Need and Intertemporal Choice: a Dual Goal Hypothesis

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In 5 studies we support the dual-goal hypothesis for the effects of need on intertemporal decisions. We find consumers of high (vs. low) need are more impatient in near future intertemporal decisions yet more patient in distant future intertemporal decisions. These studies enrich current understanding on how need affects patience.

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Nonconsumption

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Paper #1: Need and Intertemporal Choice: A Dual Goal Hypothesis
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Paper #2: Postponement Specificity Differentially Affects Desire and Consumption
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Vanessa M. Patrick, University of Houston, USA

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Paper #4: Saving It (and Us) For Later? Consuming and Saving Products that Reflect Our Selves
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SESSION OVERVIEW

Consumer research has investigated how various aspects of consumption—anticipation of consumption (Loewenstein 1987), frequency of consumption (e.g., Hamilton, Ratner, and Thompson 2011), and remembering consumption (e.g., Cowley 2007)—impact how the consumed object is evaluated. But what about nonconsumption? How does not consuming something, or deferring usage, shape downstream attitudes and behavior?

This session brings together a variety of perspectives to deepen understanding of nonconsumption. While a few papers have identified motivations for nonconsumption (e.g., Trocchia and Janda 2002; Wansink, Brasel, and Amjad 2000), little is known about how nonconsumption affects downstream attitudes and behavior pertaining to the nonconsumed (Dai and Fishbach 2013; Dai and Fishbach 2014). The papers in this session provide four novel perspectives on how nonconsumption impacts the value of, desire for, and future consumption likelihood of nonconsumed goods across several domains.

The first two papers examine how prolonged nonconsumption affects evaluations of goods we desire. Dai, Kwan, and Fishbach resolve inconsistencies in prior research on intertemporal patience by highlighting two competing goals that result from nonconsumption and are activated differentially across choice contexts: the goal to get the nonconsumed now, and the goal to get a larger quantity of the nonconsumed. Mead and Patrick explore the impact of nonconsumption specificity, show that unspecified but not specific postponement causes consumers to infer that they desire the temptation less, and are thus less likely to consume it.

The second two papers examine how nonconsumption affects perceptions and consumption of goods consumers already own. Rifkin and Berger demonstrate how deferring usage of everyday goods can spark a specialness spiral by which nonconsumed goods are perceived as more special, and thus are less likely to be used in the future. Finally, Sheehan and Dommer show that while self-relevant goods are more likely to be purchased, they are also more likely to be protected or more slowly consumed.

Taken together, these four papers shed light on how nonconsumption impacts evaluations and future behavior. The papers approach this topic across various domains and methodologies, and address several questions that remain important to consumer behavior: First, when does nonconsumption increase or decrease desire for and evaluations of goods? Second, when might increased value lead to greater or lower likelihood of future consumption? Finally, what factors drive the inferences that consumers draw from nonconsumption, and how do these inferences impact subsequent consumption?

We believe that this session will have broad appeal to scholars interested in motivation and self-regulation, meaning transfer, identity-relevant consumption, and self-perception more broadly. Given staggering statistics hinting at the massive rate of nonconsumption worldwide—namely, that the average American home contains thousands of goods (MacVean 2014), or that shoppers worldwide spend $1.2 trillion annually on non-essential goods (Whitehouse 2011)—we believe this session brings to light the incredibly relevant, and largely understudied, topic of nonconsumption.

Need and Intertemporal Choice: A Dual Goal Hypothesis

EXTENDED ABSTRACT

Consumer decisions are usually affected by transient changes in people’s need states such as hunger, thirst, and sexual desire, as a consequence of non-consumption periods. Findings from existing research (Hoch and Loewenstein 1991; Kim and Zauberman 2013; Li 2008; Loewenstein 1996; Van den Bergh et al 2008) converge to the conclusion that higher need leads to greater impatience.

In this paper we propose and show that need states could increase patience under certain situations. Specifically, we distinguish between two types of choice, proximal choice and distal choice. By proximal choice we mean a choice between an option that is available immediately or now, and an option that is usually larger and available in the future (e.g., in 10 days). By distal choice we mean a choice between options that are both available in the future, and thus could not help satisfy the current need. We propose that need states 1) generally decrease patience in the former, as most existing literature has found (a thorough literature review confirmed that these papers used only proximal choices, and in rare cases, the smaller-sooner option was very close to “now”), and 2) decrease patience in the latter.

