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Indulgence as self-reward for prior shopping restraint: A justification-based mechanism☆

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Abstract

This research investigates the effects of refraining from a purchase temptation at one point in time on choices made at a subsequent opportunity to purchase or consume a tempting product. Four experiments involving scenarios and real decisions demonstrate that the salience of restraint at a prior impulse buying opportunity causes consumers to reward themselves subsequently by choosing indulgence over non-indulgence. We show that indulgence is likely to increase only when prior restraint is salient and hence can be used as a justification. As expected, an index of reasons for vs. against buying mediates the relationship between prior impulse purchase decision and indulgent choice. In further support of the mechanism, we find that prior indulgence can have the same effect as prior restraint, if the prior indulgence is made justifiable. Finally, we show that prior shopping restraint can increase indulgence without a corresponding increase in self-esteem. These findings extend our understanding of self-regulation and demonstrate that everyday consumer decisions such as responses to impulse buying opportunities can have consequential downstream effects.

Consumers often have to make a series of purchase decisions in the face of temptations. For example, consumers make multiple, sequential purchase decisions when shopping from catalogs and websites. These decisions include whether to give in to a temptation and purchase products in categories that they had not intended to, or whether to hold back and stick to the shopping list. In the world of brick-and-mortar, consumers may splurge on some books at a bookstore in a mall and then have to make a decision on what snack to eat at the food court. Despite the ubiquity of such moment-to-moment activity, extant research on purchasing behavior has concentrated on one-time brand choice and purchase quantity decisions, often in situations where purchases are intended. However, decisions made at one point in time, even if seemingly irrelevant, may carry over to influence subsequent decisions. Consumer researchers have only recently begun to examine such sequences of decisions (Dhar, Huber, & Khan, 2007; Dholakia, Gopinath, & Bagozzi, 2005; Mukhopadhyay, Sengupta & Ramanathan, 2008). This research adds to this literature by investigating the effects of refraining from a purchase temptation on decisions to purchase or consume a different tempting product at a subsequent opportunity.

Temptations have been formally defined as "momentary allurements" that threaten a currently active goal (Fishbach, Friedman, & Kruglanski, 2003). In a purchasing context, this implicates situations of impulse buying (Stern, 1962) where consumers do not have a goal of purchasing a specific product but may well have an overarching goal of wealth maintenance (Hirschman, 1990; Wärneryd, 1999). Our main hypothesis is that a salient memory of restraint in the face of such temptation sanctions consumers to reward themselves when a subsequent temptation presents itself. We review the literature and derive our hypotheses below.

Theoretical framework

We propose that consumers who refrain from an impulse purchase at a point in time are more likely to make an indulgent

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choice at a later point in time, provided the prior shopping restraint is made salient. Moreover, we propose that this is because salience of prior restraint allows consumers to justify their indulgence (e.g., "I deserve to treat myself because I behaved so well before."). Our conceptual framework is shown in Fig. 1.

Hypotheses development

Justification and indulgence

Prior literature has validated the importance of justification on choice and has shown that people are more likely to make a choice or draw a conclusion that can be easily justified (e.g., Shafir, 1993; Shafir, Simonson, & Tversky, 1993; Tetlock and Boettger, 1989). Indeed, much research has implicated a justification mechanism as that underlying indulgence (Fishbach & Dhar, 2005; Kivetz & Simonson, 2002; Kivetz & Zheng, 2006). Kivetz and Simonson (2002) tested the proposition that increasing the effort required in a loyalty program made consumers more likely to choose a luxury rather than a necessity as a reward. Participants preferred a luxury reward (e.g., a massage) over a utilitarian reward (e.g., credit toward grocery purchases) of equal value when program requirements were high (vs. low) but only if the program was work-related. The authors conclude from these and other results—such as the finding that preference for luxuries is greater among consumers who are more likely to feel guilt about indulgence—that effort helps justify the guilt associated with choosing indulgences vs. necessities. The notion that the likelihood of indulgence can be increased if the guilt associated with indulgence is decreased is also found in the work of Strahilevitz and Myers (1998) who demonstrated that charity incentives are more effective in promoting luxury, rather than necessity, products. Luxury consumption is presumed to evoke guilt whereas donation to charity is likely to reduce guilt. Mick and Faure (1998) also propose a similar justification-based account for self-gifting based on the finding that participants are more willing to self-gift when they have recently experienced success and attribute this success to themselves.

Other work on windfall gains (Arkes et al., 1994) supports the notion that indulgence is instigated by the availability of a justification cue (O'Curry 1999). O'Curry and Strahilevitz (2001) suggest that acquiring a hedonic good (a windfall gain) is likely to evoke less guilt than spending income on this good and show that hedonic options are more likely to be chosen as a lottery prize than as a purchase option. Presumably, norms concerning disposal of windfall gains provide a justification for indulgence in this context. Fishbach and Dhar (2005) provide a goal-based account for indulgence where perceptions of goal progress liberate individuals to pursue inconsistent goals. For example, perceptions of progress toward academic goals allowed people to choose to hang out with friends and anticipated progress toward a fitness goal increased likelihood of indulgence in tasty yet fatty food. Finally, Louro, Pieters, and Zeelenberg (2007) show that perceived goal progress liberates people to pursue alternative goals, but only when the focal goal is close. Again, progress towards a goal, as exemplified by shopping restraint given a goal of not spending money, can help justify subsequent deviation such as self-reward.

Shopping restraint

In sum, prior research has demonstrated that justifiability has a robust effect on preference and choice. This study goes further, by showing that shopping restraint itself can act as a justification to make a subsequent indulgent choice. Further, the existing literature on justification-based choice has examined choices in general, and this paper extends this literature by focusing on determinants of a specific type of choice—namely, an indulgent choice.

Most people have a goal of not spending money unnecessarily (Hirschman, 1990; Wärneryd, 1999). In an unplanned shopping situation, an impulsive decision to buy goes against this generally salient goal. In contrast, not succumbing to an impulse buying temptation can be viewed as goal progress. In such a case, as Louro et al. (2007) propose, prior shopping restraint can justify subsequent indulgence. Support for this proposition also comes from Mick and DeMoss (1990) who found that respondents who rewarded themselves with an indulgence did so because they thought they "deserved" it. In their qualitative research, consumers reported feeling "proud" and "satisfied" before the acquisition of the self-gift and reported feeling "in control." This suggests that the act of subsequently rewarding themselves with a gift that was usually

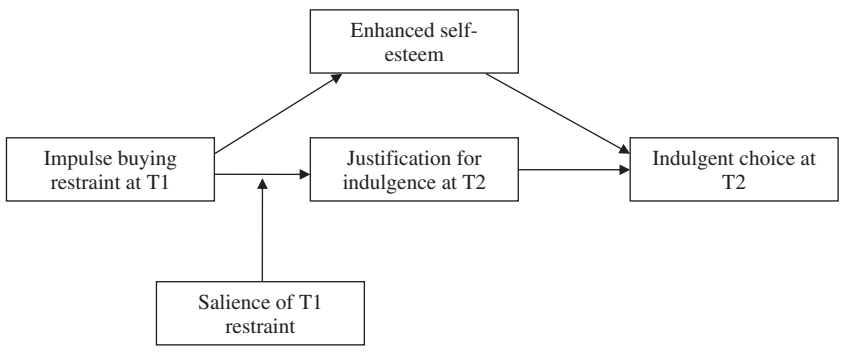

Fig. 1. Conceptual framework.

hedonic in nature was a conscious process propelled by the ability to justify the indulgence.

