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Motivation Crowding: The Hidden Costs of Introducing Incentives
in Advertising to Promote Altruistic Behavior

Common sense suggests that the offer of an incentive, such as a rebate or other promotional offer, should increase the willingness of people to perform a certain behavior. Indeed, incentives are often placed in advertising to increase the speed and extent of consumer response. But, do incentives always work in an additive manner to increase the motivation to respond to advertising? Or, are there circumstances in which incentives reduce the motivation to respond?

The potential for such an outcome has been established by psychological and economic studies of the introduction of extrinsic incentives for what would otherwise be viewed as intrinsically motivated behavior. In certain contexts, the introduction of external incentives is said to diminish the inherent or intrinsic motivation to act. This outcome has become known as the “crowding-out effect”, or “motivation crowding” (Frey and Jegen, 2001). The present study discusses previous research on this phenomenon and examines its implications for advertising, in the context of a campaign designed to encourage volunteerism among students.

Motivation Crowding Theory

Depending on the locus of its causality, human behavior can be either intrinsically or extrinsically motivated. Intrinsically motivated behaviors are performed for no other reasons than for the sake of the behavior itself (Deci, 1971; 1972), and can occur in the

absence of any external reward (e.g., attending a speech because one is interested in the topic). When people engage in such behaviors, they experience feelings of competence and autonomy, and perceive the cause of their behavior to be internal (Cameron and Pierce, 1994), which gives them a sense of self-determination (Deci, 1971, 1972; Deci and Ryan, 1985; 1991). Extrinsically motivated behaviors, on the other hand, are driven by an external agent of causality (e.g., attending a speech to earn class credit). When engaging in such behaviors, people may experience a loss in their sense of agency (Deci and Ryan, 1991). The extrinsic agent is often perceived to be controlling, and once the external rewards are removed, people may not engage the behavior any longer.

Behaviors, however, are seldom purely intrinsic or purely extrinsic in terms of their causality. Indeed, most human actions are driven, to various degrees, by both types of motivation, so that people's overall determination to engage in a behavior is the result of a "summative" degree of intrinsic and extrinsic motivation. It would be therefore logical to assume that an increase in any of the two types of motivation will increase the overall likelihood that people perform a behavior.

Motivation crowding theory (Frey and Jegen, 2001) explains how, in certain contexts, an increase in extrinsic motivation can actually diminish people's overall willingness to engage a behavior, by substantially undermining (or crowding-out) the intrinsic motives.

The present paper discusses possible implications of motivation crowding for advertising and offers an empirical test of hypotheses in the context of a campaign designed to encourage volunteering among students.

Motivation crowding theory can be traced back to economic and psychological studies of the function of incentives (Frey and Jegen, 2001). Its basic tenet is that the introduction of extrinsic rewards can substantially diminish people's inherent motivations for performing an action, resulting in a decreased overall level of motivation.

This goes against the logic of mainstream economic thinking. Conventional economic thinking is that an increase in incentives for an action will monotonically increase response, a phenomenon known as the relative price effect; by postulating a decrease in response when certain extrinsic incentives are raised, the "crowding-out effect" is thus seen as an important anomaly in economics (Frey and Jegen 2001).

The effect was described first by Titmuss (1970), who claimed that paying blood donors would undermine the social values they have internalized, and will result in reduced willingness to donate. More recently, Frey (1997), Chang and Lai (1999), Benabou and Tirole (2003), and Frey and Jegen (2001), have examined the possibility that increasing extrinsic rewards may reduce response; today, most economists have embraced the possibility of crowding-out effects to occur (Frey and Jegen, 2001).

Frey and Jegen (2001) believe that conventional economic thinking cannot account for motivation crowding because it is focused exclusively on extrinsic incentives; intrinsic motives are rarely studied in economic theory and are often assumed to be an exogenous constant (Frey and Jegen, 2001).

Cognitive social psychology, on the other hand, with its focus on intrinsically-driven behaviors, has long embraced the idea of motivation crowding. While theoretical debates in the field still continue (Deci and Ryan, 1985; Cameron and Pierce, 1994, 1996; Lepper, Keavney and Drake, 1996; Ryan and Deci, 1996; Kohn, 1996; Deci, Koestner

and Ryan, 1999), evidence for the effect has been found in numerous laboratory studies since the early 1970's.