We explain such results by a dual-goal hypothesis. We argue that a need state activates two goals: an actualization goal and a quantity goal. The actualization goal concerns the feasibility of getting the need satisfying object. It suggests that a person of high need wants larger quantity of the need satisfying object than a person of low need. Thus, when making proximal choices, those high (vs. low) in need will base their choices on the tradeoffs between the two aforementioned goals. In this case, existing literature found greater preference for the immediate option. This suggests that the actualization goal was more prominent than quantity goal in most situations when the need is high (we take this as a fact and build it into our theorization). Alternatively, when making distal choices, actualization goal is irrelevant as both options are not immediately available (neither option can satisfy this goal anyway). Those high (vs. low) in need thus base their choices on the quantity goal, and show stronger preference for the larger-later option. In line with prior findings that need (e.g., hunger) instigates a general reward seeking tendency, we expect that the effects are similar for need relevant (e.g., food) and irrelevant (e.g., money) targets.
Five studies tested the above propositions. In study 1, participants from Amazon Mechanical Turk made eight decisions on either money or food—four proximal choices and four distal choices. Then all participants reported their hunger level. Consistent with our prediction, when facing distal choices, those who were hungrier were more likely to choose the later-later options over the smaller-sooner options (i.e., more patient); in contrast, when facing proximal choices, those who were hungrier were directionally more likely to choose the smaller-sooner options (i.e., directionally less patient). Such conclusions were true for both food items and money. Study 2 was a field study in which we approached students who were either walking into (hungry condition) or out of (satiated condition) a university canteen. Participants made six decisions, either on money or food choices, half proximal choices and another half distal choices. After a manipulation check, those walking in the canteen were indeed hungrier than those walking out of it. Repeating the findings in study 1, hungrier participants were more patient when making distal choices. For proximal choices, no significant difference in patience was found.

Study 3 directly manipulated hunger. Participants were instructed not to (hungry condition) or to have breakfast (satiated condition) before the study session (in the morning). To strengthen hunger manipulation, those in the hungry condition were given a tiny slice of bread (bite size) to taste and those in the satiated condition were asked to eat two large slices. In a subsequent unrelated study, they made eight food decisions on a computer. Their response time for each action was recorded by the Mouselab program. Results indicated that hungrier participants were less patient when making proximal decisions, but more patient when making distal decisions. Hunger significantly decreased patience in this study but not in the previous studies because we had a stronger hunger manipulation (and thus the actualization goal became more prominent). These findings were further corroborated with attention measures from the Mouselab program.

To increase the generalizability of our result, study 4 manipulated sexual arousal instead of hunger. Following Li and Zhang (2014), half participants evaluated pictures of sexy female models (high sexual arousal) and another half evaluated pictures of sexually unattractive females (low sexual arousal). After this task, participants made eight money decisions, with half proximal and half distal choices. Similar to study 1 and 2, sexually aroused participants were more patient when making distal choices, but were not different from the satisfied participants in their patience when making proximal choices.

Finally, in study 5 we examined the dual-goal mechanism. Similar to study 1, participants from Amazon Mechanical Turk first made proximal and distal choices of food items and reported hunger levels. Participants also reported the extent to which they would like to get a large piece of food as possible (quantity goal), and as immediately as possible (actualization goal). Results indicated a significant interaction between hunger and decision. Hunger significantly decreased patience for proximal choices but increased patience for distal choices. More importantly, bootstrapping analyses supported the moderated mediation effects of actualization goal and quantity goal. Specifically, both immediacy goal and quantity goal could mediate this effect (in opposite directions) for proximal and distal choices. However, actualization goal was a significantly stronger mediator in proximal choices and the quantity goal was a significantly stronger mediator in distal choices. A meta-analysis of all the studies confirmed that need states decreased patience in proximal choices and increased patience in distal choices.

**Postponement Specificity Differentially Affects Desire and Consumption**

**EXTENDED ABSTRACT**

Desires are a hallmark of daily life. Although they can be a source of great pleasure, they can also be a source of pain and torment as they derail people from achieving cherished goals. How can consumers tame unwanted desires?

It is generally accepted that specific goals are superior for facilitating goal completion (e.g., Locke & Bryan, 1969). However, in the present work we suggest that unspecific postponement is more effective for reducing unwanted consumption than specific postponement.

Our hypothesis was based on an integration of two separate literatures. First, research suggests that plan specificity changes people’s motivation to achieve the set goal, with specific plans strengthening commitment and motivation (e.g., Salancik 1977). Second, recent research suggests that people learn about their desires just as they learn about their attitudes and preferences, by observing and making inferences about their behavior (e.g., Bem 1972; Dai and Fishbach 2014). When taken together, we suggest that when people observe themselves postponing a temptation to an unspecific future time, they interpret their behavior as a signal that they do not strongly value that which they have postponed. In this way, postponement should only weaken valuation for the temptation when people are induced to postpone when postponement is unspecific (not specific).