Salience of prior restraint

The fact that this proposed mechanism is a conscious one has important implications. First and foremost, it requires that the consumer make a connection between the shopping restraint and the subsequent indulgent choice. In other words, we predict that the above process will only occur if the two choices are bracketed together. Bracketing of the two episodes ensures that the time 1 decision and its attendant cognitions are cued again at time 2. As Read, Loewenstein, and Rabin (1999) discuss, choices may be bracketed temporally, physically, or relationally (with T2 cueing T1 in some way). In our context, this implies that the T2 indulgent choice need not follow immediately after the T1 shopping restraint. Indeed, all that our model requires is that the T1 decision be salient. Therefore, as an important corollary, we predict that salience of the prior restraint will moderate the effect of restraint on indulgence.

Alternate processes

Besides the justification-based account elucidated above, an independent explanation proposed in the literature for the relationship between virtuous choice at T1 and indulgent choice at T2 is that the virtuous choice boosts self-esteem, which makes indulgent choice more likely. Recently Khan and Dhar (2006) have argued that altruistic acts liberate people to behave indulgently. They suggest that the mechanism underlying this effect is a boost in self-concept. In support of the proposed mechanism, Khan and Dhar (2006) show that "license condition" participants who think of performing an altruistic task (choosing a charity to volunteer at) are more likely than control participants to rate themselves more positively on dimensions such compassion and warmth. These self-assessments in turn mediate the relationship between licensing behavior and self-reward. These authors also show that the licensing effect does not occur if the licensing behavior is attributed to external causes, suggesting that the self has to be implicated in choosing the licensing behavior in order for the effect to obtain. The authors interpret these effects as evidence of a boost in self-concept mediating the effect of time 1 behavior on time 2 choice and argue that this effect occurs below conscious awareness.

This conceptualization is similar to that of Monin and Miller (2001) who showed that establishing credentials as a non-prejudiced person allows people to express attitudes that could be viewed as prejudiced. A typical study concerns the choice of a minority candidate for a job, followed by the preference for a negatively stereotyped applicant. Self-signaling of non-prejudice occurs even when it is not warranted, such as when the minority candidate was indeed the best qualified candidate for the job. These authors also implicate affirmation of one's self-image (as a non-prejudiced person) to oneself as a mechanism by which these prejudice-sanctioning effects occur. These effects also appear to operate below conscious awareness.

It is important to note that theories of cognitive dissonance cannot account for these propositions. Dissonance reduction processes would predict that the behavior at time 2 would be the same as that at time 1. This is because regardless of the behavior at time 1, attitudes would be revised in line with the behavior thereby ensuring consistency. Other streams of literature also contradict our proposition that shopping restraint at T1 can increase indulgence at T2. For example, the shopping momentum effect (Dhar et al., 2007) suggests that an initial act of restraint leads to more restraint later on. In contrast, we argue that if memory of prior restraint is salient, consumers may indulge themselves through a reasoned process of self-reward.

Summary and hypotheses

Impulse purchases are a common marketing situation where the decision made to buy or refrain from buying could have implications for future indulgence. In an unplanned shopping situation, not succumbing to temptation represents goal progress, and can therefore justify indulgence. Such indulgence can take the form of choosing to purchase or consume hedonic products or "vices" (as opposed to utilitarian products or "virtues"). In general, purchase or consumption of vices is harder to justify than that of virtues (Okada, 2005) and provision of an external justification (such as prior restraint) should increase the likelihood of indulging in vices (but should not affect virtues). Therefore, we predict that consumers are more likely to make an indulgent purchase when prior restraint from (vs. giving in to) an indulgent purchase is salient.

Four experiments test this hypothesis in different ways. Experiments 1 and 2 directly test it by showing that choices of indulgence are greater for prior no-buy than for prior buy decisions, and this effect obtains only when past shopping restraint is salient. Experiment 3 further tests the underlying justification process by showing that the effects can be reversed such that prior indulgence can lead to greater indulgence at time 2 if prior indulgence is framed as virtuous and hence provides justification for time 2 indulgence. Experiment 4 simultaneously investigates the justification and self-esteem based processes presumed to underlie indulgence.

Our contribution is four-fold. First, we broaden the study of self-rewards in marketing contexts from specific situations such as loyalty programs and charity donations to the more generalized context of unplanned buying opportunities—a situation that most consumers face multiple times every day. Second, we bring together existing work that implicates self-concepts and justifications in self-reward, by showing how both processes may independently have the effect of instigating self-reward. Third, we demonstrate that indulgence is intentional but does not have to be premeditated—a temptation could cue a justification and as long as the justification is accessible, consumers may give in and indulge. Finally, we show that it is not always acts of commission (e.g., volunteering, going to the gym) that engender indulgence; it could also be acts of omission, as long as they contribute to goal pursuit. The salience of prior shopping restraint operates as a trigger that consumers use to sanction themselves to indulge.

Experiment 1—self-reward for prior restraint

Overview and design

The goal of this experiment was to demonstrate the self-reward phenomenon in the purchasing context where consumers give in vs. refrain from buying at time 1 (manipulated) and are then faced with the possibility of buying an indulgent or functional product. This experiment was a 2 (Decision at T1: Buy vs. Not buy)×2 (Salience of T1 decision: Baseline vs. Heightened)×2 (Nature of product at T2: Indulgent vs. Non-indulgent) between-subjects design with random assignment. Our justification hypothesis predicts purchase of an indulgent product at time 2 is likely to be greater when the time 1 decision was to not buy vs. to buy, but only when the time 1 decision is salient. Justification is not easy when the time 1 decision is not salient (and is therefore not accessible); hence, in this case, purchase of a indulgent product at time 2 should not differ based on time 1 decision (buy vs. no buy). Purchase of a non-indulgent product should not be affected by time 1 buying decision because additional justification is not needed in this case.

Pretest—stimulus development

We first identified and created attractive offers on products that are either indulgent or non-indulgent, within each of two product categories, books and software. Three hundred and twenty-four students at a large Northeastern university rated several different offers on various types of books and software packages on their overall attractiveness, how valuable the product was in the short- and the long-term, whether using the product was prudent and far-sighted or self-indulgent and near-sighted, and on the extent to which the product satisfied the goals of education and entertainment (all on 7-point scales). Eight distinct offer packages were selected for use in this experiment, based on three criteria. First, all selected offers were rated equally attractive (but not extremely attractive, $M=4.26$, as that might render the purchase decision trivial). Second, within a category, all offers were equated on price, with price points chosen within the discretionary budget of the student sample ($55 discounted down to $29.95 for books and $45 discounted down to $19.95 for software). Third, those products that were seen as more valuable in the long than in the short run (average long- vs. short-term value within books Ms=4.85 vs. 4.41, $F(1, 323)=15.07$, $p<.001$; Ms=5.05 vs. 4.63, $F(1, 323)=9.39$, $p<.01$ within software) were selected as non-indulgent products. Correspondingly, those products that were seen as more valuable in the short- than in the long-term (average short- vs. long-term value within books Ms=3.71 vs. 2.99, $F(1, 323)=28.29$, $p<.001$; Ms=3.67 vs. 2.88, $F(1, 323)=20.05$, $p<.001$ within software)[1] were selected as indulgent products. We also ensured that non-indulgent [indulgent] products were seen as more [less] prudent than indulgent and satisfied the goal of education more [less] than they did entertainment. The non-indulgent products selected were: (1) science and business books, (2) biographies and math books, (3) foreign language tutoring software, and (4) computer language tutoring software. The indulgent products were: (1) comic books and celebrity biographies, (2) pulp fiction bestsellers, (3) video game software, and (4) personal hobby software.

