in which it was explained that the questionnaire responses would need to be processed, but that the study would resume in approximately 8 minutes. The subject was instructed that they should remain in the room until the researcher returned, but that they could do whatever they'd like during the 8 minutes of free time (including participating in the volunteerism activity, using the internet, reading, or doing nothing at all).

In order to measure the level of intrinsic motivation during the free choice period, subjects were observed by hidden video cameras. The researcher then tallied the amount of time spent participating in the hat-making volunteerism activity (including reviewing the instructions) as opposed to participating in one of the distracter activities (e.g., reading or using the internet), participating in another activity (e.g., doing homework or talking on their cell phone), or doing nothing at all.

This method, which is known as the free choice measure is a "behavioral measure of intrinsic motivation" which operates on the premise that when the research subject is in an environment where no extrinsic motivation exists, the amount of time spent on the target activity will be an indicator of the level of intrinsic motivation (Ryan & Deci, 2000a). A widely used instrument in such studies, "this measure has been the mainstay

through which the dynamics of intrinsic motivation have been experimentally studied" (Ryan & Deci, p. 4).

Data Analysis

The data collection methods and analysis in the present study were a replication of Deci's 1971 study on the effects of monetary rewards on intrinsic motivation. The scores from the intrinsic motivation inventory were used only to verify that the volunteerism activity was interesting to the research participants. Any participant who reported an average interest/enjoyment score of a two or less on the intrinsic motivation inventory would have been disqualified from the study.

Intrinsic motivation data were then collected from the hidden video camera tapes by tallying the amount of time spent participating in the hat-making volunteerism activity (as opposed to participating in one of the other activities in the room or doing nothing) during the 8-minute free time periods. The mean amount of time for each group was then calculated for each free time period, and the first free time period mean was subtracted from the third free time period mean to obtain the change in average free time spent volunteering in each group. An Analysis of Variance (ANOVA) test was used to test the differences in groups.

Data Cleaning

Before data analysis could be conducted, several participants needed to be removed from the set due to unforeseen circumstances which rendered their data unusable. After the data cleaning, the sample of usable data was smaller (n = 34), but still of a similar size to the Deci 1971 study.

One participant was deleted because he ran out of materials for the volunteerisms activity mid-experiment. Another was deleted because the subject only participated in two-thirds of the experiment because the researcher accidentally skipped the second volunteerism session and free time. Four participants were deleted due to technical difficulties involving the hidden camera (e.g., researcher forgot to insert tape, camera was poorly positioned, etc.). Three participants were deleted from the data set because they refused to accept the monetary compensation. One participant was deleted from the data set because she had already graduated.

Results

Intrinsic Motivation Inventory Data

Because the cognitive evaluation theory is only applicable to situations in which there is an initial interest in an activity, the intrinsic motivation inventory was administered to each participant at the end of the first 13-minute volunteer period. Participants with average scores of 2 or lower would need to be disqualified from participation in the study. However, an analysis of the responses of the intrinsic motivation inventory revealed that all participants reported moderate to high levels of initial interest in the volunteerism activity. A statistical analysis revealed that the lowest individual score average for the first intrinsic motivation inventory was 3.57 and the highest was 7.00. The mean score was 5.53, with a standard deviation of 0.95.

Only the first administration of the intrinsic motivation inventory was necessary in order to verify the initial interest of the participants. As such, the scores from the second and third administration of the intrinsic motivation inventory were not analyzed.

These subsequent administrations were for the purpose of transitioning into the free choice period (as participants were told that time was needed to process their responses).

Demographic Data

Information about several demographic variables was collected in order to control for potentially confounding variables. An analysis of covariance was conducted in order to determine if any of the demographic variables were connected to the effects of the treatment on time spent volunteering (see Table 3). The analysis of covariance revealed that the *F* values and probability of *F* values were not significant for the demographic variables of age ($F = 2.08$, $p = 0.16$), gender ($F = 0.00$, $p = 0.96$), year in school ($F = 0.05$, $p = 0.95$), and grade point average ($F = 0.05$, $p = 0.82$). Ethnicity was removed from statistical consideration because all participants but one classified themselves as Caucasian.

Free choice Time Data

The average amount of time spent participating in the volunteerism activity was calculated for each group and each free time period (see Table 1). The mean time for the first free time period was then subtracted from the mean time for the third free time period in order to determine the amount of change in volunteer time from before the monetary reward was administered to after the monetary reward was administered.

While it may be of value in other research questions to analyze the changes in time recorded during the second free time period, this study was primarily concerned with the effects of monetary rewards after their removal. Thus, only the first and third free time periods were considered in the analysis.

The control group showed little change in volunteer time from the first free time period to the third free time period (M = -3). The $1 experimental group showed more change (M = -17.64 seconds). The $10 experimental group showed the most change (M = -23.83 seconds). Regardless of this subtle trend, however, an analysis of variance test (see Table 4) revealed that the amount of time difference was not statistically significant (p = 0.90). Nevertheless, power analyses revealed that, had the trend continued, statistical significance would be obtained with a sample size of n = 500 for the level of difference displayed in the $10 experimental group and n = 1,600 for the level of difference displayed in the $1 experimental group.

Discussion

Conclusions

An analysis of the data demonstrated no statistically significant difference between the reception of a monetary reward and the amount of time spent participating in the volunteerism activity. However, the data from the participants in this study seemed to indicate a subtle trend which did support the hypothesis that monetary rewards may undermine intrinsic motivation to volunteer. Furthermore, a power analysis suggested that a larger sample size may have produced statistically significant results, lending more credibility to the cognitive evaluation theory in the context of volunteerism. Nevertheless, the analysis of variance test indicated no statistically significance; therefore, the null hypothesis that monetary rewards have no effect on university students' intrinsic motivation to participate in a volunteerism activity must be accepted.

One factor that may have impeded statistical significance was the extreme variance (see Table 5). It seemed that most participants, regardless of whether or not they received a monetary reward, volunteered the entire time in all three free time periods. However, there were also some participants that spent very little time volunteering during their free time periods (see Table 2). This extreme variance—present in the control and experimental groups—indicates that there may have been uncontrolled variables affecting motivation to volunteer in addition to monetary rewards. Previous research and current trends in volunteerism suggest that the constructs of reward expectancy, reward contingency, and cultural beliefs may help to explain why the data in this study did not demonstrate significant support of the hypothesis.

