Immediate Rewards Render Activities More Intrinsically Motivating

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Can immediate rewards increase consumers’ intrinsic motivation? Across five studies (N=1125), immediate (vs. delayed) rewards increased intrinsic motivation for activities consumers care about (exercising; visiting museums; reading). This effect is specific to intrinsic (vs. extrinsic) motivation and operates by strengthening the association between an activity and its outcome.

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Eyes on the Prize: When Rewards Hurt vs. Help Motivation
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Paper #1: How “Effort Balancing” Explains Dynamic Effects of Incentives on Motivation
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Paper #2: Donate to Be a Hero: Social Power Moderates the Effect of Incentives on Donation
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Paper #3: Immediate Rewards Render Activities More Intrinsically Motivating
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Paper #4: Journey Takes You Beyond the Destination: The Use of Linguistic Metaphor in Sustaining Post Goal-Attainment Motivation
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SESSION OVERVIEW
Consumers use rewards to increase motivation, and rewards appear to work. Financial incentives successfully help consumers lose weight (John et al. 2011; Volpp et al. 2008a), stop smoking (Volpp et al. 2009), exercise more (Acland and Levy 2015; Charness and Gneezy 2009), and adhere to medication (Volpp et al. 2008b). Indeed, rewards can engender lasting behaviors, such as creating a habit to exercise even after their removal (Charness and Gneezy 2009).

Yet the effect of rewards on motivation is often unclear, as rewards can also hurt goal pursuit by crowding out intrinsic motivation (Deci and Ryan 1985; Lepper and Greene 1978). For example, providing thank-you gifts reduced the amount of money donors gave to charity (Newman and Shen 2012). The body of research presented in this session accordingly explores the nuanced ways in which rewards influence motivation. Across four papers, we investigate when rewards increase versus decrease motivation and, in particular, test effects of rewards on intrinsic motivation and post-reward engagement.

Specifically, the first two papers explore positive effects of rewards on motivation. In the first paper, Goswami and Urminsky show that the effect of rewards on reducing motivation (the crowding out effect) is temporary. Across four studies, they find that a short-term reduction in task engagement following a temporary reward is caused by a desire to balance effortful goal pursuit with the enjoyment of benefits. In the second paper, Yang, Zhang, and Lee, in the context of donating, identify power as a moderator of the effect of rewards on motivation. Four experiments demonstrate that using a journey metaphor associates the rewards from goal attainment with the process of goal pursuit (vs. the outcome), thereby increasing motivation.

These papers explore a classic problem in goal pursuit, how to motivate behavior, and examine underlying processes that shed light on when rewards will increase versus undermine motivation. Further, they explore post reward and post goal attainment motivation, providing practical insights for increasing motivation and goal-congruent behaviors. This session will have broad appeal to scholars interested in incentives, donation behavior, motivation in general, and post goal attainment motivation in particular, as well as connections between these topics.

How “Effort Balancing” Explains Dynamic Effects of Incentives on Motivation

EXTENDED ABSTRACT
Incentives are fundamental to marketing, yet the widespread use of incentives raises potential concerns about the effects on intrinsic motivation. This concern originates with a large and influential literature which argues that conditional incentives can undermine or crowd-out intrinsic task interest, by changing either task perception or beliefs about own preferences (Deci and Ryan 1985; Lepper and Greene 1978). As a result, the change in belief or task perception is predicted to result in a persistent disengagement after incentives end (Deci, Koestner, and Ryan 1999).

Recent research has challenged this long-standing view, finding that the post-incentive reduction in engagement is brief when it occurs and is less likely to occur in highly rewarding situations (e.g., high payment or fun tasks; Goswami and Urminsky 2017). We test an “effort balancing” account, which reconciles previous findings and generates new predictions. In this view, post-incentive changes in task engagement are driven by a psychological desire to balance effortful goal pursuit with enjoyment of benefits. After exerting additional beneficial effort in response to modest external incentives, decision makers will temporarily prefer extra leisure to restore their perceived sense of balance.