In a series of three experiments, Edward Deci (1971) found that the introduction of a monetary reward led to a cognitive re-evaluation of an intrinsically motivated activity. The intrinsic motivation for engaging in intriguing puzzle solving/headline writing exercises was reduced when extrinsic monetary incentives were offered. In one of the three experiments, a field replication, this effect was shown to continue over a 10-week period of time.

Lepper, Greene and Nisbett (1973) found that children who had been intrinsically motivated to draw spent less time drawing after they were promised an external reward (a "good player" award), compared to children in no-reward groups. Morgan (1981) also reports "a decline in intrinsic interest" in a task for groups of children who were promised a tangible extrinsic reward, compared to no-reward control groups. Similar results from studies on children were reported by Ross (1975, experiments 1 and 3), Reiss and Sushinski (1975), Swann and Pitmann (1977), Danner and Lonkey (1981), Ryan et al. (1983), Boggiano et al. (1985), Fabes (1987), Fabes et al. (1988), etc. .

Further empirical evidence has been found in the context of laboratory tasks performed by adults, such as engaging in an interesting activity, reciprocating in a game theory setting, readiness to volunteer, and readiness to accept an unwanted outcome for the benefit of others (e.g., Kruglanski et al., 1971; Salanick, 1975; Weiner and Mander, 1978; Daniel & Esser, 1980; Luyten and Lens, 1981; Ryan et al, 1983; Petty and Seligman, 1984).

While these studies offer wide support for the crowding-out effect, they also show that not all types of extrinsic rewards can crowd out intrinsic motivation. Indeed, the crowding-out effect is lessened or absent when the extrinsic incentive is not expected (i.e., not promised in advance), when it is verbal, or when the intrinsic motivation is at a relatively low level to start with (Lepper et al., 1999). Similarly, there is a lessening of the crowding-out effect for achievement-based extrinsic rewards (Cameron et. al, 2005), or when the extrinsic rewards are intangible (Deci et al, 1999).

A meta-analytic review conducted by Cameron and Pierce (1994) on motivation crowding research casts doubt on the validity of the empirical evidence of the crowding-out effect. This analysis has been widely criticized by other researchers for failure to include relevant studies, lack of methodological rigor, and tendency to ignore important conceptual distinctions (Kohn, 1996; see also Ryan and Deci, 1996; Lepper, Keavney and Drake, 1996 for further criticism).

However, the empirical evidence of the effect is considered reliable and valid. A recent meta-analysis of 128 psychological studies has shown that “tangible rewards tend to have a substantially negative effect on intrinsic motivation” (Deci, Koestner and Ryan, 1999). Deci et al.’s (1999) meta-analysis is regarded as “the best available survey [of motivation crowding] in the field of social psychology” (Frey and Jegen, 2001). Accordingly, researchers have concluded that the effect is “empirically relevant,” and that the goal of future research should be to further specify the conditions under which the crowding out effect dominates the traditional relative price effect (Frey and Jegen 2001).

The dynamics of motivation crowding

The effect of tangible extrinsic rewards on motivation to perform an intrinsically-motivated behavior has been shown to follow the two-stage pattern depicted in figure 1 (adapted from Frey and Jegen, 2001). The first stage, following the immediate introduction of the reward, results in a decrease in overall motivation, due to the crowding-out of intrinsic motives (stage 1). Then, as the extrinsic reward becomes more consistent (e.g., monetary rewards increase in value), overall motivation increases (stage 2). At this stage, overall motivation is driven primarily by the extrinsic reward, with intrinsic motivation playing a minor role (Frey and Jegen, 2001), as it is partially or completely crowded out.

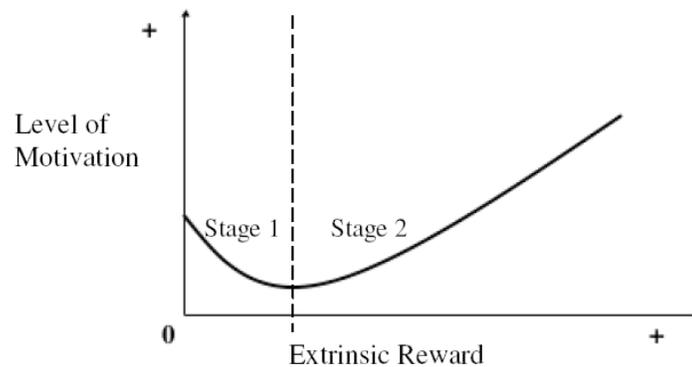


Figure 1. The motivation crowding effect

Various theoretical explanations can account for this pattern.