The expectancy of monetary rewards (whether or not the participant was expecting to receive a reward) was one issue that may have been influential in not finding significance. Studies using the cognitive evaluation theory have demonstrated that the undermining effect of rewards is mostly present when the rewards are expected and contingent upon some action (Deci, Koestner, & Ryan, 2001). Considering this, the original study design created a scenario in which participants would receive expected rewards, contingent upon a particular activity. Participants were to be informed at the beginning of the second 13-minute volunteerism period that they would be given a monetary reward for their participation in that volunteerism period. It was intended that the payment would be contingent because participants would be informed that they would only be rewarded if they completed the entire 13-minute period.

However, because the IRB required that participants be informed via consent form of the total duration of the study before participation in this study (including the detail that there would be three volunteer periods), the experience may have been altered from a scenario in which participants completed a portion of the activity in order to receive an expected reward to a scenario in which participants received an unexpected reward during a multi-session activity that they had already agreed to complete. While expected rewards were promised for participation in the second 13-minute period of volunteerism, the fact that participants had already agreed to participate in the entire study prior to knowing about the monetary rewards may have caused the rewards to be interpreted as unexpected on a larger scale. Prior studies using the cognitive evaluation theory demonstrate that expected rewards have an undermining effect on motivation, whereas unexpected rewards do not (Deci, Koestner, & Ryan, 2001). For the present study, however, it was impossible to determine to what extent the participants interpreted the rewards as expected or unexpected, so the results of both groups are indistinguishably mixed together. Had the rewards been perceived as expected by the participants, there may have been less variance towards a more pronounced decrease in time spent volunteering.

As other cognitive evaluation theory studies have shown, the contingency of the reward also influences the undermining effect (Deci, Koestner, & Ryan, 2001). It was anticipated that the video message from the researcher would include the detail that the money would only be administered if the participant completed the entire 13-minute volunteerism activity. However, due to an oversight on the part of the principle

researcher, this detail was not included in the message. Participants were informed that they would receive a monetary reward at the end of the period, but there was no mention of it being contingent upon participation (although it was subtly implied). Participants, who did not know they were being observed, may have assumed that they would receive the reward regardless of their actions. However, the video message said that they would receive a monetary reward "for their participation," so some participants may have determined that the reward was, in fact, contingent upon their participation. It is impossible to know the extent to which the participants considered the reward contingent or non-contingent, so it is impossible to categorize the results according to reward contingency. Had the rewards been perceived as contingent upon participation, there also may have been less variance towards a more pronounced decrease in time spent volunteering.

The third major issue that may have buffered against a significantly undermining effect of monetary rewards was the cultural beliefs of the Brigham Young University Students. One of the educational aims of Brigham Young University is to lead students to "life-long service" (Aims of a BYU Education, n.d.). Relatedly, a recent report by the Corporation for National and Community Service identified Utah as the highest ranking state in volunteerism (Associated Press, 2008). Provo, which is the city in which Brigham Young University is located, was reported to have the highest volunteer rate out of any jurisdiction in the entire report (Associated Press). It is conceivable that the culture of volunteerism and the beliefs associated with the participants in the area superseded the undermining effects of monetary rewards. Had the study been conducted in another

location, it is possible that the undermining effect of monetary rewards would have been more influential.

Furthermore, the present study involved an activity which was intended to save the lives of babies in third-world countries. Especially in a culture which places such a high emphasis on volunteerism, it is possible that the participants attached a sense of importance to the activity, regardless of their feelings of intrinsic motivation. Deci's original study observed the undermining effects of monetary rewards on an *interesting* activity, but the element of importance was most likely not present (Deci, 1971). In the present study, it is possible that a sense of duty or a feeling that the activity was important may have influenced participants to continue the hat-making activity even when the intrinsic motivation subsided. Had the participants been participating in a service activity with seemingly less important results (e.g., mopping a floor), the undermining effect of monetary rewards may have more powerfully influenced behavior.

Another issue that complicates the interpretation of this data, but renders a useful point to ponder, was the presence of many unanticipated variables that may have been affecting the behavior of participants at any given time. For example, one participant (which was removed from the data set because the research assistant forgot to insert a tape into the camera) confessed afterward that she had spent all of the first two, but none of the third free time period volunteering. However, she explained that she had a medical condition which caused her right arm, wrist, and hand to hurt, so when the pain set in, she finished the hat that she was on and ceased to participate in the activity. Had the data been included without this insight, it may have suggested that the $10 monetary reward

that she received was the cause for the sudden and complete change in volunteer participation; however, the participant explained that it was merely a result of when the pain set in. In future studies, it may be useful to include a screening question which would disqualify those who may be unable to participate for the full duration of the study.

Another example of the difficulty of accurate interpretation is found in the intrinsic motivation inventory scores of participant 12. This participant was adamant about not accepting the monetary reward. (It was only when it was suggested to her by the researcher that she could use the money to do service to someone else that she consented to accept the reward.) She was vocally annoyed by the fact that we were trying to pay her to do a service project for which she had volunteered. As she explained after the study, she did not like that she had been getting paid, so when she was not paid for the third volunteerism period, she enjoyed it more. Thus, in an attempt to express this disapproval of the monetary reward, she increased her enjoyment scores on the third intrinsic motivation inventory. The data alone, however, may have been interpreted to suggest a lingering increase in volunteer enjoyment as a result of the monetary compensation. Even with very sound theoretical frameworks and sturdy instruments, it is possible that the behavior observed in an experiment is erroneously assumed to have a causal relationship with the independent variable or variables. Future research may obtain a more accurate understanding of any given phenomena by employing mixed methods (including an open-ended question or opportunity for comments in conjunction with quantitative data collection). This qualitative addition may make it possible to not only

observe behavior, but to also allow research subjects to self-report the meaning associated with their behavior.