Experiment 1 (N=108) varied the specificity of postponement and examined desire for the temptation in the heat of the moment by measuring performance on a reading comprehension task in the presence of the tempting cookies (e.g., Masicampo and Baumeister 2011). Before completing the reading comprehension task, participants formed an unspecific postponement intention or a specific postponement intention about the tempting cookies. Specifically, those in the unspecific (specific) postponement condition rewrote an intention to postpone the temptation (“If I have the urge to eat cookies, I will tell myself that I can eat cookies some other time [in exactly one week]”). Hence, the unspecific and specific postponement intentions were identical except that “some other time” in the unspecific intention was replaced with “in exactly 1 week” in the specific intention. A baseline condition was included in which participants completed the reading comprehension task but were not exposed to the cookies.

Results supported predictions. Unspecific postponement participants reported being less distracted by the cookies and hence performed better on the reading comprehension task as compared to specific postponement participants. Additionally, unspecific postponement participants did not differ from baseline participants suggesting that unspecific postponement enabled participants to perform as though the cookies were not even there.

Experiment 2 (N=186) tested the differential effects of specific and unspecific postponement for liking of a temptation. If unspecific postponement weakens valuation of the temptation, then a change in liking—an affective evaluation—should be reduced by unspecific but not specific postponement. Experiment 2 also tested the hypothesis that individual differences in motivation to forgo the temptation moderate the effect of postponement on consumption. If unspecific postponement weakens liking because it leads people to infer lackluster valuation for the temptation then this should occur most strongly among participants who are motivated to interpret the ambiguous postponement intention as a signal of low valuation of the temptation.

Similar to Experiment 1, participants in the unspecific and specific postponement conditions were exposed to cookies in their cu-
bibles whereas participants in the baseline condition were not. All participants rated their liking for the cookies. Then, participants in the postponement conditions completed the same intention used in Experiment 1. After a distractor task, all participants completed their liking of cookies again. Motivation to forego unhealthy food was measured with the dieting subscale from (Herman and Polivy 1980).

Results supported predictions. An interaction between unspecified and specific postponement (vs. baseline) and eating restraint emerged when predicting change in liking from pre-manipulation to post-manipulation. Dissecting the interaction revealed that unspecified postponement (vs. baseline) reduced liking for the temptation, primarily among participants who were highly motivated to forego tempting but unhealthy food. There was no interaction between specific postponement and eating restraint.

Experiment 3 (N=235) sought to test the differential effects of unspecified and specific postponement for consumption of the postponed temptation. Participants were asked to choose a food temptation and were induced to form an unspecified postponement intention (same as experiment 1), specific postponement intention (identical to experiment 1 except the time frame was “three days”), or no plan (same as experiment 1). Participants received a text message on their smartphone and were asked to click on the link the very next time they consumed the temptation, enabling us a precise measure of consumption delay. Results supported the self-signaling account for the effects of postponement on consumption. An interaction between motivation to forgo consumption and unspecified postponement (vs. no-plan control) but not specific postponement (vs. no-plan control) emerged. Among participants highly motivated to forgo consumption of the temptation, unspecified postponement (vs. no-plan control) delayed consumption. The effect of unspecified postponement (vs. no-plan control) was not significant among those who were not highly motivated to forgo consumption.

In summary, three experiments suggest that when consumers are trying to give up a temptation, unspecified postponement is a more effective strategy than specific postponement. The results imply that people’s desires for temptations are partially shaped by the interpretation of their behavior, and that desire modification can be an effective route toward self-control success.

How Everyday Items Become Treasures: Forgoing Usage and the Escalation of Specialness

EXTENDED ABSTRACT

Consumers own many unused items (e.g., Trocchia and Janda 2002; Wansink, Brasel, and Amjad 2003). Some things (e.g., fancy china or tuxedos) go unused because there are rarely occasions nice enough; others (e.g., wine from your wedding) go unused because of sentimental value; and still more things go unused because they are no longer liked (e.g., old clothes) or because usage opportunities rarely arise (e.g., baseball gloves). But are these the only reason items go unused?

A brief glance in one’s closet or pantry suggests that some items—such as inexpensive bottles of wine or t-shirts—are continually passed over, even though people like them and have ample opportunities to use them. Further, these “everyday” items didn’t come from a special event and don’t start with any sentimental value. So why do people continually forgo using them?

We suggest that merely not using an everyday item, like a bottle of wine, can lead people to avoid using it in the future. There are many inferences consumers can draw from nonconsumption (Bern 1972) and these inferences shape how non-consumed items are perceived and used (Dai and Fishbach 2013, 2014). In the absence of salient external (i.e., I can’t access it) or negative (i.e., I don’t like it) attributions, however, we suggest that forgoing usage can lead an item to be perceived as more special. If one infers they passed up using something because they are saving it, for example, that suggests the item must be worth saving, and thus must have at least some special quality or aspect to it.