According to Lepper, Greene and Nisbett's (1973) *overjustification* hypothesis, motivation to behave is influenced by people's perceptions of the cause of their behaviors. They claim that the introduction of extrinsic rewards provides additional

reasons for performing the behavior (overjustification), diminishing the importance of the intrinsic motives. When this leads to a shift in the perceived causality of the behavior (i.e., people start to believe that they perform the behavior because of the extrinsic rewards), intrinsic motivation significantly drops (is crowded-out), causing the overall motivational level to decrease (stage 1). Then, once the extrinsic reward becomes the primary driver of motivation, motivation will increase as the extrinsic reward increases (stage 2).

The same pattern is suggested by Deci and his associates (e.g., Deci, 1971; Deci et al, 1993; Deci and Ryan, 1987), although their explanation is different. Deci and Ryan (1985) explain motivation crowding by drawing on cognitive evaluation theory (CET). CET claims that people have intrinsic needs for competence and autonomy (Deci and Ryan, 1985; Deci, Koestner and Ryan, 1999). Accordingly, when an external reward enhances feelings of competence and autonomy, intrinsic motivation increases; when the reward reduces these feelings, intrinsic motivation diminishes (Deci and Ryan, 1985). Tangible extrinsic rewards (such as money or points) promised before the behavior is performed, can be seen as attempts to determine behavior because they are imposing external reasons to perform it. As a result, they can reduce feelings of autonomy and cause a drop in intrinsic motivation, reducing the overall motivational level (stage 1). Again, once the intrinsic motivation is crowded out and extrinsic motives become the main driver of motivation, one should expect a quasi-linear, positive relationship between extrinsic reward and overall motivation (stage 2).

Motivation Crowding and Advertising

Advertising presents an intriguing new context in which to examine the crowding-out effect, as advertisements often address both the extrinsic and the intrinsic motivations of their recipients when recommending certain behaviors (e.g., to purchase a particular product, to volunteer, etc.).

Incentive-based advertising, in particular, can benefit from such an examination. Incentive-based advertising is a popular form of advertising which rests on the economics logic that by adding extrinsic rewards such as rebates or other monetary incentives, one will increase people's willingness to follow the behavior recommended in the ad. For these reasons, incentives are offered in both commercial and non-commercial advertising campaigns. But if the crowding effect holds, this paper will show that the introduction of advertising incentives can actually reduce the effectiveness of the ads, by crowding-out intrinsic motives and therefore diminishing consumers' motivation to engage in the recommended behavior. To the best of our knowledge, there are no studies yet which examine this detrimental effect of incentives on advertising effectiveness.

Rationale and Hypotheses

Given that some advertisements incur intrinsic motivational value, what happens when additional extrinsic incentives are introduced? Following the predictions of motivation crowding theory (Frey and Jegen 2001), we hypothesize the following relationship between the magnitude of a monetary incentive introduced into the

advertising and recipients' intentions of performing the advertised behavior (please see Figure 2).

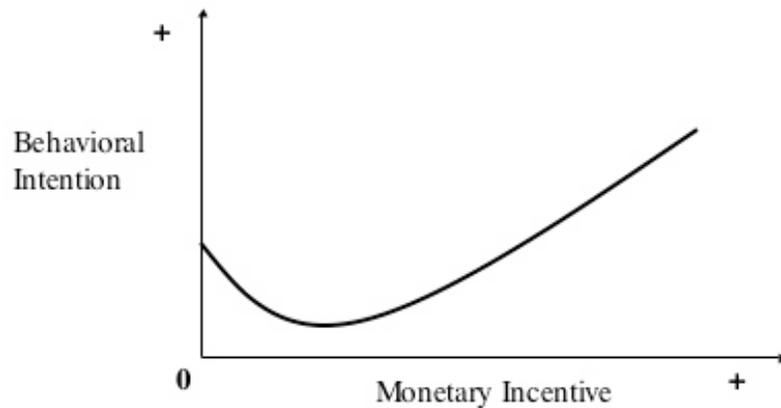


Figure 2. The expected effect of monetary incentives on people's willingness to perform behaviors recommended in advertising

As predicted by motivation crowding, the introduction of some levels of monetary incentive may act to decrease the effectiveness of an advertisement. As suggested by Deci and Ryan (1985), in contrast to advertisements with no incentive, the introduction of additional monetary rewards interferes with the perceived decisional autonomy of individuals. Persons encountering such an offer may feel the additional reward fails to acknowledge their independent intrinsic motivation, leading them to reduce their likelihood to respond. In different terms, the offer of an additional reward may be seen as not respecting their judgment, leading them to restore their self-esteem by reducing their willingness to perform the behavior (Frey and Jegen 2001).