The cognitive evaluation theory has been demonstrated as a valid theoretical framework to study the undermining effect of monetary rewards (Deci, Koestner, & Ryan, 2001). At first glance, the results from this study indicate that the theory may not be applicable in the realm of volunteerism. However, the issues of reward expectation, reward contingency, and cultural beliefs may help to explain why the data did not support the cognitive evaluation theory in this study. Future studies may yet demonstrate that the cognitive evaluation theory is an appropriate framework through which to study and understand rewards and volunteerism.

Implications for University Volunteerism Centers

While the null hypothesis was accepted in the current study, the results may provide a practical model for volunteer administrators at BYU who wish to give monetary rewards while not affecting intrinsic motivation. Although there may be other unknown factors in play, some of the possible characteristics of a paid volunteerism experience that is exempt from the undermining effects sometimes associated with monetary rewards may include a meaningful service concept (e.g., saving babies lives), an unexpected reward (e.g., withhold prior information of monetary reward), and a task non-contingent reward (e.g., the reward is given to all volunteers, regardless of performance). While the characteristics of reward expectancy and reward contingency have been studied in prior research (Deci, Koestner, & Ryan, 2001), the concept of employing a meaningful service concept as a buffer against the undermining effects of

monetary rewards is purely speculative at this point. This area is unexplored and may provide useful areas of focus for future research.

Recommendations for Future Research

This study design has value in that it tests the cognitive evaluation theory in the relatively unexplored—yet very relevant—area of paid volunteerism. As already noted, controlling for the variables of reward expectancy and contingency may render data that are less variable and statistically significant. Therefore, a recommendation for future research is to replicate this study (which is a replication of the Deci 1971 study) while more fully controlling for these variables. Reward contingency can be better controlled for by clearly communicating the contingent or non-contingent nature of the reward. Reward expectancy may be controlled by a different study design or by obtaining permission from the IRB to withhold information about the duration of the study. Such studies may also benefit from a more diverse sample, including participants from different geographic locations, ethnicities, and religious beliefs.

Another suggestion for future research stems from the incidental collection of qualitative data from some of the research subjects in this study. As was demonstrated by the examples of the participant with the painful wrist condition and the participant who expressed her opposition to the monetary reward, quantitative data may not always be an accurate representation of reality. While the numbers of quantitative data collection do accurately reflect behavior, they may not assign the correct meaning to the behavior. This is especially problematic when, as a researcher, one views a phenomenon in the context of a particular theoretical framework. Looking for significance, the search for truth may

be neglected. Though even with pure curiosity, quantitative data collection cannot account for special circumstances, alternative motivations, and variable attitudes. Therefore, a recommendation for future research (especially in studies regarding human behavior and motivation) is to employ mixed methods. A comment from the participant or an answer to an open-ended question may help to assign more correct meaning to observed behaviors.

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Table 1

Mean Number of Seconds Spent Participating in the Volunteerism Activity During the 8-minute Free Choice Periods

Group	Time 1	Time 2	Time 3	Time 3-Time 1
Control (n = 13)	419.46	435.15	416.46	-3.00
\$1 Experimental (n = 11)	426.09	347.73	408.45	-17.64
\$10 Experimental (n = 10)	392.33	419.00	368.50	-23.83

$E_1(T_3\text{-}T_1) - C(T_3\text{-}T_1) = -14.64$

$E_{10}(T_3\text{-}T_1) - C(T_3\text{-}T_1) = -20.83$

Table 2

Amount of Time Spent Participating in the Volunteerism Activity During the 8-minute Free Choice Periods

Participant #	Treatment (in $)	Time 1 (seconds)	Time 2 (seconds)	Time 3 (seconds)
1	0	480	480	469
5	1	469	480	480
6	10	480	480	480
8	1	454	460	435
9	10	15	0	130
10	0	480	480	480
11	1	480	480	480
12	10	480	480	440
13	0	480	480	480
14	1	480	480	480
15	10	480	480	480
16	0	480	480	480
17	1	480	480	480
19	0	480	480	480
22	0	480	277	34
23	1	440	0	218
24	10	208	480	480
25	0	480	480	446
26	1	480	480	480
28	0	0	100	192
31	0	445	480	480
32	1	480	480	480
33	10	480	480	480
34	0	480	480	480
35	1	444	5	480
36	10	480	480	0
37	0	208	480	480
38	1	480	480	480
39	10	471	466	480
40	0	480	480	433
41	1	0	0	0
42	10	437	364	235
43	0	480	480	480
45	10	480	480	480

Table 3

Analysis of Covariance on Demographic Variables

Effect	Num DF	Den DF	F Value	Pr > F
Age	1	32	2.08	0.1585
Gender	1	32	0.00	0.9636
Year in School	2	32	0.05	0.9520
GPA	1	32	0.05	0.8242
Treatment	2	32	1.84	0.1753

Table 4

Analysis of Variance

Effect	Num DF	Den DF	F Value	Pr > F
Treatment	2	33	0.10	0.9011

Table 5

Least Squares Means

Group	Estimate	Standard Error	DF	T Value	Pr > |t|
Control	-2.7857	39.2693	33	-0.07	0.9439
$1 Experimental	-17.6364	44.3017	33	-0.40	0.6931
$10 Experimental	-29.6364	44.3017	33	-0.67	0.5082

Appendix A

Prospectus

Chapter 1

Introduction

Participation in volunteerism has been empirically demonstrated to have both short- and long-term benefits for university students (Astin, Sax, and Avalos, 1999). Perhaps as a result of these findings, more and more universities are officially encouraging student volunteerism. Many schools have volunteerism centers with various options for service involvement. Some schools are mandating participation in volunteerism as a requirement for graduation. And although it may seem contrary to the essence of volunteerism, some organizations are even paying students to volunteer.

How do these methods of encouraging volunteerism affect motivation to volunteer? The immediate number of volunteers obviously increases as a result of extrinsic motivators, but what are the long-term effects? Do students who are paid to volunteer continue to volunteer when the compensation is removed?

While student volunteerism is generally accepted to be a good thing, the motivational tactics of some educational institutions may be having unintended negative effects. Theory and research in other fields suggests that externally administered rewards may undermine intrinsic motivation for various activities (e.g., Deci 1971); however, no research has been published which studies the phenomenon of "paid volunteerism."