In this paper, we test empirically predictions of the Effort-Balancing account that shed light on our understanding of intrinsic motivation. According to this account, to the extent that post-reward behavior is driven by a psychological desire, we expect that this desire can be either heightened or suppressed by situational factors. In a series of controlled experiments, we vary the desire to restore balance by manipulating aspects of the decision environment.

In our experiments, we track trial-by-trial engagement in an incentivized task before and even after rewards have ended. Participants make a series of choices between 30-second tasks, either a beneficial work task (a math problem) or a leisure task (watching a video). Repeated choices were grouped into three rounds – pre-incentive, during incentive, and post-incentive. Participants in the incentive condition were informed of the amount and duration of the incentive (e.g., 5 cents per correct answer for the next 10 tasks) at the beginning of the incentive round.

In Study 1 (N=437), we exogenously varied the effort exerted when rewards were available by having the computer assign the tasks in each round using a 2(reward, no-reward) x 2(effort-level in round
2: low, high) design. We hypothesized that the reward group required to exert more effort would have a heightened desire to restore balance compared to the reward group required to exert low effort, and this would manifest as a greater reduction in engagement after the rewards end, but would last only momentarily. Online participants chose the math task 63% of the time in the pre-incentive period. Immediately after the incentive ended, 51% of the online participants in the low-effort reward group chose to do the math task, compared to 41% in the high-effort reward group ($p=.009$ hierarchical regression, controlling for individual choices in round 1). However, the overall engagement with the math task recovered quickly, and overall round 3 there was no difference between the two groups (low-effort: 58% vs. high-effort: 54%), and both were similar to the no-reward controls, replicating the momentary nature of post-reward task disengagement.

In Study 2 (N=702), we used a 2(reward, no-reward) x 2(pre-incentive experience vs. no pre-incentive experience) design to test the self-perception alternative account directly. If participants make inferences about their preferences from their own past behavior, they would be more sensitive to incentives when they have not already had a non-incentivized experience of choosing the task. However, we found no effect of prior experience. In the first choice after the incentive ended, a similar proportion of participants in the reward groups chose to do the math task in the two-round (no pre-incentive experience) and three-round conditions (63% and 56% respectively; difference $p=.12$). Overall, there was no difference in the average choices of the incentivized task during the entire post-incentive round (no pre-incentive experience: 65% vs. pre-incentive experience: 61%), consistent with the effort-balancing account, rather than self-perception.

Based on the motivational role of pride on perseverance (Williams and DeSteno 2008), we hypothesized that reflecting on task performance could reduce the psychological desire for leisure. In Study 3 (N=217), we added a second incentive condition in which we prompted participants to reflect upon and take pride in their effort, before they began their post-incentive round. After the incentive ended, the pride-reflection group chose to do the math task 75% of the time, similar to the non-incentive control group (74%) and marginally more than the no-intervention reward group (56%; $p=.065$).

In Study 4 (N=134), we distinguish between effort-balancing and depletion. We tested whether the reduction in post-incentive engagement is mitigated when choosing between leisure and a novel effort task. After the incentivized math-tasks ended, participants chose between videos and a similarly effortful verbal-spelling task. Compared to the control (65%), there was no reduction in engagement immediately after the rewards ended (63%; $p=.38$), or in the entire post-reward period (reward 41% vs. control 46%, n.s.). This demonstrates that incentivizing a specific beneficial effort does not reduce engagement with other types of beneficial effort, contained in a different mental account. From a practical standpoint, this suggests that marketers promoting healthy purchase using discounts are unlikely to see even a temporary reduction in consumers’ motivation to buy other products from that brand after the promotion ends.

Taken together, our research replicates the temporary post-incentive reduction in task-engagement, due to a temporary desire for a break to balance effort and leisure after exerting extra effort for the incentive. We rule out depletion and self-perception as alternative accounts. The temporary reduction in engagement is mitigated when people exert less effort, take pride in their accomplishment, or make choices involving novel tasks.