Method

Three hundred and thirty-three students were recruited at a large Northeastern university by means of flyers put up around campus. On arrival at the experimental venue, they were presented with a packet of ostensibly unrelated studies. The experiment was presented as two scenarios (described below) separated by an unrelated filler task. The first scenario manipulated the T1 decision, while the second presented the T2 decision and key dependent variables. Participants were directed to individual workstations where they responded to the stimuli at their own pace. Upon completion, they were paid, thanked, and debriefed.

All respondents were presented with an impulse buying scenario wherein they came across an attractive sale on books (the indulgent books) as they were killing time in a mall, waiting for a friend. In order to disguise the task, allow for heterogeneity in preferences, and guard against the lone alternative bias, the temptation was presented as a choice between two equally attractive offers as pre-tested. After being shown the scenario and product descriptions, respondents were told that they had either bought or not bought the books at this sale. This procedure randomly assigned the decision at T1 as part of the experimental set-up (Arkes, Kung, & Hutzel, 2002), thereby avoiding self-selection. Then, to better approximate the decision process, respondents were asked to generate reasons supporting their "decision" in as much detail as possible. In sum, the forcing of the T1 decision followed by the thought generation process aimed to experimentally simulate an actual purchase decision (Robinson & Clore, 2001).

A filler task lasting approximately 15 min followed the simulation of the T1 decision. Respondents in the baseline salience condition were then presented with the T2 scenario and purchase opportunity (product category: software). In order to maintain relational bracketing (Read et al., 1999), the T2 scenario was set at the same mall the following weekend, where participants had ostensibly gone for a movie. Half the participants chose between two indulgent software products and the other half chose between two non-indulgent software products. They were also given the option of passing on both. In the heightened salience condition, following the filler, respondents were reminded of the T1 decision and asked to recall it in as much detail as possible. The T2 software purchase decision was presented immediately after this task.

The principal dependent variables in the experiment were the proportion deciding to buy at T2 and the propensity to buy at T2 measured on a 100-point allocation task. Participants were then

[1] Note that participants in this experiment chose between two indulgent products or two non-indulgent products as explained later, and not between an indulgent and a non-indulgent product. Hence, it was important to keep the relative long vs. short term value equation within indulgent and non-indulgent products rather than across indulgent and non-indulgent products.

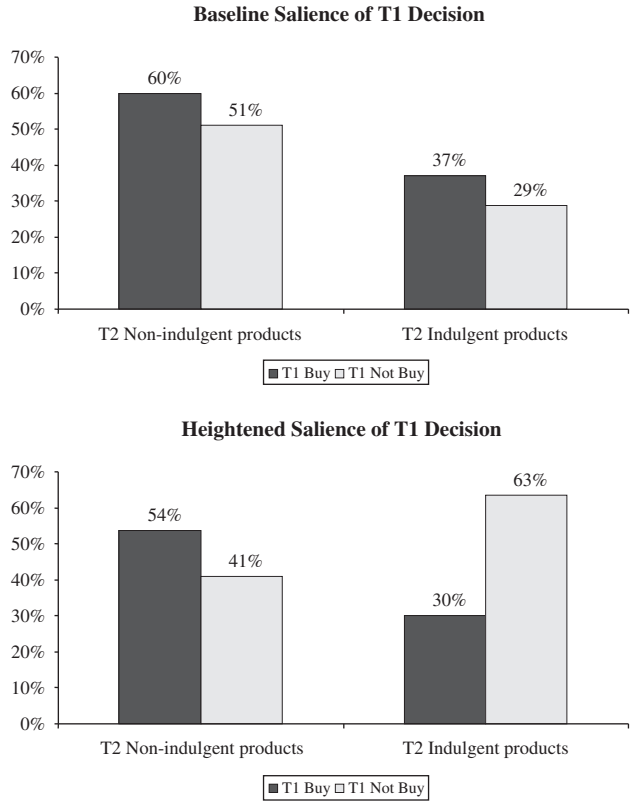

Fig. 2. Experiment 1: proportions choosing to buy at time 2.

presented with a list of 20 items, purportedly reactions from participants in a previous experiment, and asked to indicate which of these reflected thoughts that they had. The items either opposed or supported buying (e.g., "I have already spent some money that I hadn't planned on spending," and, "I have already spent some money, so—what the hell, I can spend some more!") and were presented in random order. Participants were free to check as many as they wished, without any constraints.

Results and discussion

Hypothesis test

We predict that under heightened salience of the decision made at T1, purchase of indulgent products at T2 should be greater when the T1 decision was a salient not-buy vs. buy. Moreover, the T1 decision should not have an effect on purchase of indulgent products at T2 when it is not salient (i.e., at baseline salience). Purchase of non-indulgent products at T2 should not be affected by the T1 decision or by its salience because these purchases do not need additional justification. To test these predictions, we first conducted a binary logistic regression on the decision to buy at T2, with the decision at T1 (buy vs. no buy), the salience of the T1 decision (baseline vs. heightened), and the nature of the T2 product (indulgent vs. non-indulgent) as independent variables. Supporting the greater justifiability of non-indulgent (vs. indulgent products), there was a significant main effect for the nature of product at T2, such that overall non-indulgent products were more likely to be bought at T2 than indulgent products (Ms=51.2% vs. 40.1%, Wald (1)=4.23, $p<.05$). Significant interactions between T2 product and T1 decision (Wald (1)=6.76, $p<.01$), and T2 product and salience of T1 decision (Wald (1)=6.45, $p<.01$) were qualified by a significant three-way interaction (Wald (1)=4.40, $p<.05$; see Fig. 2). Based on the three-way interaction, analyses were conducted separately within the heightened and baseline salience conditions. In support of our hypothesis, under heightened salience of time 1 decision, when faced with indulgent products, the proportion choosing to buy at time 2 was greater if they had refrained from buying at T1 than if they had previously bought at T1 (Ms=63% vs. 30%, $t(78)=3.20$, $p<.01$). At heightened salience, proportion choosing to buy non-indulgent products at time 2 did not differ based on time 1 decision to not buy vs. buy (Ms=41% vs. 54%, $t(82)=1.19$, $p>.24$, *ns*). This supports the main hypothesis regarding self-reward with indulgent products when past restraint is salient. A different pattern was observed at baseline salience. Here, proportions choosing to buy at time 2 did not differ whether the T1 decision had been to buy or not buy, and this was regardless of whether the T2 products were non-indulgent (Ms=37% vs. 29%, $t(78)<1$, $p>.40$, *ns*) or indulgent (Ms=60% vs. 51%, $t(78)<1$, $p>.40$, *ns*). Further, comparing across the heightened and baseline T1 no-buy conditions, purchase of indulgent products in the heightened condition was greater than in the baseline condition (Ms=63% vs. 29%; $t(78)=3.28$, $p<.01$). This supports our proposition that the effect is driven by an increase in self-reward when justification is accessible compared to default levels of purchase of indulgences.[2]