Problem Statement

The focus of this research study, therefore, will be to examine the effects of monetary rewards on university students' intrinsic motivation to participate in volunteerism activities.

Need for the Study

Intrinsic motivation has been empirically demonstrated to be positively associated with various benefits (see Nix et al., 1999; Ryan and Deci, 2000a; Sheldon et al., 1997). Research has also suggested that externally administered rewards significantly undermine intrinsic motivation (Koestner, & Ryan, 2001). However, some universities are using external rewards (such as money) to encourage student involvement in volunteerism. Obviously, there is an immediate increase in volunteerism participation as a result of monetary incentives; however, there may also be unintended effects.

An understanding of the effects of monetary rewards on intrinsic motivation is needed in order to understand the long-term implications of using monetary rewards as an incentive to participate in volunteerism. Such a research study may be useful in two ways. First of all, this type of research may provide a useful theoretical orientation for practitioners of volunteerism, leading to more effective policies and practices in university volunteerism centers. In addition, an understanding of how to preserve intrinsic motivation to volunteer will possibly increase future volunteerism, which may strengthen youth (through volunteer-run organizations such as Boy Scouts and little league sports) and families (through family volunteerism lifestyles). Incidentally, this perpetuation of service is also in line with the fourth aim of the BYU education.

Delimitations

The scope of this study will be delimited to the following:

1. The study's sample will be comprised of a group of 50 male and 50 female undergraduate students enrolled full-time at Brigham Young University.

2. Study participants will participate individually in a volunteerism activity in which hats will be made for new-born babies in third-world countries.
3. Study participants must not be fulfilling any other requirement (e.g., course assignment) or receiving any other reward (e.g., Americorps compensation) by participating in the volunteerism activity.
4. The intrinsic interest level of the volunteerism activity will be verified by the Interest/Enjoyment subscale of the Intrinsic Motivation Inventory (IMI).
5. Intrinsic motivation to participate in volunteerism activities will be measured by using the free-choice measure of behavior.
6. Data will be collected over a two-week period in May, 2008.

Limitations

The results from this study will be analyzed considering the following limitations:

1. Because the sample will not be randomly selected, the results of the study cannot be inferred to a larger population.
2. Although efforts will be taken to administer external rewards to the control group in a consistent manner, perceptions of control may vary from subject to subject.
3. In order to avoid potentially confounding variables, this research will be conducted in a laboratory setting. Due to the possible presence of such confounding variables in real-life volunteerism situations, the actual effects of external rewards may vary.

Assumptions

The study will be based upon the following assumptions:

1. Intrinsic motivation is a desired and beneficial construct in the realm of volunteerism.
2. The Interest/Enjoyment subscale of the Intrinsic Motivation Inventory (IMI) and the free-choice measure of behavior are valid and reliable measures of intrinsic motivation.
3. Subjects left to themselves (without external motivations) will act intrinsically.
4. Because research subjects in the experimental group will be paid an amount equivalent to the hourly wages of Americorps volunteers at BYU, the laboratory volunteerism activity will adequately simulate the experience of serving as a paid volunteer.

Hypotheses

The study is designed to test the following null hypothesis (H_0):

1. H_{01}: The external administration of monetary rewards will not significantly decrease the amount of free time spent participating in the volunteerism activity.

Conversely, the following working hypothesis (H_a) will be considered:

1. H_{a1}: The external administration of monetary rewards will significantly decrease the amount of free time spent participating in the volunteerism activity.

Definition of Terms

In order to provide a consistent means of interpretation throughout the study, the relevant terms will be defined as follows:

1. *Intrinsic Motivation.* A natural inclination to participate in an activity, independent of external pressure (Deci, 1971; Rummel & Feinbero, 1988; Ryan & Deci, 2000b).
2. *Extrinsic Motivation.* An activity that is extrinsically (or externally) motivated "requires an instrumentality between the activity and some separable consequence such as tangible or verbal rewards" (Gagné & Deci, 2005).
3. *Volunteerism.* Doing "any activity in which time is given freely to benefit another person, group, or organization" (Wilson, 2000).
4. *Paid Volunteerism.* Volunteerism in which the volunteer receives a monetary reward for participation.

Chapter 2

Review of Literature

In order to better understand how this study contributes to the current body of knowledge, a review of the relevant scholarly literature will be conducted. The literature review will be presented by topic as follows: (a) the value of intrinsic motivation; (b) the effects of external rewards; (c) the development and application of cognitive evaluation theory; (d) volunteerism; and (e) summary.

The Value of Intrinsic Motivation

Intrinsic motivation may be defined as a natural inclination to participate in an activity, independent of external pressure (Deci, 1971; Rummel & Feinbero, 1988; Ryan & Deci, 2000b). "Intrinsic motivation involves people doing an activity because they find it interesting and derive spontaneous satisfaction from the activity itself" (Gagné & Deci, 2005, p. 331). Ryan and Deci (2000a) further explain that an intrinsically motivated person "is moved to act for the fun or challenge entailed rather than because of external prods, pressures, or rewards" (p. 56). In other words, intrinsically motivated people act because "they value an activity," independent of "external coercion" (Ryan & Deci, 2000b, p. 69).

Perhaps a reflection of its intuitive importance, the construct of intrinsic motivation has been the focus of substantial scholarly attention over multiple decades. Commenting on the vast amount of research revolving around the issue, Deci (1982) shared his opinion that "the concept of intrinsic motivation is a very compelling one that has a lot of relevance to people's lives" (p. 18). In the book *Intrinsic Motivation and Self-*

Determination in Human Behavior, Deci and Ryan (1985) claim that intrinsic motivation is "an important motivator of the learning, adaptation, and growth in competencies that characterize human development" (p. 43). Later, Ryan and Deci (2000b) referred to intrinsic motivation as a "vital expression of the human growth tendency" (p. 76). Almost universally, intrinsic motivation is accepted to be an important construct.