**Donate to Be a Hero: Social Power Moderates the Effect of Incentives on Donation**

**EXTENDED ABSTRACT**

Early in the 1970’s, Titmuss (1970) pointed out that providing incentives to blood donors might create an unintended effect of reducing blood supply. Later research confirms his projection, showing that the provision of extrinsic rewards could, in fact, undermine the intrinsic motive to help, thus leading to a reduction of altruistic behaviors (Deci, Koestner, and Ryan 1999; Deci and Ryan 1975; Gneezy and Rustichini 2000). Offering incentives also dilutes the signaling value of a donation behavior and makes it difficult to judge whether the donor is really trying to do good to others (Ariely, Bracha, and Meier 2009).

However, there is also research showing the opposite. For example, research finds that the introduction of monetary incentives in the market for live and cadaveric organ donations increases the supply of organs for transplant sufficiently to eliminate the very large queues in organ markets (Becker and Elias 2007). Thus, there is an unresolved inconsistency in the findings on the effect of incentives on donation behavior. Although we know much about why incentives reduce donation, we know very little about when and who are more likely to be affected by the unintended consequence of incentives. In this research, we study one important moderator of the effect of providing incentives, namely, perceived social power.

Social power is typically defined as asymmetric control over valued resources in a social relationship (Galinsky, Rucker, and Magee 2015). In this research, we suggest that perceived social power increases one’s donation tendency when the donation is framed as a pure pro-social action. Emotional satisfaction, the enjoyment of enhancement of self-esteem and demonstration of competence, is recognized as one of the major self-based motives behind donations (Andreoni 1990; Batson and Powell 2003). We suggest that powerful individuals are interested in creating a heroic and noble self-image and anticipate a stronger emotional satisfaction when thinking about the act of donation. The feelings of self-satisfaction largely come from the fact that the act of donation demonstrates one’s competence, one of powerful individuals’ biggest advantages, in positively affecting the recipient’s life. This implies that the positive effect of power on donation behavior will disappear, and sometimes even backfire, when incentives are offered. The effect of incentives on powerless individuals, however, can be very different. Donation generates less emotional satisfaction among powerless individuals who are still struggling with getting control over their life and environment. Thus, they are predicted to be less interested in making positive impacts on others and experiencing the emotional satisfaction derived from such prosocial actions. This also implies that self-benefiting incentives would have a positive effect on the powerless individuals.

We tested these predictions in three experiments. In Experiment 1, we manipulated whether monetary incentives were provided for a hair donation decision. Participants first were asked to recall an experience that they felt powerful or powerless. Next, the experimenter introduced to participants a charitable organization “Wigs for Kids” and presented himself as a volunteer from this organization. The experimenter then explained that the organization makes wigs with donors’ hair for kids suffering from hair loss due to cancer. Then participants were randomly asked to read one of two advertisements. The two advertisements were identical except that one offered a monetary incentive. The headline for the no-payment conditions read “Donate Your Hair”, whereas the one for the with-payment conditions read, “Donate Your Hair, Get $20 Compensation”. Afterwards, participants were asked to leave their names, emails and
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cellphone numbers if they were willing to donate. Because such incentives would make one’s donation behavior seem selfish and consequently stop people from deriving emotional satisfaction about themselves, we reasoned that incentives would reduce powerful individual’s donation tendency. We also expect that incentives would increase powerless individual’s donation tendency because it provides a tangible benefit for donation. As expected, offering $20 reduced powerful participants’ donation percentage from (48.7%) to (17.1%), χ^2(1) = 9.12, p = .003, whereas offering $20 significantly increased powerless participants’ donation percentage from 17.5% to 48.7%, χ^2(1) = 8.72, p = .003.