The second dependent measure was the propensity to buy at T2, as measured by the points allocated out of 100. A 2 (T1 decision: Buy vs. Not buy)×2 (Salience of T1 decision: Baseline vs. Heightened)×2 (Nature of T2 product: Indulgent vs. Non-indulgent) between-subjects ANOVA conducted on the propensity to buy revealed a significant effect of the nature of T2 product such that overall, non-indulgent (vs. indulgent) products were more likely to be bought at T2 (Ms=53.06 vs. 45.69, $F(1, 324)=4.00$, $p<.05$). This main effect again suggests that in general, purchases of non-indulgent products are easier to justify than those of indulgent products. This was qualified by an interaction with the salience of the T1 decision ($F(1, 324)=4.45$, $p<.05$) and a three-way interaction ($F(1, 324)=5.28$, $p<.05$). Follow-up contrasts again revealed that under heightened salience and when faced with indulgent products, propensity to buy was greater for those who had not bought at T1 than for those who had bought (Ms=57.10 vs. 38.78, $F(1, 324)=6.11$, $p<.05$). The propensity to buy non-indulgent products at T2 did not differ based on T1 decision to buy vs. not buy, even when this decision was salient (Ms=51.98 vs. 43.09, $F(1, 324)=1.49$, $p>.20$, *ns*). Further, at baseline salience, regardless of T2

[2] It is also possible to test this effect by comparing the proportion buying indulgent products under heightened accessibility of a T1 no buy decision (63%) against the proportion buying indulgent products under baseline accessibility of T1 no buy (29%) and T1 buy (37%) pooled. This contrast is also significant ($t(78) = 3.28$, $p < .01$).

product, there was no difference in propensity to buy at T2 for those who had bought at T1 ($M=51.37$) and those who had not bought ($M=50.66$, $F<1$). Again, comparing across the heightened and baseline T1 no-buy conditions, purchase of indulgent products in the heightened condition was greater than in the baseline condition (Ms = 57.10 vs. 41.42; $F(1, 324)=4.31$, $p<.05$).

Process measures

Recall that participants had indicated which of twenty reason items reflected their thoughts while they were making their T2 decision. An index of justifiability of buying at T2 was constructed by subtracting the number of reasons opposing buying from the number of reasons supporting buying. Our hypothesis states that restraint, as opposed to indulgence, at time 1 should lead to a greater justifiability of buying indulgent products at time 2. To trace this proposed process, we investigated whether the justifiability of buying, as measured by this constructed index, mediated the effect of T1 decision on the propensity to buy at T2. Hence, we conducted a four-step mediation analysis (Baron & Kenny, 1986) within the high salience, T2 indulgent products conditions, with T1 decision as the independent variable, justifiability as the mediator, and propensity to buy as the dependent variable. First, T1 decision had a significant effect on propensity to buy ($B=-18.32$, $t(80)=-2.49$, $p<.05$). Next, T1 decision had a significant effect on justifiability of buying at T2 ($B=-1.84$, $t(81)=-2.63$, $p<.01$). Third, justifiability had a significant effect on propensity to buy ($B=6.93$, $t(80)=7.73$, $p<.001$). And finally, when justifiability and T1 decision were simultaneously entered in a regression predicting propensity to buy, the effect of justifiability remained significant ($B=6.65$, $t(79)=7.16$, $p<.001$) while T1 decision dropped below significance ($B=-6.97$, $t(79)=-1.17$, $p<.25$, *ns*). A Sobel test supported the mediation effect ($z=2.49$, $p<.05$; Sobel, 1982). This finding demonstrates that the positivity in reasons supporting buying at T2 fully mediates the effect of the decision at T1 on the propensity to buy at T2. The decision at T1 affects the justifiability of buying at T2 and the decision at T2, but once the reasons are accounted for there is no effect of T1 on T2. Further, a similar analysis on the other experimental conditions revealed that T1 decision did not have a significant effect on the justifiability of buying at T2 ($B=-.91$, $t(324)=-1.27$, $p>.20$, *ns*), which is further evidence that salience of prior restraint is necessary for self-reward. Moreover, it is important to note that the measures of the propensity to buy at T2 and the justifiability of buying at T2 were not similar—propensity to buy was constructed by adding the points allocated to buying the two different offers, while the metric of justifiability was constructed by counting the number of reason items checked freely. This argues against demand or response consistency explanations for the observed mediation.

More specific evidence for the underlying role of justification in explaining the observed patterns can be obtained by examining responses to the specific reasons items. Each item was cross-tabulated individually against the three independent variables, T1 decision, salience, and T2 product. The only item to vary significantly across salience treatments was Item #15, "I had refrained from buying the books, so I deserve a little treat". Consistent with our hypothesis, respondents who saw indulgent products at T2 under heightened salience of T1 were significantly more likely to check agreement with this item than those who were at baseline salience (Ms = 29% vs. 11%, $t(78)=2.11$, $p<.05$).

These results demonstrate that in general, choice proportions for non-indulgent products are greater than for indulgent products. However, increasing the salience of previous restraint can significantly increase purchase likelihood for indulgences at T2. We found that this may be due to increased justifiability, as people who think about past restraint feel justified in buying products that offer greater value in the short term. Accessible reasons guide purchase decisions and mediate the effect of prior restraint on the tendency to reward oneself with a product offering short-term value. Taken together, these findings provide strong evidence for the role of reasons in explaining self-rewarding behaviors across tempting consumption opportunities—increasing the salience of prior restraint can increase purchase probability for indulgences, because indulgences offer immediate gratification and hence can function as "deserved treats."

Alternative explanations

This experiment is open to a few criticisms. First, participants were assigned to time 1 buy vs. not-buy conditions. While there is precedent for this manipulation in the literature (Arkes et al., 2002), and every attempt was made to get participants to simulate the time 1 decision, these effects need to be replicated using an alternative manipulation. Second, one could argue that participants held a lay belief that people reward themselves after they have exercised restraint and hence were simply providing this response. We believe it is unlikely that participants in experiment 1 simply responded based on their naïve beliefs for two reasons. First, at time 2, participants were assigned to either choose between two indulgences or between two non-indulgences. A single subject did not make a choice between an indulgence and a non-indulgence. Hence, it is hard to see how the results reveal enactment of a lay belief. Second, the lay belief that consumers reward themselves after restraint may exist, but it is not clear that it exists in the more sophisticated form shown here—namely, salient prior restraint not influencing purchase at time 2 if the items are not indulgences. Also, the finding that salience matters indicates that it is not simply an effect of trying to intuit the experimental hypothesis and conform to it: as with much of the research in goal-directed behavior, participants need to find themselves in the particular motivational states for any expected results to obtain. Finally, our finding that baseline expectation that virtues are more likely to be purchased than vices provides confidence in the validity of the results.