Accordingly, we believe that the introduction of a monetary incentive to an advertisement that promotes an intrinsically-motivated behavior will lead to a reduction in respondents' likelihood to perform the behavior. Therefore, we propose

H1: Recipients of advertising which offers an additional monetary reward will be less likely to perform the advertised behavior than recipients of advertising which offers no monetary reward.

However, as the magnitude of the monetary incentive is increased, there should come a point at which the extrinsic motivational value of the incentive crowds out the effects of the intrinsic motives, such that the motivational attraction of the proposed action becomes entirely determined by the incentive. In such a situation, the relationship between the proposed action and individual behavior could be seen as “monetized” and relatively absent of other motivational considerations. Marketing concepts such as the “deal-prone consumer” show the everyday relevance of this phenomenon.

Hence, we believe that as the level of a monetary incentive included in an advertisement is increased, the likelihood of performing the advertised behavior will increase. More formally,

H2: Recipients of advertising which offers larger monetary rewards will be more likely to perform the advertised behavior than recipients of advertising which offers lower monetary rewards.

While this hypothesis may sound very intuitive, we place the emphasis on the mechanisms that drive the effect. Specifically, we see incentives of greater magnitude as having the capacity to become the primary determinant of the willingness to respond to the advertising. With the larger incentives the issues of personal autonomy and self-esteem that occur at lower levels of monetary reward will be over-ridden by the motivational attractiveness of the incentives.

The study

We chose to test these hypotheses in the context of a campaign designed to promote volunteerism among students.

Two main reasons lead to this choice. First, with over 20 billion work hours donated across America (Clary and Snyder, 1999), volunteerism is a widespread phenomenon, with far-reaching economic and societal impact. However, the U.S. Bureau of Labor Statistics reported that only 29 percent of the adult population says they volunteer to help an organization at least once a year (Bureau of Labor Statistics 2005). Clearly, there is a role for public service advertising to play in terms of motivating the 71 percent of the people who don't volunteer, or to make occasional volunteers donate their time and efforts more often. Indeed, an important area of advertising involves campaigns designed to motivate public action (such as volunteering) in support of pressing social issues. For example, the Advertising Council reported that over \$1.7 billion in media time and space was donated in 2005 for that organization's public service advertising campaigns (Advertising Council 2005). As many of these campaigns use extrinsic (monetary) rewards to motivate people to volunteer, it would be beneficial to provide evidence that in some situations this strategy actually undermines the effectiveness of the campaign.

Second, incentive-based campaigns designed to increase volunteering provide a conceptual fit with motivation crowding theory. Not only is volunteerism an intrinsically-motivated behavior (thus allowing for the crowding-out effect to occur), but the extrinsic

rewards intended to promote it are tangible (monetary compensation) and are promised before the behavior is supposed to occur.

Accordingly, volunteerism was selected as the subject for an experiment to examine the effects of incentives on the advertising effectiveness. Volunteerism was also seen as a particularly appropriate subject for an experiment involving students, a significant target market for volunteerism.

Method and procedures

Study Participants

Sixty undergraduate students participated in an experiment for course credit. They were recruited from an introductory mass communication course at a large Midwestern university. The university's Institutional Review Board approved the experimental design and procedures. All study participants provided informed consent prior to their participation.

Design

A 1 by 3 factorial design was employed, with three levels of incentive (no incentive, smaller incentive, and larger incentive). The no incentive treatment consisted of a one-page print ad to recruit experienced students to volunteer to serve as mentors for students needing help in managing their time more effectively. The volunteerism aspect of this treatment provided means of gauging the intrinsic value of the specific action sought by the advertising appeal. The smaller incentive treatment consisted of the same advertisement with the addition of an offer of being paid 7 dollars an hour. This amount

is essentially equivalent to the minimum hourly wage in the local area of the study. The larger incentive treatment consisted of the same basic advertisement with an offer of being paid 18 dollars an hour. Figure 2 shows how the three levels in the experimental design relate to the predictions of the Motivation Crowding model.