In addition, intrinsic motivation has been demonstrated in many studies to be positively associated with benefits. For example, Nix et al. (1999) found support for the hypothesis that "doing well when autonomously motivated would enhance subjective vitality relative to doing well when controlled in one's motivation" (p. 266). Discussing another study, Ryan and Deci (2000a) commented that "intrinsic motivation results in high-quality learning and creativity" (p. 55). Furthermore, Sheldon et al. (1997) demonstrated that the related constructs of "authenticity and autonomy are associated with being a more fully functioning person" (p. 1391). These studies, among others, maintain a robust paradigm regarding the value of intrinsic motivation. However, while the value of intrinsic motivation is generally accepted, there has been a considerable amount of debate regarding its cultivation and preservation.

The Effects of External Rewards

Perhaps a result of the long established behaviorist ideology, it is a common practice among employers, educators, and leaders in general to offer extrinsic motivations in order to encourage desired behaviors. In contrast to intrinsic motivation, extrinsic motivation "requires an instrumentality between the activity and some separable

consequence such as tangible or verbal rewards" (Gagné & Deci, 2005). Essentially, extrinsic motivation encourages activity that would not normally occur.

In 1971, Edward Deci conducted an experiment to measure the effects of externally administered rewards on intrinsic motivation. While there were previous experiments and influential theories along this line of thinking (e.g., Atkinson, 1964; deCharms, 1968; Festinger, 1957; Gately, 1950; Harlow, Harlow & Meyer, 1950; Murray, 1964; and White, 1959), and while there were at least two other researchers studying the same idea independently (see Deci 1982), Deci's studies on the effects of externally administered rewards on intrinsic motivation incited a great interest in the topic of human motivation and has since become the landmark study in the line of research.

In the years leading up to Deci's research, multiple studies regarding the effects of rewards on behavior were conducted using animals as research subjects and food as external rewards; however, the results were contradictory (see Deci 1971 for a review of the prior literature). Considering the mixed results of the various research studies, Deci (1971) concluded that there was "no definitive answer to the question of the effects of externally mediated rewards on intrinsic motivation" (p. 107). However, amidst the uncertain findings of prior studies, Deci identified two unexplored aspects of the research that would, he said, "serve to reconcile the conflicting results" (p. 107). Deci mused that the results of motivational studies may be different in human subjects due to higher levels of cognition. Deci also proposed that external rewards in monetary form would have unique effects on motivation due to some unspecified "peculiar property associated with

them" (p. 107). Albeit intuitive, these ideas were both conceptual leaps for academia, as they were apparently not solidly founded on published empirical theories or research.

Deci's (1971) earliest study set out to test the following hypotheses: "If a person is engaged in some activity for reasons of intrinsic motivation, and if he begins to receive the external reward, money, for performing the activity, the degree to which he is intrinsically motivated to perform the activity decreases" (p. 108).[1] In order to test this hypothesis, Deci set up a laboratory experiment in which the intrinsic motivation of university students was measured against the presence of external rewards. In three 13-minute sessions, subjects were instructed to play with a puzzle that was deemed to be intrinsically interesting. After each session, subjects were given a free choice of activity for eight minutes while the researcher left the room. As the subjects were secretly observed through a one-way window, intrinsic motivation was measured based on the amount of time that subjects spent playing with the puzzle during the free choice time.

During the first session, the control and experimental groups were identical, as both participated in the activity for no external reward. During the second session, however, the experimental group was informed that they would receive a monetary reward for each puzzle solution that they found. During the third session, both groups again participated in the activity for no external reward.

The results confirmed Deci's (1971) hypothesis that external rewards would decrease intrinsic motivation to participate in an activity (see table 1). In the experimental group, the external rewards had a significant effect on the amount of free time subjects

[1] The study also included a hypothesis regarding external rewards in the form of verbal praise; however, this facet of the research will not be addressed in the present literature review.

spent engaged in the activity. While the motivation to participate in the activity increased after the second session (in which monetary rewards were contingently administered), the motivation to participate dropped down below original interest levels once the external rewards were no longer offered. Conversely, in the control group, motivation stayed relatively constant across all three sessions. While the robustness of the findings was hampered by the small sample size (n=24) and slightly high p-value (p <.10), the results were nonetheless important.

In the years immediately following the study by Deci (1971), there were a plethora of similar studies replicating the undermining effects of external rewards on motivation (e.g., Anderson, Manoogian, and Reznick, 1976; Calder and Straw, 1975; Eden, 1975; Pinder, 1976; Pritchard, Campbell, and Campbell, 1977; Yoshimura, 1979). As Deci and Ryan (1985) observed, "the weight of evidence from these studies seems clear: when subjects received monetary rewards for working on a variety of activities, under a variety of circumstances in and out of the laboratory, their intrinsic motivation for the rewarded activity decreased" (p. 48).

The Development and Application of Cognitive Evaluation Theory

In an attempt to provide a framework to understand the observed phenomena of the intrinsic motivations studies, Deci, Cascio, and Krusell (1975) introduced the cognitive evaluation theory. The "cognitive evaluation theory assumes that intrinsically motivated behavior is behavior which allows a person to feel competent and self-determining" (Deci, Cascio, & Krusell, p. 82). As explained by Deci, Cascio, and Krusell, there are basically two aspects to the cognitive evaluation theory: competence

and autonomy. Ryan and Deci (2000a) elaborated that "interpersonal events and structures (e.g., rewards, communications, feedback) that conduce toward *feelings of competence* during action can enhance intrinsic motivation for that action because they allow satisfaction of the basic psychological need for competence" (p. 58). On the other hand, "feelings of competence will *not* enhance intrinsic motivation unless they are accompanied by a *sense of autonomy* or, in attributional terms, by an *internal perceived locus of causality*" (Ryan & Deci, p. 58). The cognitive evaluation theory provides a framework in which to understand the effect of different types of external events (such as monetary rewards) on intrinsic motivation based on perceptions of competence and autonomy.[2]

Much research has been published on topics pertaining to the cognitive evaluation theory in a variety of situations and including many different types of rewards. The effects of external rewards on intrinsic motivation have been studied in the context of work (e.g., Kunz & Pfaff, 2002), school (e.g., Greene, Stenberg, & Lepper, 1976; Ross, 1975), and sports and fitness (e.g., Dyrlund & Wininger, 2006; Ferrer-Caja & Weiss, 2000; Frederick & Ryan, 1995; Mandigo & Holt, 2000; Vallerand, Deci, & Ryan 1987). Empirical studies have sought to understand the effects of both task-noncontingent rewards and task-contingent rewards (including engagement-contingent rewards, completion-contingent rewards, and performance-contingent rewards). In addition, researchers have studied the effects of expected rewards versus non-expected rewards. A comprehensive list of studies in each category can be found in a meta-analysis by Deci,

[2] The cognitive evaluation theory is now a sub-theory of the self-determination theory in that the cognitive evaluation theory is wholly contained within the self-determination theory.