Experiment 2—direct trade-offs and self-reward

This experiment provides a second direct test of the self-reward hypothesis by asking respondents to directly indicate

their preference between an indulgence (e.g., a chocolate cake) and a non-indulgence (e.g., a fruit salad; Sengupta & Zhou, 2007; Shiv & Fedorikhin, 1999). By requiring respondents to directly trade-off between an indulgence and a non-indulgence, this procedure involves a conservative test of our theory because a direct comparison makes it harder to justify the indulgence (Okada, 2005). Moreover, to further increase confidence in our findings, experiment 2 also uses a different operationalization of the independent variable, and it explores the underlying process in a consumption (as opposed to purchase) setting at T2.

Method

Stimuli and design

This experiment was a 2 (T1 Decision: Buy vs. Not buy) × 2 (Salience of T1 decision: Heightened vs. Baseline) fully crossed between-subjects design. As described above, the dependent variable was relative preference at T2 between an indulgent and a non-indulgent product. The T1 decision was manipulated by asking respondents to recall an instance in the recent past where they had seen a product on sale that they had not originally intended to buy, but had been really tempted by, and had ended up either buying or not buying (between-subjects). The salience of this decision was manipulated by placing the T2 temptations either immediately after the recall task at the beginning of the session (heightened salience), or over half an hour later, after an unrelated filler task (on financial decision-making).

Participants and procedure

One hundred respondents (fifty-five men and forty-five women) were recruited at a large Northeastern university, in return for $15 compensation. On arrival at the laboratory, they were directed to individual workstations and given a packet consisting of stimuli for a set of ostensibly unrelated studies. Each workstation had on it two identical opaque cardboard boxes, with "Do Not Touch" written on them. Participants worked through the stimuli at their own pace. When they came to the T2 task, the instructions required them to raise their hands. At this point, the experimenter came to their desk and opened the two boxes, revealing a chocolate cake and a fresh fruit salad. Participants were asked to indicate which of the two options they would prefer in a direct comparison (1 = definitely prefer cake, 9 = definitely prefer fruit salad; reverse coded such that greater numbers were consistent with self-reward). On completion, they were debriefed, paid, and thanked.

Results

Preliminary analysis of the direct comparison preference indicated that men were marginally more likely than women to prefer cake over salad (Ms = 4.71 vs. 3.78, $F(1, 98) = 2.89$, $p < .09$), hence gender was controlled for in subsequent analyses. A 2 (T1 decision: Buy vs. Not buy) × 2 (Salience of T1 decision) between-subjects ANCOVA with the relative preference for cake over fruit salad revealed a significant interaction effect ($F(1, 95) = 4.32$, $p < .05$). Consistent with our self-reward hypothesis, planned contrasts revealed that when the T1 decision was salient, those who had not bought at T1 tended to prefer cake over fruit salad more than those who had bought (Ms = 4.79 vs. 3.42, $F(1, 95) = 3.18$, $p < .05$, one-tailed). There was no significant difference in relative preference for cake over fruit salad when the T1 decision was not salient (Ms = 4.03 vs. 4.92, $F(1, 95) = 1.35$, $p > .20$).

These results support the proposed self-reward mechanism. Faced with a trade-off between a real cake (an indulgence) and a real fruit salad (a non-indulgence), respondents who had a salient memory of having resisted temptation indicated a preference for the cake over the salad, while those who did not have this memory salient, did not show this effect. Note that this effect was observed despite respondents having only recalled an instance of past restraint, thereby implicating the salience of restraint and arguing against any depletion-based mechanism. In other words, while resource depletion brought about by restraint could have the effect of increasing indulgence (Vohs & Faber, 2007), our findings suggest that depletion is not necessary for the effect to obtain. The fact that the results replicate in a consumption context at T2 also helps rule out any budget constraint explanations for the previous experiment.

Alternative explanation

While these findings could be interpreted as revealing participants' lay theories of what they are expected to do when they have shown restraint, this is unlikely for two reasons. First, participants expected to consume their choice, hence they were making real choices. Second, indulgence is chosen more than non-indulgence only when it can be justified by accessible reasons—this is consistent with the hypothesis. The justification mechanism could be considered a lay theory reflective of normative behavior or simply a mechanism that brings about the behavior. Based on the reasons-based choice literature, we believe it is the latter. To test this explanation, we conducted a follow-up experiment, in which participants were presented the same T1 scenario as in experiment 1, framed in the third person (e.g., "Imagine a person X was in a mall…", and X chose to either buy or not buy the products on sale). Following the scenario, participants were asked what X would choose, given a choice between a chocolate cake and a fruit salad. Contrary to the self-reward hypothesis, a majority of respondents indicated that following an indulgent (vs. non-indulgent) decision at T1, X would be more likely to choose the indulgent cake at T2 ($M_{\text{TIBuy}} = 67.3\%$ vs. $M_{\text{T1NotBuy}} = 44.9\%$, $\chi^2(1) = 5.01$, $p < .05$). This result, which is indicative of a highlighting effect (Dhar & Simonson, 1999), argues against the above lay theory based demand explanation. Indeed, it suggests that if respondents do indeed hold lay theories about the type of situation we study (which we believe they do), these lay theories tend to support highlighting rather than self-reward.

So far, the justification that has instigated indulgence is restraint at a previous impulse purchase opportunity. If our theorizing is correct, then any justification afforded by a prior purchase decision should have the same effect, as long as it justifies current indulgence. The next experiment triangulates

on the justification process presumed to underlie our results by varying the type of justification.

Experiment 3: self-reward for prior purchase

Our argument so far has been that salient prior restraint enables indulgence by allowing people to justify their indulgence based on past "good" behavior. If justification is indeed the mechanism underlying indulgence, then salient prior consumption should have the same effect as salient prior restraint, if salient prior consumption can be made to provide a justification for indulgence. Further, if prior restraint is reframed so that it does not afford the justification to indulge, then prior indulgence should lead to greater indulgence at T2. Such a demonstration would pin down the role of justification in instigating indulgence. In this experiment, we designed a condition where prior purchase is viewed positively and affords justification for current indulgence whereas prior restraint is viewed ambivalently and affords less justification. To facilitate justification based on prior impulse purchase, we told participants that purchase proceeds from their T1 purchase/non-purchase were given to charity. As shown in prior research (e.g., Khan & Dhar, 2006), acts of altruism facilitate indulgence; hence, we expect greater indulgence at T2 under T1 buy vs. no-buy conditions (where not buying is now not necessarily "good" behavior). In conditions where this altruism justification for prior purchase is not given, we should replicate greater indulgence under T1 no-buy (vs. buy) conditions.

Method

Stimuli and design

This experiment was in the form of a 2 (T1 Decision: Buy vs. Not buy) × 2 (T1 Donation: Proceeds donated to charity vs. No donation) fully crossed between-subjects design. The T1 purchase decision was observed by giving participants the opportunity to spend some of their experiment compensation money to buy a bar of chocolate described as being "organic European chocolate that is new to the market." The donation to charity was then manipulated by telling respondents that the collections received from sale of the chocolate would be donated to charity, or by not mentioning any donation. The T2 self-reward opportunity was then immediately presented as a choice between chocolate cake and fruit salad, depicted using color photographs (as in Sengupta & Zhou, 2007). We hypothesized that while the basic self-reward effect would be replicated in the no-charity condition (time 1 decision is always salient in this experiment), it would be reversed in the charity condition. This is because the donation would allow respondents who had given in to temptation and bought the chocolate to justify treating themselves, while those who did not buy would not have this justification.