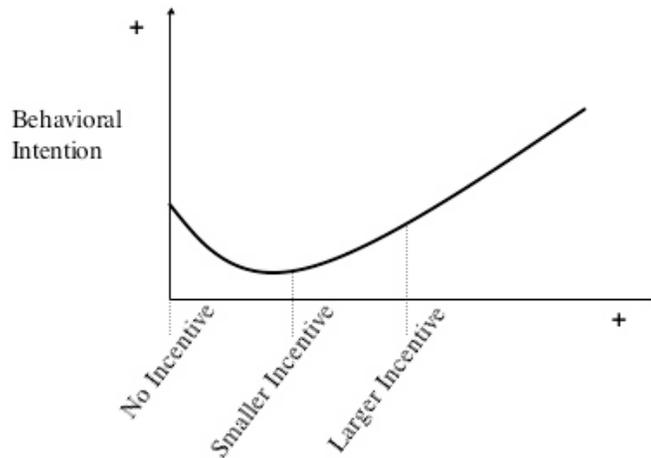


Figure 3. Motivation Crowding and the Experimental Design

All advertisements employed the same visualization of a female student placed above the headline “How far will you go to help?” For each ad, the body copy below the headline says, “Susan struggled in her first year at the U. Time management was not her strong point. But, a student mentor helped her focus on priorities and gain confidence in her own abilities.”

All three ads included the same call to action, “Be a Student Mentor.” The no incentive treatment ad ended with the line, “Volunteer now to help someone who needs you.” The lower incentive treatment ad ended with the line, “Be paid \$7 an hour to help someone who needs you. The higher incentive treatment ad ended with the line, “Be paid \$18 an hour to help someone who needs you.”

Although there were no theoretical reasons to expect effects of the model's gender, this possibility was out-ruled in separate testing. The three final advertisements are shown in Figure 4.