Self-benefitting incentives can also be non-monetary. For example, some organ-donation organizations try to persuade people to donate by arguing that donors enjoy the benefit of being able to continue living after death in another way. Experiment 2 adopted a non-monetary incentive in the design. To manipulate power, we had participants imagine that they were a boss or an employee. Participants then moved onto an ostensibly unrelated study which asked for their opinions about a cornea donation advertisement. They were randomly assigned to read one of two advertisements. One advertisement used a tagline of “donate your cornea”, and the other “donate your cornea to continue to see the world”. A pretest shows that the second advertisement highlighted more benefits to donors. Afterwards, participants indicated the extent to which they were willing to donate and how likely they would donate cornea after they passed away on 0 (very unwilling/unlikely) to 10 (very willing/likely) scales. A 2 (Power) x 2 (Incentive) ANOVA on donation intention returned a significant interaction between power and advertisement type, F(1, 194) = 4.35, p = .038, n^2 = .022. Again, powerful participants showed a greater donation intention for the without-incentive advertisement (M = 5.68, SD = 2.50) than for the with-incentive advertisement (M = 4.84, SD = 3.23), F(1, 194) = 2.10, p = .149, but it caused an opposite effect among powerless participants (M = 4.69, SD = 3.14) for the without-incentive advertisement and (M = 5.52, SD = 2.34) for the with-incentive advertisement), F(1, 194) = 2.25, p = .135.

In experiment 3, we measured, instead of manipulated, power, and replicated our findings. This suggests that the interactive effect of power and incentives on donation does not hinges on the activation of the power concept.

Taken together, three experiments provide corroborative evidence that offering self-benefitting incentives reduces powerful individuals’ donation intention but increases powerless individuals’ donation intention. Thus, the research sheds light on when and how to tend to be negatively affected by self-benefitting incentives in prosocial decisions.

**Immediate Rewards Render Activities More Intrinsically Motivating**

**EXTENDED ABSTRACT**

Can an immediate, extrinsic reward make exercising feel more like playing? Whereas prior research documented that extrinsic rewards crowd out intrinsic motivation (Deci and Ryan 1985; Lepper, Greene, and Nisbett 1973), we hypothesize that receiving an immediate (vs. delayed) reward can increase intrinsic motivation for activities consumers care about pursuing (e.g., exercising; visiting museums; reading). We predict that immediate rewards foster intrinsic motivation by strengthening the temporal association between an activity and its outcome, such that the activity becomes “an end in itself” (Kruglanski et al. 2013).

Most activities that consumers pursue offer both intrinsic and extrinsic rewards to some degree. At the gym, for example, intrinsic rewards include “having an enjoyable workout” and extrinsic rewards are external to a task, such as “losing weight” or “improving one’s health” (Woolley and Fishbach 2016). An activity is intrinsically motivated to the extent that it is experienced as internally derived and the activity serves as an end in itself rather than as a means to another end (Fishbach and Choi 2012; Heath 1999).

Across five studies (N=1125), we explore whether immediate rewards, which increase the temporal activity-outcome association, render the experience of pursuing an activity as more intrinsically motivated—an end in itself. We explore this basic effect, as well as the possibility that immediate rewards increase intrinsic—but not extrinsic—motivation, that they do so by strengthening the association between the ends (outcome) and means (activity), and that only the timing of reward delivery matters for intrinsic motivation, whereas the size of the reward does not.

In Study 1, participants read rewards people receive from exercising and visiting a museum and indicated whether each activity was more similar to playing (intrinsic) or working (extrinsic). We framed rewards as arriving during the activity (immediate) or after the activity (delayed). For example, “Exercise that feels enjoyable [while/after] I do it.” As predicted, participants perceived exercising as more intrinsically motivated in the immediate (vs. delayed) condition, t(87) = 2.51, p = .012. Similarly, participants perceived a museum visit as more intrinsically motivated (i.e., more similar to playing) in the immediate (vs. delayed) condition, t(98) = 2.19, p = .031. Thus, immediate (vs. delayed) rewards lead people to perceive exercising and visiting a museum as more intrinsically motivating.