Participants and procedure

One hundred and one respondents (52% female) participated in this experiment. On arrival, they were directed to individual workstations and given a set of questionnaires including some unrelated stimuli and the materials for this experiment at the end. The T1 temptation consisted of a single sheet describing the European chocolate, followed by a tear-away coupon where participants were to indicate whether they would like to use part of their experiment compensation to buy some chocolate or not. Immediately following this was the T2 measure consisting of photographs of a cake and a fruit salad followed by the same dependent variables as in study 2. Finally, participants were debriefed and thanked.

Results and discussion

Eight respondents said they were extremely frequent dieters (circling 7 on the 7-point scale), and hence were excluded from the data set prior to analyses. The data patterns remained substantively unaffected by this measure. 39% of participants chose to buy at the time 1 chocolate buying opportunity (and this did not vary by gender, $\chi^2(1)=.03$, *NS*). Further, although the time 1 decision was measured rather than manipulated, our hypothesis predicts an interaction between time 1 buying decision and donation to charity; this precludes a self-selection explanation for the results. A 2 (T1 Decision) × 2 (Donation) between-subjects ANOVA, using the rated preference for cake vs. salad at T2 as the dependent variable, revealed no main effect, but a significant interaction ($F(1, 89)=8.13$, $p<.05$; see Table 1). Follow-up contrasts revealed, as expected, in the no-donation condition, respondents preferred cake more when they had not bought the chocolates than when they had bought (*M*s = 5.37 vs. 4.16, $F(1, 89)=2.77$, $p<.10$), replicating the basic self-reward effect. However, there was a reversal in the donation condition, with respondents preferring cake *less* when they had not bought vs. bought (*M*s = 4.06 vs. 6.18, $F(1, 89)=5.38$, $p<.05$). This pattern was reflected on the choice measure. With no donation, those who had restrained at T1 were directionally more likely to choose cake over fruit salad (*M*s = 58.5% vs. 36.8%, $t(45)=1.50$, $p<.07$, one-tailed). This was reversed in the donation condition where respondents who had restrained at T1 were less likely to choose cake than those who had given in (*M*s = 37.5% vs. 82.4%, $t(39)=3.60$, $p<.001$).

These results provide strong support for our proposed justification mechanism. Further, they also suggest that it is not the act of buying or not buying itself that causes

Table 1
Experiment 3 results.

	T1 proceeds donated to charity		No donation to charity	
	T1 Buy	T1 Not buy	T1 Buy	T1 Not buy
Preference for cake vs. fruit salad	5.37[b]	4.16[a]	4.06[a]	6.18[b]
Choice of cake over fruit salad	58.5%[b]	36.8%[a]	37.5%[a]	82.4%[c]

Note: T1 decision is salient in all conditions.
[a,b,c]Means in the same row having different superscripts are significantly different (one-tailed).

indulgence; it is the justification afforded by that act. The specific pattern of results suggests that prior impulse purchase behavior, whether it is to buy or not to buy, can be used to justify indulgence as long as the prior behavior is virtuous (e.g., altruistic—proceeds of purchase were donated to charity, or normative—did not buy on impulse). The justification in this case is not prior effort as in Kivetz and Simonson (2002), but prior decision, and the implications of that decision. Increased indulgence in both prior buy as well as in prior no-buy conditions suggests that effort or resource depletion do not underlie these results because purchase and restraint cannot both be viewed as depleting or effortful. If simply making a decision was effortful, then results should have been consistent with Dholakia et al. (2005) and revealed high levels of indulgence in all conditions.

So far, the results suggest that shopping restraint can serve as a justification for subsequent indulgence as long as the restraint is salient. An independent mechanism by which shopping restraint can increase indulgence is by increasing self-esteem, or as Khan and Dhar (2006) put it, "boosting the self-concept." Khan and Dhar (2006) have argued that altruistic acts liberate people to behave indulgently. Next, we turn to this alternate explanation for our results.

Experiment 4: self-concept boost is sufficient but not necessary for self-reward

This experiment examines the roles of the restraint-induced justification mechanism vs. the restraint-induced self-esteem enhancement mechanism in instigating indulgence. As described in Fig. 1, we do not believe that these two accounts contradict each other, but rather that self-reward is multiply determined. If this is indeed the case, then we should observe self-reward even when self-esteem is not implicated. In this experiment, we manipulate whether participants are reminded of their self-esteem either before the T2 decision, or after it. The condition where self-esteem is measured after T2 is analogous to the baseline conditions in the previous three experiments, where we expect to see the standard justification-based self-reward effect. Measuring self-esteem immediately after the T1 decision enables us to observe whether self-esteem is enhanced by a T1 no-buy decision and whether this increases indulgence at T2.

Method

Stimuli and design

This experiment was in the form of a 2 (T1 Decision: Buy vs. Not buy) × 2 (Self-esteem measurement: Before T2 vs. After T2) fully crossed between-subjects design. The T1 purchase decision was simulated as in experiment 2 where participants were asked to recall a prior episode of giving in vs. holding back from an impulse purchase. Following this, half the participants responded to the State Self-Esteem Scale (a 20-item measure of self-esteem; Heatherton & Polivy 1991). All participants were then presented the T2 self-reward opportunity, again a choice between chocolate cake and fruit salad, depicted using color photographs (as in Sengupta & Zhou, 2007). Finally, those participants in the self-esteem measurement after T2 condition responded to the same measure of self-esteem.

Participants and procedure

One hundred and ninety-one respondents (56% female) participated in this experiment. On arrival at the laboratory, they were directed to individual workstations and given a set of questionnaires which included some unrelated stimuli. The T1 and T2 stimuli were presented as separate studies on separate sheets of paper. After completion, participants were debriefed and thanked.

Results and discussion

The proportion of respondents opting to self-reward at T2 by choosing the cake over the fruit salad was cross-tabulated against the two independent variables. The basic self-reward effect was replicated in the condition where self-esteem was measured after T2, with participants who had not bought at T1 being more likely to choose cake over fruit salad than those who had bought at T1 (Ms = 38.0% vs. 19.1%, $\chi^2(1) = 4.19$, $p < .05$). However, when self-esteem was measured before the T2 decision, there was no difference between those who had not bought vs. those who had bought at T1 (Ms = 39.6% vs. 26.1%, $\chi^2(1) = 1.94$, $p > .15$; see Table 2). Analysis of the self-esteem revealed no significant effects; all respondents reported uniformly high self-esteem ($M = 3.58$ on a 5-point scale). Hence, the no-buy decision did not boost self-esteem in this case (ceiling effects may be possible in this high self-esteem population); however, being reminded of their (high) self-esteem led to generally increased indulgence.

These results demonstrate strong support for our proposed justification mechanism. When presented an opportunity to indulge after a prior occasion of indulgence or restraint, we find that not buying at T1 leads to greater indulgence. Further, simply recalling the act of restraining or giving in at T1 does not influence self-esteem. However, when respondents are reminded of their generally high self-esteem, even those who bought at T1 tend to become more indulgent. This supports the self-esteem route to indulgence proposed by Khan and Dhar (2006). However, when participants are not reminded of their high self-esteem, those who had not bought at T1 tend to indulge more than those who had bought at T1. Given that self-esteem is the same across conditions, the only explanation for

Table 2
Experiment 4 results.