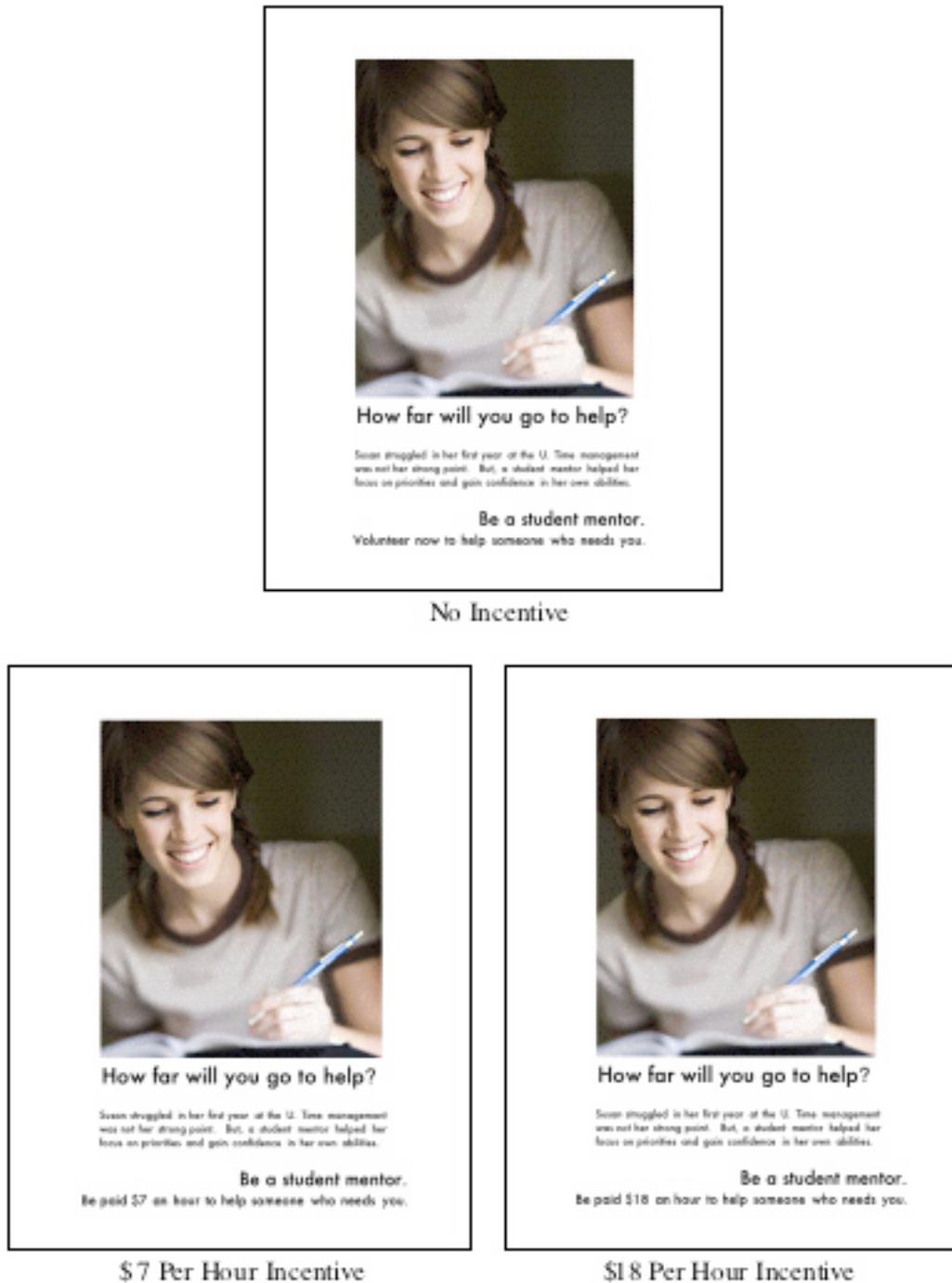


Figure 4. The Three Advertisements

Procedure

The 60 study participants were randomly assigned to the experimental conditions. Each was assigned a time slot to come to an experimental laboratory where they were told they would be shown a possible advertising campaign and asked to give their reactions. Each study participant read one of the ads and completed a questionnaire. In the final analysis, one respondent's answers were discarded for failing to follow instructions.

Dependent measures

The critical dependent variable in this study was behavioral intent, measuring willingness to perform the advertised behavior (i.e., intention to become a mentor). This variable was measured with two 7-point Likert-type scales: "I will try to become a student mentor" (Label: Intention – Try) and "I plan to become a student mentor." (Label: Intention - Plan), anchored by "definitely false" and "definitely true". The two items are commonly used in studies on the theory of planned behavior as valid measures of behavioral intent. An additional overall behavioral intent measure (Label: Overall Intention) was the 7-point Likert-type scale "Overall, how likely are you to participate in the mentor-mentee program by offering your services as a mentor?", anchored by "extremely unlikely" and "extremely likely".

Process measures

The theory suggests that the different levels on the dependent variable can be attributed to a crowding-out of intrinsic motivations by the introduction of extrinsic

incentives (the monetary reward). To assess the levels of intrinsic and extrinsic motivation, two additional seven-point Likert-type scales were used. These items were, “My intentions were influenced primarily by the possibility of helping another student” (label: Motivated by altruism) and “My intentions were influenced primarily by the financial reward” (label: Motivated by reward).

Results

Hypotheses test

Data analysis revealed support for both of our hypotheses.

H1 predicted that the introduction of an incentive would lead to a drop in willingness to perform the advertised behavior. H2 predicted that a subsequent increase in the monetary reward will complete the crowding out of intrinsic motivation, leading to an increase in the willingness to perform the behavior. To test these hypotheses, we conducted a one-way Anova, wherein the level of incentive (no incentive, low incentive, high incentive) was the independent variable and the three behavioral intent scales specified above served as measures of the dependent variable.

Figure 4 shows that the dependent measures follow the pattern predicted by the hypotheses, and suggested by motivation crowding theory. The study respondents in the smaller incentive treatment group were less likely to respond to the advertisement than those who examined the ad with no incentive. The study participants in the larger incentive treatment group were more likely to respond than those in the lower incentive

group. These effects are significant on all three measures of the dependent variable (see Table 1). The Anova means are given in Table 2.