Koestner, & Ryan (2001), in which previous meta-analyses are also reviewed and critiqued. Overall, externally administered rewards (when they do not enhance competence and support autonomy) have been demonstrated to significantly undermine intrinsic motivation (Deci, Koestner, & Ryan).

Volunteerism

As already noted, the cognitive evaluation theory has been applied to understand intrinsic motivation in a variety of settings (e.g., work, school, and sports and fitness); however, the effect of externally mediated rewards on intrinsic motivation to volunteer is an area that has been relatively unexplored.

Volunteerism Defined

There has been a considerable amount of deliberation as to the definition of volunteerism (Wilson, 2000). Indeed, "no clear-cut definition that encompasses all aspects of volunteering exists" (Handy et al., 2000, p. 46). However, some researchers have sought to standardize the terminology (e.g., Cnaan, Handy, & Wadsworth, 1996; Handy et al., 2000). Reviewing over 300 publications, Cnaan, Handy, & Wadsworth (1996) identified in the literature a continuum of volunteer definitions from pure to broad. At the broad end of the continuum, "almost everyone who works without full financial compensation is a volunteer" (p. 366). At the other end, "only those who give extensively of their time and effort without recompense are volunteers" (p. 366). For the present study, we use the definition provided by Wilson (2000): "Volunteering means any activity in which time is given freely to benefit another person, group, or organization" (p. 215).

Benefits Associated with Volunteerism

A decade review of the volunteerism literature from 1990-1999 reported that there were at least 2,558 publications involving volunteerism (Perry & Imperial, 2001). As a widely researched construct, volunteerism has been studied in many populations, including youth and adolescents (e.g., Kielsmeier et al., 2004; Sutherland et al., 2006; Youniss, McLellan, & Yates, 1999), high-school students (e.g., Metz & Youniss, 2003; Metz & Youniss, 2005), university students (e.g., Astin & Sax, 1998; Astin, Sax, & Avalos, 1999; Edwards, Mooney, & Heald, 2001; Ostrander, 2004; Ryder, 2002), elderly people (e.g., Folts, 2006; Rosenberg & Letrero, 2006), families (e.g., Bowen & McKechnie, 2002; Hegel, 2004; Littlepage, Obergfell, & Zanin, 2003; McCurley, 2005; Palmer, Freeman, & Zabriskie, 2007; Porritt, 1995), and populations outside of the United States (e.g., Frey & Goetee, 1999; Greenslade & White, 2002; Hooghe, 2003; Hustinx, 2007; Kulik, 2007; Meier & Stutzer, 2007). These studies have generally demonstrated volunteerism to be beneficial to the volunteer. Some benefits that have been associated with volunteerism in various populations include increased citizenship, decreased antisocial behaviors, improved physical health, improved mental health, and enhanced socioeconomic achievement (Wilson, 2000). In addition, those who participate in volunteerism in earlier stages in life tend to continue to participate in volunteerism in later stages in the life course (Perry & Imperial).

In 1998, Astin and Sax conducted a large-scale longitudinal study (n=3,450 from 42 institutions over the course of 1-5 years) that observed how undergraduates are

affected by participation in volunteerism. Reviewing their 1998 study, Astin, Sax, and Avalos (1999) summarized the findings of the study as follows:

> Among other things, the study found that service participation positively affects students' commitment to their communities, to helping others in difficulty, to promoting racial understanding, and to influencing social values. In addition, service participation directly influences the development of important life skills, such as leadership ability, social self-confidence, critical thinking skills, and conflict resolution skills. Service participation also has unique positive effects on academic development, including knowledge gained, grades earned, degrees sought after, and time devoted to academic endeavors (p. 188).

In a separate large-scale longitudinal study (n=27,064 from 388 institutions over a period of 4 years and n=12,376 from 209 institutions over a period of 9 years), Astin, Sax, and Avalos (1999) observed the long-term effects of participation in volunteerism during undergraduate years. The study revealed that "undergraduate volunteer participation affects students in both the affective and cognitive realms" (Astin, Sax, & Avalos, p. 200). Behaviors that were positively associated with volunteer participation include "attending graduate school, earning higher degrees, donating money to one's alma mater, socializing with persons from different racial/ethnic groups, and participating in volunteer/community service work in the years after college" (Astin, Sax, & Avalos, p. 197). In addition to these behaviors associated with volunteerism, Astin, Sax, and Avalos reported that many post-college values were positively associated with participation in college volunteerism, including "helping others in difficulty, participating in community

action programs, participating in environmental cleanup programs, promoting racial understanding, and developing a meaningful philosophy of life" (p. 197). In summary, participation in volunteerism during college is positively associated with short- and long-term benefits for the volunteer.

Institutional Encouragement of Volunteerism

Volunteerism is a growing phenomenon in educational institutions (Astin, Sax, & Avalos, 1999). Indeed, many educational institutions are encouraging volunteerism. Three indicators of encouragement towards volunteerism by educational institutions include the following: making volunteerism official, mandating volunteerism as part of course requirements, and paying monetary rewards for student participation in volunteerism.

Making volunteerism official. Over 1,100 schools are now members of the campus compact, which is a nation-wide coalition to encourage volunteerism and other forms of civic engagement in institutions of higher education ("About Us," n.d.). While somewhat passive, providing an organizational structure to facilitate volunteerism is one way that educational institutions are encouraging volunteer participation.