	Self-esteem measured after T2		Self-esteem measured before T2	
	T1 Buy	T1 Not buy	T1 Buy	T1 Not buy
Choice of cake over fruit salad	19.1%[a]	38.0%[b]	26.1%[a,b]	39.6%[b]
Self-esteem	3.49[a]	3.54[a]	3.63[a]	3.65[a]

Note: T1 decision is salient in all conditions.
[a,b]Means in the same row having different superscripts are significantly different.

this finding is that prior restraint affords justification for indulgence.

General discussion

The studies described above demonstrate that when restraint at a prior impulse buying opportunity is salient, consumers tend to reward themselves with the purchase or consumption of an indulgent product, namely, one that offers gratification in the short term. Experiment 1 demonstrated this basic effect in a purchasing context at both time 1 and time 2, and showed that the effect was mediated by the justifiability of buying at time 2. The cognitive process was further identified using respondents' agreement with plausible reasons for their behavior—the only reason item that varied significantly across conditions was the one that reflected self-reward justification. Experiment 2 replicated the result using a direct trade-off between an indulgent vs. non-indulgent product to be consumed as opposed to purchased at time 2, and demonstrated that liking for the products in question varied systematically as per the predictions of our cognitive model. Experiment 3 pinned down the justification process by showing that any "good" behavior can be used to justify indulgence, even if it is prior impulse purchase where purchase proceeds are given to charity. In this case, prior impulse purchase can be encoded positively and used to justify indulgence whereas prior restraint has ambiguous implications and is therefore harder to use as justification. One may argue that the lack of a significant self-reward phenomenon in the low salience of prior restraint conditions of experiments 1 and 2 argue against a self-concept boost mechanism for the finding because self-concept boost should be relatively long lasting (at least as long as the experimental session). However, this is only indirect evidence and it could simply be that self-concept is not spontaneously activated upon restraint in this situation. Finally, experiment 4 pinned down the extent to which it was necessary to implicate the self in order to justify indulgence and showed that either a self-concept boost or a prior "good" behavior that did not directly implicate the self-concept could be used as justification for indulgence. A boost in self-concept is not a necessary condition to facilitate indulgence.

Contributions

These findings provide insight into one possible mechanism underlying behaviors that could be labeled as failures in self-regulation. Much of the self-control literature characterizes self-control as a conflict between a relatively automatic force of desire that spurs the consumer towards indulgence and a more conscious, controlled force of willpower that restricts this consumption (Hoch & Loewenstein, 1991; Shiv & Fedorikhin, 1999; see also Baumeister et al. 2008). This literature often infers lapses of self-control from observed choices of indulgent products. However, it is not as if indulgence exclusively happens when impulsive consumers act in the spur of the moment. Our results show that under certain circumstances, endogenous to a sequence of consumption decisions, consumers may strategically (even if without complete awareness) choose to indulge themselves. Such behavior signals, if anything, an episode of successful self-regulation.

Prior literature has established the importance of justification on choice, and this research goes a step further by showing that justification is stimulated by a virtuous choice at T1 on an indulgent choice at T2. It also goes beyond this literature by focusing on determinants of indulgent choices. One process that has received some attention is that of ego depletion (Muraven & Baumeister, 2000), whereby an initial act of self-regulation depletes regulatory resources, thereby impairing subsequent self-regulation. Ego depletion cannot account for the current results, especially since the initial act of restraint was manipulated in three experiments by asking participants to recall an occasion when they had or had not given in to an impulse purchase opportunity. The ego depletion account does not propose that the act of recalling is itself depleting, and our participants did not find it difficult to recall these episodes, describing them in rich detail regardless of whether they had given in or held back.

Kivetz and Zheng (2006) implicate two types of justification underlying indulgence—entitlement (through hard work) or non-depletion of income, and speculate that alternative explanations for self-gratification such as ego depletion operate via a justification mechanism. Our results add to this by highlighting another justification for indulgence, namely prior restraint. Further, we isolate two possible justification mechanisms, one that boosts the self-concept, and another that operates independent of self-concept. The entitlement route may similarly operate without implicating the self, but by simply providing a temporary justification for ephemeral indulgence. Indeed, while we limited the scope of our research to shopping restraint at time 1, it is highly plausible that our model can be applied to virtuous choices in general.

Dhar and Simonson (1999) showed that when consumers make trade-offs between two different goals within a consumption episode, they tend to "balance" choices by furthering first one goal and then the other. Our research may be interpreted as a demonstration of meta-preferences for such balancing behaviors. However, not only is our context not interpretable as "goals" and "resources", as Dhar and Simonson's framework requires, but we believe our findings extend theirs in several key ways. First, we find our effects across temporally separated decisions, demonstrating that balancing need not be restricted within a single consumption episode. Second, we demonstrate self-reward across various different consumption categories, thereby generalizing Dhar and Simonson's findings to the very broadly defined goals of "pleasure" and "not spending". Finally and most importantly, we go beyond Dhar and Simonson by demonstrating a process-level explanation of our effects, namely, justification-based choice.

Future research

One question raised by our findings concerns the specific justification afforded by prior restraint. Our results do not speak

directly to the type of product one must refrain from in order to justify future indulgence. We believe that impulse purchase opportunities operate as temptations that distract consumers who do not have the goal of shopping for those product categories at that point in time. In this case, the nature of the product should not matter because giving in to the temptation and buying something, whether an indulgent or non-indulgent product, cannot provide justification for future indulgence. However, holding back from any type of product is an act that is encoded as goal-consistent and therefore "good" behavior; this behavior can then be used to justify subsequent indulgence. It is possible that restraining from giving in to a vice-type product provides even more justification than restraining from a virtue-type product. Data from an additional experiment not reported here suggest that the nature of the product refrained from at T1 does not differentially influence the propensity to self-reward; however, examining the continuum of justification is an area for future research.

It would also be interesting to consider when restraint from impulse shopping leads to consistency, rather than self-reward. This might be the case when the two episodes are not bracketed, there exists a strong norm to be virtuous at T2, the behavior is habitual (Ji & Wood, 2007), the two episodes are construed at the same high level (Trope, Liberman, & Wakslak, 2007), or there is a strongly chronic trait such as prudence (Mukhopadhyay et al., 2008). Further, we did not empirically investigate the possible role of affect. Mukhopadhyay and Johar (2007) and Ramanathan and Williams (2007) both demonstrate that resisting temptations causes self-conscious emotions such as pride, and Mick and Faure (1998) demonstrated that pride and deservingness mediated the effects of achievement and attributions on self-gifting. Hence, it is plausible that feelings such as pride may indeed spur one to self-reward. However, it should be noted that self-conscious emotions tend to be cognitively based, and hence may be subsumed in the process we propose.