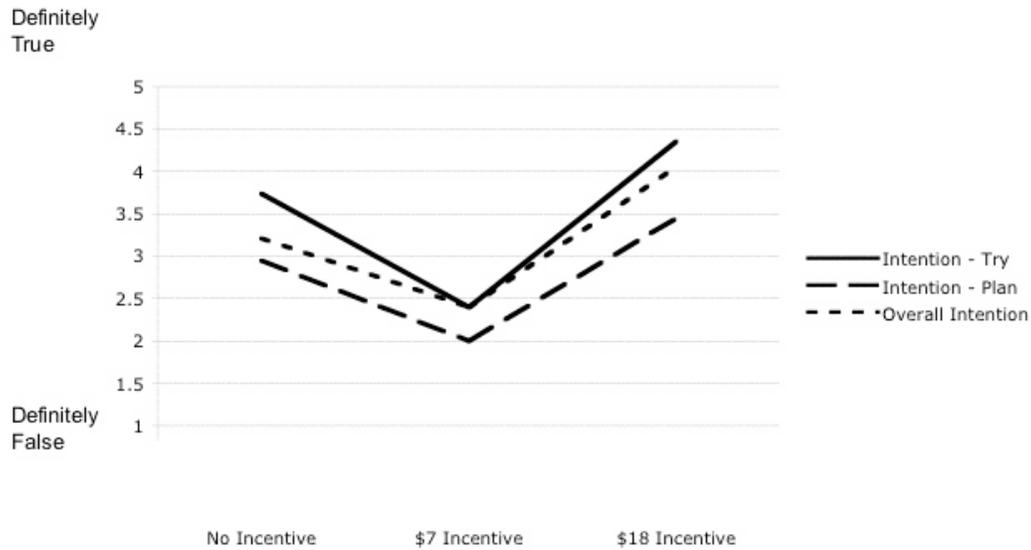


Figure 4. Treatment Group Comparisons Chart on Dependent Variable Measures

Table 1: Results on the one-way Anova test of hypotheses

	F	Sig.
Intention - Try	10.792	.000
Intention - Plan	7.406	.001
Overall Intention	6.411	.003

Table 2: Anova Means table

Experimental condition		Intention-try	Intention - Plan	Overall Intention
No incentive	N=19	3.7368	2.9474	3.2105
Low incentive (seven dollars)	N=20	2.4000	2.0000	2.4000
High incentive (eighteen dollars)	N=20	4.3500	3.4500	4.0500

Process measures

Our contention was that the differences in behavioral intent would be driven by a crowding-out of the intrinsic motivations at the introduction of the extrinsic rewards. If that was true, responses to process measures should have indicated two things. First, that the intrinsic motivations are undermined by the introduction of the reward. Second, that at some point, extrinsic rewards become the primary determinant of the intent to perform the behavior.

Indeed, people in the larger reward condition were significantly more motivated by the extrinsic reward than people in the lower reward condition ($t_{(1,40)} = 2.284$; $M_{\text{larger}} = 5.45$, $M_{\text{lower}} = 3.73$, $p < .001$) (see Figure 5). Considering the significant differences and the direction of means on the behavioral intent measure, this suggests that extrinsic motivation had become the main driver of the intent to perform the behavior.

Consistent with motivation crowding, the direction of the means on the item that assessed the level of intrinsic motivation suggests that when the lower reward is introduced, altruistic motivation decreases (please see Figure 5). Lack of statistical significance on this measure may have been caused by a social desirability effect – respondents might have felt that it is inappropriate to admit that they are not driven by altruistic reasons..

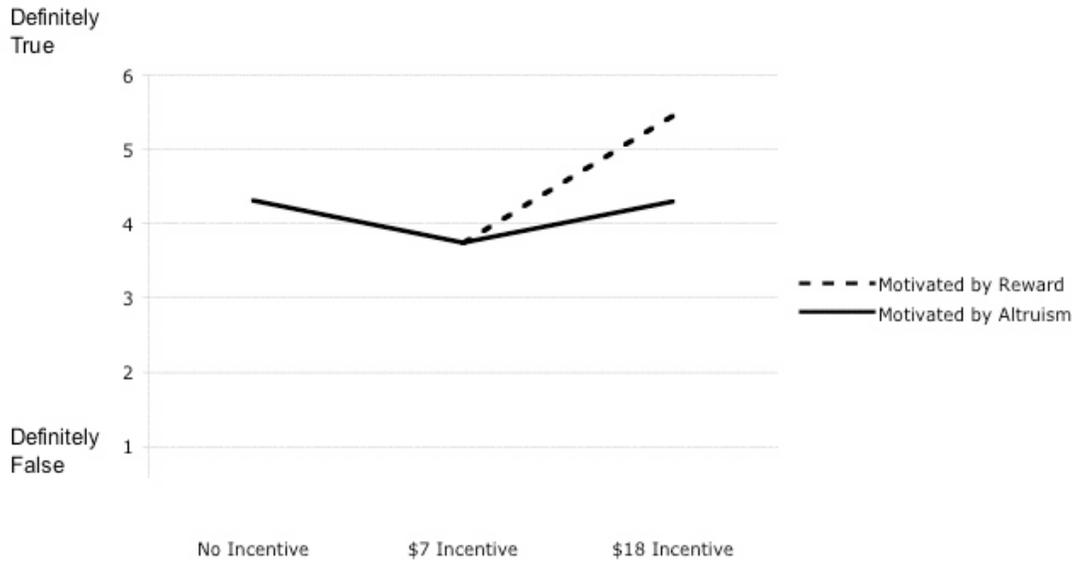


Figure 5. Treatment Group Comparisons Chart on Intrinsic and Extrinsic Motivation