Mandating Volunteerism. Some educational institutions have used coercion as a means of ensuring that students participate in volunteerism (Stukas, Snyder, & Clary, 1999). Service-learning and experiential learning are being utilized in order to incorporate aspects of volunteerism into the curriculum (Kronick, 2007; Parker-Gwin, 1996). While it obviously increases the amount of volunteerism in the short-term, it is debated as to whether there are lasting benefits and/or effects on future participation (see

Metz & Youniss, 2003; Metz & Youniss, 2005; Stukas, Snyder, & Clary, 1999).

Paying Volunteers. Although it may seem contrary to the essence of volunteerism, some institutions have resorted to offering monetary rewards to encourage students to participate in volunteerism. By some definitions, actions that are recompensed would not even be considered volunteerism (see Cnaan, Handy, & Wadsworth, 1996); however, others consider stipended service to be volunteerism because the remuneration is less than market value and the object is to help others (Tschirhart et al., 2001).

Researchers have suggested that the motivations of paid volunteers may be different than those of pure volunteers. Because of these differences, "research findings regarding uncompensated volunteers may not generalize to the stipended volunteer" (Mesch et al. 1998, p. 5). However, as the practice of paying volunteers is relatively new, there has been very little empirical research in this area (Mesch et al.). Accordingly, there has been a call for research studying paid volunteerism, "particularly in the area of retention" (Mesch et al., p. 5).

Summary

Intrinsic motivation is "an important motivator of the learning, adaptation, and growth in competencies that characterize human development" (Deci & Ryan, 1985, p. 43). When intrinsic motivation is preserved, participants tend to have an enhanced experience and an increased likelihood of future participation. Although it is a common practice to offer rewards in order to encourage a desired behavior, evidence from many empirical studies has demonstrated that externally mediated rewards generally undermine intrinsic motivation, thus reducing the likelihood of future participation in the activity.

Participation in volunteerism activities is positively associated with short- and long-term benefits in students. Perhaps for this reason, some educational institutions have begun to pay students in order to encourage participation in volunteerism. The cognitive evaluation theory would suggest that monetary rewards for participation in volunteerism may lead to a perceived change in locus of causality, thus undermining intrinsic motivation and decreasing the likelihood of future participation in volunteerism (Ryan & Deci, 2000a); however, paid volunteerism has yet to be empirically examined.

Chapter 3

Methods

The focus of this research study will be to examine the effects of monetary rewards on university students' intrinsic motivation to participate in volunteerism activities. In order to examine this, a laboratory experiment will be conducted that is similar to Deci's (1971) study on externally mediated rewards and intrinsic motivation. The methods of the study will be discussed as follows: (a) procedure, (b) instrumentation, (c) participants, and (d) data analysis.

Procedure

Overview

Research subjects will participate individually in three 13-minute sessions of volunteerism. After each session, there will be an 8-minute period of free choice time. The research subjects in the experimental group will be compensated for their participation in the second 13-minute session of volunteer activity. The subjects will be secretly observed during the 8-minute free choice periods to see how much time they devote to participating in the volunteerism. In order to examine the effects of externally mediated rewards on intrinsic motivation, the amount of time spent participating in volunteerism during the three 8-minute periods of free choice time will be observed and compared.

Experiment Room Set-Up

The research subject will enter an experiment room in which a volunteerism activity will be performed. The experiment room will contain a table with materials for

the volunteerism activity, a television to view pre-recorded messages from the experimenter, a computer with internet connection, and a collection of assorted magazines and newspapers. The computer will be powered-up with the student log-in page visible on the screen. Current copies of *The Daily Universe*, *The Daily Herald, U.S.A. Today, The Ensign, Sports Illustrated, Reader's Digest, and Newsweek* will also be visible and accessible.

Volunteerism Activity

The volunteerism activity will consist of making hats for new-born babies. The subject will be informed that the hats will be sent via LDS Humanitarian Services to parts of the world where newborn babies are known to die from exposure. The subject will be shown an instructional video on how to perform the hat making activity before the first volunteerism session and printed instructions will be accessible.

Volunteerism Sessions

In three consecutive sessions, the subject will participate in the hat-making volunteerism activity for 13 minutes.

Intrinsic Motivation Inventory

At the end of each 13-minute volunteerism session, the researcher will administer a paper version of the Interest/Enjoyment subscale of the Intrinsic Motivation Inventory. Because the cognitive evaluation theory only applies to activities that are considered intrinsically interesting to the participant, this inventory will be administered in order to verify that the hat-making activity is indeed interesting. Participants who report very low interest/enjoyment scores on the Intrinsic Motivation Inventory (i.e., an average score of

less than 2 on each item) after the first 13-minute volunteer session will be noted for possible disqualification. The Intrinsic Motivation Inventory will be administered a second and third time after the subsequent 13-minute volunteerism periods, but this will serve mainly as a transition to the free choice periods.

Free Choice Period

After the Intrinsic Motivation Inventory score has been completed by the participant at the end of each 13-minute volunteerism session, a video will be shown in which will explain to the subject that their questionnaire information will need to be processed, but that the study will resume in approximately 8 minutes. The subject will be instructed that they should remain in the room until the researcher returns, but may do whatever they'd like during the 8 minutes of free time. During each 8-minute free choice time period, subjects will be recorded through a hidden camera, with the researcher recording the amount of time spent participating in the hat-making volunteerism activity (including reviewing the instructions) as opposed to participating in one of the other activities in the room or doing nothing. At the end of the 8-minute period of free choice time, the researcher will return and the entire process will be repeated, except for the instructional video will be replaced with a video instructing the participants to again begin participation.

Monetary Compensation

Before the second 13-minute volunteerism activity session, research subjects in the experimental group will be shown a video in which the researcher informs them that they will receive a monetary compensation for their participation in the volunteerism

activity. The monetary reward will be administered in cash at the end of the 13-minute session, but only if the subject participates in the volunteerism activity for the full 13 minutes (e.g., the subject will not receive any monetary reward if the 13-minute session is not completed). This completion-contingent mediation of monetary rewards (which should simulate the reward conditions of Americorps paid volunteers at BYU) is assumed to be perceived as controlling but not information, and therefore undermining to intrinsic motivation.