In Study 2 participants completed an experimental task in exchange for chocolate. Participants received chocolate and the task simultaneously (immediate-condition) or learned they would receive chocolate after completing the task. We measured intrinsic motivation to pursue the experimental task using a four-item scale (enjoyable; interesting; more like fun; future interest; see Ryan 1982). As predicted, an immediate reward rendered an experimental task as more intrinsically motivated compared with a delayed reward, t(99) = 2.57, p = .012.

Study 3 tested whether an immediate delivery of an extrinsic financial incentive increases intrinsic motivation, and also added a no reward control group. Participants read a book excerpt in return for payment. In addition, they expected to receive an immediate bonus ($1.00 now) a delayed bonus ($1.00 in a month) or no bonus. As in Study 2, we measured the intrinsic experience of reading, and included a behavioral measure, examining participants’ task selection during a free choice period absent a reward (Etkin 2016). As predicted, an immediate bonus increased the intrinsic experience of reading compared with control conditions (delayed and no bonus), F(1, 184) = 4.03, p = .045, with no difference between the control conditions, χ^2(1, 124) = .51, p = .477. In a follow up study, we examined temporal discounting as an alternative explanation, and find that the effect is driven by differences in reward timing, rather than reward magnitude.

Study 4 examined the specificity of the effect of immediate rewards on motivation to better understand the underlying process. Participants viewed a product advertisement that described an immediate arrival of rewards from using moisturizer (immediate-reward condition) or did not mention timing of rewards (delayed-reward condition). We measured intrinsic motivation to use the moisturizer
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(Enjoyable, positive experience) and extrinsic motivation (important, useful). As predicted, moisturizer use was more intrinsically motivated in the immediate versus delayed reward condition, t(198) = 2.45, p = .015, with no effect of timing on extrinsic motivation, t(198) = .25, p = .800.

To examine the process, Study 5 tested whether immediate rewards increase intrinsic motivation by strengthening the activity-outcome association. As in Study 4, participants viewed an advertisement for a moisturizer (immediate vs. delayed reward) and completed intrinsic and extrinsic measures. To capture the degree of overlap between the activity (using moisturizer) and the outcome (smooth skin), we created seven pairs of circles that overlapped to different degrees, from completely separate to very overlapped (Aron et al. 1992). Replicating Study 4, using moisturizer was more intrinsically motivated in the immediate (vs. delayed) condition, t(199) = 3.63, p < .001, with no effect for extrinsic motivation, t(199) = .69, p = .493. Further, participants reported greater overlap between moisturizer and smooth skin in the immediate (vs. delayed) condition, t(199) = 3.69, p < .001. The increased association between moisturizer and smooth skin mediated the effect of immediacy on intrinsic motivation (βmed = .15, SE = .06; 95% CI [.05, .30]).

Overall, we provide evidence that immediate rewards increase the intrinsic experience of activity pursuit. Our research suggests marketers can harness immediate rewards to increase the intrinsic experience of activity engagement, with implications for increased persistence. For example, airlines can offer promotions to customers immediately after a flight, potentially increasing customers’ intrinsic experience of using their airline.

Journey Takes You Beyond the Destination: The Use of Linguistic Metaphor in Sustaining Post Goal-Attainment Motivation