As shown in Table 3, further evidence of a crowding-out effect comes from the subjects’ answers to open-ended questions in which they were asked to explain what drove their decisions. These answers reveal that there are significant differences in the proportion of people who think intrinsic motivation is the only driver of the behavior (intrinsic motivation only) and the proportion of people who think the behavior is exclusively motivated by the extrinsic financial rewards (extrinsic motivation only), across the three experimental conditions ($\chi^2=10.484$, $df=4$, $p<.05$).

Table 3. Cross-tabulation of experimental condition by type of motivation

		Intrinsic only	Extrinsic only	Other answer	Total
group	No incentive	58.8%	10.0%	31.8%	100%
	Low reward (seven dollars)	23.5%	40.0%	36.4%	100%
	High reward (eighteen dollars)	17.6%	50.0%	31.8%	100%

The pattern of percentages is also consistent with the crowding-out effect. In the no incentive condition, almost 60% of respondents believe that such behaviors are intrinsically-motivated, while just 10% think that volunteering is driven exclusively by extrinsic rewards. In the lower and larger reward conditions, the percentage of people believing that volunteerism is driven exclusively by extrinsic motives increases to 40% and 50%, “crowding-out” those who see intrinsic motivation as the only driver.

Discussion and Implications

Much of the contemporary economic thinking is based on the logic that an increase in external (extrinsic) incentives to perform a behavior should lead to increased willingness to perform that behavior. However, motivation crowding theory holds that the offering of certain types of incentives (namely, tangible extrinsic rewards which are promised before the occurrence of the behavior) may actually act to decrease people’s willingness to engage the behavior, by crowding-out the intrinsic motives. In spite of extant empirical evidence for motivation crowding in cognitive and social psychology, we know of no study that has examined the effect in an advertising context.

The present paper offered a first empirical test of motivation crowding in the context of an incentive-based advertising campaign designed to promote volunteerism among students, and examined the psychological processes which underlie this effect.

Results indicate evidence for the effect. Both hypotheses were supported by data. Indeed, recipients of advertising which offers an additional monetary reward were less likely to volunteer than recipients of advertising which offers no monetary reward

(supporting H1). Moreover, results suggest that this is caused by the crowding-out of intrinsic rewards. Indeed, as postulated by the theory, our data show that at higher levels of extrinsic rewards, extrinsic motivation becomes the primary driver of willingness to volunteer (supporting H2).

These results have direct implications for incentive-based advertising. First, they suggest that offering extrinsic monetary rewards may actually decrease people's willingness to respond to the ads, unless the extrinsic rewards are of relatively high value. Given the budgetary constraints of many organizations that are in need of volunteers, financial compensation for voluntary effort is often kept at a minimum; therefore, the offering of material rewards may not be a good strategic option. Second, much of the reviewed experimental work on motivation crowding suggests that once the rewards have been offered, the intrinsic motivation to subsequently volunteer in absence of the extrinsic rewards is significantly diminished. This means that once the organization cannot provide the rewards any longer, it may face lower levels of volunteering than before the rewards were offered in the first place.

The results are important for the realm of commercial advertising as well. Whenever advertisers offer incentives such as rebates, coupons, or other promotional offers, to motivate people to purchase, they base their choices on the assumption that these extrinsic monetary rewards increase consumer response. Our results signal a potential risk that incentives may undermine the effectiveness of these ads, especially when purchase behavior is initially caused by intrinsic motivations (e.g., emotional loyalty to a brand).

Indeed, we see intrinsic motivation extending to the intangible attractiveness of well-established brands. People are emotionally loyal to certain brands and they have intrinsic motivations which result from these feelings. In this regard, we see the inclusion of external incentives in advertising as a threat (motivational crowding) to the intangible and inherent attractiveness of brands. In this sense, offering discounts or rebates for brands that consumers may purchase for intrinsic reasons, may actually be detrimental to the brand, by placing the whole consumer-brand relationship in a materialistic, transactional paradigm where competing brands with better deals can sometimes win.

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