Two different reward amounts will be used. A $10.00 compensation amount will be awarded to one experimental group. A $10.00 compensation is deemed by the research to be a substantial reward for participation in the 13-minute volunteerism activity, so this should address any issues of the award amount not seeming significant to the participant. The other experimental group will receive a compensation of $1.00. This amount is roughly equivalent to the hourly rate paid to Americorps volunteers at Brigham Young University and should qualify as a "small amount" (Gneezy and Rustichini, 2000). Participants in the control group will receive no compensation and have no knowledge of any other participants being compensated.

Before the third 13-minute volunteerism activity, research subjects in the experimental groups will be shown a video informing them that they will no longer receive compensation for their participation in the volunteerism activity.

Participants

A convenience sample (n=150) of research subjects will be obtained on a purely voluntary basis. Similar to real-life volunteer opportunities at BYU, research subjects will

be recruited by way of a booth in the Wilkinson Student Center. At the booth, there will be a poster advertising the opportunity to participate in a volunteerism activity as part of a research study, and an attendant to answer questions. Volunteers will be directed immediately to one of several experiment groups where the study will begin.

Sample Size

A total sample size of n=150 will be obtained for the study. A sample of n=25 males and n=25 females will be obtained for the control group and a sample size of n=25 males and n=25 females will be obtained for each of the experimental group (for a total of n=50 males and n=50 females in the experimental groups). This sample size is appropriate to achieve significance based on the results and standard deviation of the free-choice measure of behavior as reported by Deci (1971).

Blindness

In order to preserve the blindness of those being studied, the specific research question will not be disclosed to research subjects. An attendant will be present at the recruitment booth to answer questions about logistical details (i.e., location, time commitment, nature of volunteerism activity, etc.); however, further information will not be shared.

Although research subjects will be aware that they are participating in a research study, they will be unaware that they are being observed (via hidden camera) during the three free-time sessions. At the end of the final free-time session, the experimenter will conduct a debriefing session in which the participant will be informed of the hidden cameras and the purpose of the observation. Research subjects will be given the choice of

whether to be included in the study or not. The videos of those subjects choosing not to be included in the study will not be viewed.

Homogeneity

The focus of this research study will be on university students; therefore, potential research subjects will be screened at the recruitment booth by the attendant in order to verify enrollment status. Those who are not enrolled as full-time students at Brigham Young University will be informed that they are not eligible to participate in the study.

Perceived Freedom

In order to avoid the potentially confounding variables related to "mandatory volunteerism" (see Stukas, Snyder, & Clary, 1999), the potential research subjects will also be screened by the attendant for existing extrinsic motivation. Those who are participating in order to fulfill a requirement or receive a compensation of some sort will be disqualified from participation in the study.

Randomization

Each subject will be randomly assigned in alternating order into either the control group, the $10.00 experimental group, or the $1.00 experimental group. Because subjects will be randomized in their assignment to groups, causality can be established. However, as the sample was not a random sample, statistical inference to any greater population will not be possible.

Instrumentation

Intrinsic Motivation Inventory

Because the cognitive evaluation theory is only intended for application with activities that are already intrinsically interesting to the participant (externally mediated rewards cannot have an undermining affect on intrinsic motivation if intrinsic motivation is not present), it will be necessary to verify after the first session that the activity is indeed interesting to the participants (Deci, 1971; Deci, Koestner, & Ryan 2001). As explained on the official Self-Determination website **(**"Intrinsic Motivation Inventory," n.d.), "the interest/enjoyment subscale [of the Intrinsic Motivation Inventory] is considered the self-report measure of intrinsic motivation" and has been demonstrated to be reliable and valid (see McAuley, Duncan, & Tammen, 1989 and Tsigilis & Theodosiou, 2003). In order to verify that the volunteerism activity is interesting to the participants, the researcher will administer the interest/enjoyment subscale of the Post-Experimental Intrinsic Motivation Inventory after the first 13-minute volunteerism session.

Free Choice Measure

The free choice measure is a "behavioral measure of intrinsic motivation" which operates on the premise that when the research subject is in an environment where no extrinsic motivation exists, the amount of time spent on the target activity will be an indicator of the level of intrinsic motivation (Ryan & Deci, 2000a). Widely used, "this measure has been the mainstay through which the dynamics of intrinsic motivation have been experimentally studied" (Ryan & Deci, p. 4). In order to behaviorally measure the

level of intrinsic motivation during the free-choice period, subjects will be observed by hidden video cameras, with the researcher recording the amount of time spent participating in the hat-making volunteerism activity (including reviewing the instructions) as opposed to participating in one of the distracter activities or doing nothing at all.

Demographic Variables

After all subjects have participated in all three 13-minute volunteerism sessions and 8-minute free-choice periods, a brief questionnaire will be administered to participants in order to ascertain their gender, age, race, religion, year in school, and previous volunteer involvement.

Data Analysis

The observed data from the free-choice measure and the demographic variables will be entered into the NCSS statistical analysis program for treatment. If the demographic variables appear to have a significant influence, a block regression analysis will be used to control for these potentially confounding variables. A covariate analysis of variance (with time spent during free-choice period as the dependant variable and treatment group and session number as the independent variables) will then be performed to measure the significance of change in free time spent participating in the volunteerism activity as a result of the introduction of monetary rewards.

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Appendix A-1

Instrument

THE POST-EXPERIMENTAL INTRINSIC MOTIVATION INVENTORY

For each of the following statements, please indicate how true it is for you, using the following scale:

1	2	3	4	5	6	7
not at all true			somewhat true			very true

I enjoyed doing this activity very much

1	2	3	4	5	6	7
not at all true			somewhat true			very true

This activity was fun to do.

1	2	3	4	5	6	7
not at all true			somewhat true			very true

I thought this was a boring activity. (R)

1	2	3	4	5	6	7
not at all true			somewhat true			very true

This activity did not hold my attention at all. (R)

1	2	3	4	5	6	7
not at all true			somewhat true			very true

I would describe this activity as very interesting.

1	2	3	4	5	6	7
not at all true			somewhat true			very true

I thought this activity was quite enjoyable.

1	2	3	4	5	6	7
not at all true			somewhat true			very true

While I was doing this activity, I was thinking about how much I enjoyed it.

1	2	3	4	5	6	7
not at all true			somewhat true			very true