EXTENDED ABSTRACT

People pursue goals throughout their lives. Students attend study groups to excel in school, and dieters count calories and monitor portion sizes to lose weight. While some of these pursuits may end with failure, many end with success—the goal is attained. However, despite the frequent occurrence of goal attainment experiences, prior literature remains relatively silent on what happens after a goal has been attained. Attaining a goal implies that one can now disengage from actions directed at achieving this goal (Ferguson and Bargh 2004; Forster, Liberman, and Higgins 2005). This post-attainment disengagement could be detrimental, however, as goal-congruent behaviors could be beneficial by themselves. Consider, for instance, those who achieved a weight-loss goal but begin eating poorly again, or students who completed their education but stop learning. As predicted, the students who used the journey (vs. destination) metaphor derived greater meaning, which led to greater goal as a check. The text then invited those in the journey [destination] condition to take a moment to: “…see yourself actually working [actually attaining this goal], taking the necessary steps during this journey [reaching this final destination], and have this picture in your mind.” In Pilot Study A, participants received additional text prompts to enhance the effectiveness of linguistic metaphor, e.g., to think about the steps they took during the journey [vs. what reaching this destination is like for them]. In Study B, participants received additional visual aid instead of text prompt; they saw a picture of a black-and-white country road with the word Journey [Destination] highlighted at the beginning [ending] part of the road. Following procedures in metaphor literature, participants in the control condition did not do any metaphor practice. The results of both studies showed that the journey metaphor stimuli successfully enhanced perceived continuity from the original goal-initiation state (i.e., who they were when they first started pursuing this goal) to the goal-attainment state; that is, the stimuli we designed indeed guided participants to adopt a journey (vs. no or destination) metaphor as intended (Landau, Meier, and Keefer 2010; Landau, Sullivan, and Greenberg 2009). We also ruled out alternative accounts such as perceived difficulty, effort, goal value, visualization vividness, and mood effects.

Next, Study 1 used linguistic metaphor to test its effect on executives who have successfully achieved a learning goal (applying business education to improve their corporate practices) in an executive program in Africa. Three on-site interviewees executed a 30-minute individually-guided thought practice (journey vs. destination metaphor) during the graduation ceremony. The content of the thought practice was transcribed and emailed to the participants. A cohort was excluded from this practice to serve as a control group. Six months after graduation, executives received the follow-up survey from the program and reported their goal-congruent behaviors in the past six months, e.g., “I have made changes to my supply chain that will help my company scale.” Executives who described their goal attainment experience as a journey were more likely to continue goal-congruent behaviors after completing the program, comparing to not having metaphor or using a destination metaphor (the latter two groups did not differ).

Study 2 replicated the findings in Study 1 with a different group of goal achievers—dieters who have recently attained a fitness goal. In addition, we included a future-journey condition to rule out construal level as an alternative account. Three hundred dieters wrote about the fitness goal they recently attained, went through the same manipulation check, and then proceeded with the linguistic metaphor thought practice (journey vs. destination vs. future-journey). Those in the future-journey condition were asked to visualize themselves continue working for this fitness goal in the future, “to see yourself actually working, taking the necessary steps to continue this journey, and have this picture in your mind.” The results revealed that participants in the journey condition were more motivated to continue goal-congruent actions than those in the destination and future-journey conditions (the latter two groups did not differ). Further, follow-up survey on actual behaviors after two weeks revealed the same pattern.

Next, Study 3 examined the driving role of meaning among students who recently completed an academic goal. College students were assigned to either a journey or destination metaphor condition to describe their goal attainment experience and the actions they took. They then reported their desire to continue these goal-congruent behaviors, as well as the meaning they derived from the completed pursuit. As predicted, the students who used the journey (vs. destination) metaphor derived greater meaning, which led to greater...
willingness to continue taking goal-congruent actions (mediational path index = .0801, 95% CI = .0115 to .1994).

Lastly, Study 4 employed a Metaphor (journey vs. destination) × Goal Initiation (autonomous vs. imposed) design among college students who recently completed an academic goal. We obtained our hypothesized effect of journey (vs. destination) metaphor among students who achieved the academic goals they autonomously adopted for themselves, but not for those who achieved the academic goals others imposed on them. This finding provided further support that the impact of metaphor on goal-congruent behavior occurred by providing meaning; when the achieved goals were imposed by others, the meaning one could derive is limited, rendering the journey metaphor less effective. The results are discussed in light of extant research on goal pursuit, metaphor, and meaning.

REFERENCES