Implications

Our results have important implications for practitioners. From a marketer's viewpoint, while there is abundant literature on the quantitative effects of promotions, there is less knowledge about qualitative aspects such as the effects of promoting different types of products. This research addresses the gap by deriving clear implications for positioning decisions and the sequencing of offers. Sales managers, salespeople, and CRM database managers who track consumer decisions over time can benefit from knowing how being exposed to tempting offers once can affect responses to subsequent purchase opportunities. For instance, based on our findings, managers would be advised to sequence offers such that indulgences are offered following a no-buy decision. Our research also suggests that no-buy decisions should be followed up by offers that promote the indulgence value of a given product. After a no-buy decision, managers would be advised to position an indulgent product by making the customer think about their previous restraint, thereby bracketing the two together.

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References

Arkes, H. R., Joyner, C. A., Pezzo, M. V., Nash, J. G., Siegel-Jacobs, K., & Stone, E. (1994). The psychology of windfall gains. *Organizational Behavior and Human Decision Processes*, *59*, 331−347.

Arkes, H. R., Kung, Y. H., & Hutzel, L. (2002). Regret, valuation, and inaction inertia. *Organizational Behavior and Human Decision Processes*, *87*, 371−385.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173−1182.

Baumeister, R. F., Sparks, E. A., Stillman, T. F., & Vohs, K. D. (2008). Free will in consumer behavior: Self-control, ego-depletion, and choice. *Journal of Consumer Psychology*, *18*, 4−13.

Dhar, R., & Simonson, I. (1999). Making complementary choices in consumption episodes: Highlighting versus balancing. *Journal of Marketing Research*, *36*, 29−44.

Dhar, R., Huber, J., & Khan, U. (2007). The shopping momentum effect. *Journal of Marketing Research*, *44*, 370−378.

Dholakia, U. M., Gopinath, M., & Bagozzi, R. P. (2005). The role of desires in sequential impulsive choices. *Organizational Behavior and Human Decision Processes*, *98*, 179−194.

Fishbach, A., & Dhar, R. (2005). Goals as excuses or guides: The liberating effect of perceived goal progress on choice. *Journal of Consumer Research*, *32*, 370−377.

Fishbach, A., Friedman, R. S., & Kruglanski, A. W. (2003). Leading us not unto temptation: Momentary allurements elicit overriding goal activation. *Journal of Personality and Social Psychology*, *84*, 296−309.

Heatherton, T. F., & Polivy, J. (1991). Development and validation of a scale for measuring state self-esteem. *Journal of Personality and Social Psychology*, *60*, 895−910.

Hirschman, E. C. (1990). Secular immortality and the American ideology of affluence. *Journal of Consumer Research*, *17*, 31−42.

Hoch, S. J., & Loewenstein, G. F. (1991). Time-inconsistent preferences and consumer self-control. *Journal of Consumer Research*, *17*, 492−507.

Ji, M. F., & Wood, W. (2007). Purchase and consumption habits: Not necessarily what you intend. *Journal of Consumer Psychology*, *17*, 261−276.

Khan, U., & Dhar, R. (2006). Licensing effect in consumer choice. *Journal of Marketing Research*, *63*, 259−266.

Kivetz, R., & Simonson, I. (2002). Earning the right to indulge: Effort as a determinant of customer preferences toward frequency program rewards. *Journal of Marketing Research*, *39*, 155−170.

Kivetz, R., & Zheng, Y. (2006). Determinants of justification and self-control. *Journal of Experimental Psychology: General*, *135*, 572−587.

Louro, M. J. S., Pieters, R., & Zeelenberg, M. (2007). Dynamics of multiple goal pursuit. *Journal of Personality and Social Psychology*, *93*, 174−193.

Mick, D. G., & DeMoss, M. (1990). Self-gifts: Phenomenological insights from four contexts. *Journal of Consumer Research*, *17*, 322−332.

Mick, D. G., & Faure, C. (1998). Consumer self-gifts in achievement contexts: The role of outcomes, attributions, emotions, and deservingness. *International Journal of Research in Marketing*, *15*, 293−307.

Monin, B., & Miller, D. T. (2001). Moral credentials and the expression of prejudice. *Journal of Personality and Social Psychology*, *81*, 33−43.

Mukhopadhyay, A., & Johar, G. V. (2007). Tempted or not? The effect of recent purchase history on responses to affective advertising. *Journal of Consumer Research*, *33*, 445−453.

Mukhopadhyay, A., Sengupta, J., & Ramanathan, S. (2008). Recalling past temptations: An information-processing perspective on the dynamics of self-control. *Journal of Consumer Research*, *35*, 586−599.

Muraven, M., & Baumeister, R. F. (2000). Self-regulation of limited resources: Does self-control resemble a muscle? *Psychological Bulletin*, *126*, 247−259.

O'Curry, S. (1999). Consumer budgeting and mental accounting. In P. E. Earl, & S. Kemp (Eds.), *Elgar companion to consumer economics and economic psychology* Cheltenham: Elgar.

O'Curry, S., & Strahilevitz, M. A. (2001). Probability and mode of acquisition effects on choices between hedonic and utilitarian options. *Marketing Letters*, *12*, 37−49.

Okada, E. M. (2005). Justification effects on consumer choice of hedonic and utilitarian goods. *Journal of Marketing Research*, *42*, 43−53.

Ramanathan, S., & Williams, P. M. (2007). Immediate and delayed consequences of indulgence: The moderating influence of personality type on mixed emotions. *Journal of Consumer Research*, *34*, 212−223.

Read, D., Loewenstein, G. F., & Rabin, M. (1999). Choice bracketing. *Journal of Risk and Uncertainty*, *19*, 171−197.

Robinson, M. D., & Clore, G. L. (2001). Simulation, scenarios, and emotional appraisal: Testing the convergence of real and imagined reactions to emotional stimuli. *Personality and Social Psychology Bulletin*, *27*, 1520−1532.

Sengupta, J., & Zhou, R. (2007). Understanding impulsives' choice behaviors: The motivational influences of regulatory focus. *Journal of Marketing Research*, *44*, 297−308.

Shafir, E. (1993). Choosing versus rejecting: Why some options are both better and worse than others. *Memory & Cognition*, *21*(4), 546−556.

Shafir, E., Simonson, I., & Tversky, A. (1993). Reason-based choice. *Cognition*, *49*, 11−36.

Shiv, B., & Fedorikhin, A. (1999). Heart and mind in conflict: The interplay of affect and cognition in consumer decision making. *Journal of Consumer Research*, *26*, 278−292.

Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhart (Ed.), *Sociological methodology 1982* (pp. 290−312). San Francisco: Jossey-Bass.

Stern, H. (1962). The significance of impulse buying today. *Journal of Marketing*, *26*, 59−62.

Strahilevitz, M., & Myers, J. G. (1998). Donations to charity as purchase incentives: How well they work may depend on what you are trying to sell. *Journal of Consumer Research*, *24*, 434−446.

Tetlock, P. E., & Boettger, R. (1989). Accountability: A social magnifier of the dilution effect. *Journal of Personality and Social Psychology*, *57*, 388−398.

Trope, Y., Liberman, N., & Wakslak, C. (2007). Construal levels and psychological distance. Effects on representation, prediction, evaluation, and behavior. *Journal of Consumer Psychology*, *17*, 83−95.

Vohs, K. D., & Faber, R. J. (2007). Self-regulation and impulsive spending. *Journal of Consumer Research*, *33*, 537−547.

Wärneryd, K. (1999). The psychology of saving: A study on economic psychology Cheltenham, UK: Edward Elgar Publishing.