Perceiving an item as more special can in turn decrease subsequent use. Much like the way families restrict using china for special occasions, or wait to open champagne until a big job promotion, people are motivated to protect special items by restricting their use (Belk, Wallendorf, and Sherry, Jr. 1989; Zauberman, Ratner, and Kim 2009). Thus, when everyday items become special due to being passed up, consumers will restrict future usage in two complementary ways: by reducing usage in normal, everyday occasions (e.g., a Tuesday) and by reserving for more extraordinary (i.e., rare or special) occasions (e.g., a birthday).

As non-consumed items are passed up in subsequent opportunities, they become even more special, and thus, further restricted from usage. Consequently, forgoing usage may spark a “specialness spiral” whereby items become more and more special, and less and less likely to be used. As a result, everyday items may become treasures: fenced-off gems, only to be used in the most extraordinary of occasions.

Studies 1a-c provide an initial test of this phenomenon. Whether examining tickets to a boat cruise (study 1a; N = 181), episodes of a television show (study 1b; N = 205), or a bottle of wine (study c; N = 203), compared to simply considering such items, forgoing decreased usage likelihood in everyday occasions, and increased likelihood of being reserved for extraordinary occasions (all ps < .05). By demonstrating that forgoing usage leads to reserving for more extraordinary occasions, study 1 casts doubt on the alternative explanation that forgoing decreases future use because people infer that they do not like the non-used item.

Study 2 (N = 320) tests our proposed mechanism. While people can draw various inferences about why they chose not to use a good (e.g., they don’t like it, it’s not a good fit for the situation), saving inferences should be most likely to enhance that good’s specialness. Consequently, if changes in the item’s perceived specialness are driving our effect, as we suggest, then encouraging such saving inferences should amplify the effects on future usage. Results confirmed this prediction: People who naturally made saving inferences perceived a non-used item as more special (r = .56) and intended to reserve it for a more extraordinary occasion (r = .64). Moreover, encouraging such saving inferences led to reserving for more extraordinary occasions (p = .022), mediated by increased perceived specialness (p = .024; 95% CI [.03, .48]).

Study 3 (N = 402) further tests the proposed process by manipulating both saving inferences and whether a subsequent usage occasion is ordinary or extraordinary. Consistent with our notion of everyday items becoming treasures, a predicted two-way Saving Inferences × Usage Occasion interaction (p = .086) reveals that passed-up items that have become more special are restricted from everyday occasions (e.g., a normal dinner at home; p = .001), but not from extraordinary occasions (e.g., a celebratory dinner at home; p = .35).

Does increased specialness always lead to restricted use? Forgoing leads to future usage restriction due to consumers’ motivation to protect an items’ specialness; accordingly, we suggest that reducing how limited an item seems should attenuate our effect. Thus, study 4 (N = 227) manipulated both saving inferences and how limited an item was. As expected, the Saving Inferences × Limited interaction (p = .05) revealed that when a non-used item is framed as less limited (and thus, needing less protection), increases in specialness
from forgoing usage did not lead to future restricted use \( (p_{\text{limited}} = .05; p_{\text{less limited}} = .4) \).

Finally, study 5 \((N = 103)\) tests the additive nature of “specialness spirals.” In a within-subjects design, we find that the more times people pass up using an item, the more special it becomes \((\text{all } ps < .001)\), and the less likely they were to use it in subsequent everyday opportunities \((\text{all } ps < .001)\).

Across several domains, we demonstrate how everyday items become treasures: A single act of forgoing usage can spark a specialness spiral by which the item seems more special, and is subsequently less likely to be used in the future. This research advances understanding of nonconsumption, first by examining nonconsumption that is neither externally-imposed nor planned in advance, and second, by examining beliefs about when non-consumed items should be used; and to the work on meaning transfer, by introducing a non-active process by which goods can be imbued with specialness.

**Saving It (and Us) For Later? Consuming and Saving Products that Reflect Our Selves**

**EXTENDED ABSTRACT**

A vast amount of research has demonstrated that consumers prefer products and brands that express their selves and identities \((\text{Escalas and Bettman 2005; Fournier 1994; Kleine, Kleine, and Allen 1995; Reed 2004})\). While clearly consumers like products and brands that symbolize their selves, it is unclear whether/how consumers actually use these products. The present research examines whether these products that symbolize one’s self are protected (i.e., saved) or are consumed quickly after purchase.

Research in marketing and psychology makes opposing predictions regarding the likelihood of saving versus consuming self-symbolic goods. On one hand, consumers may be more likely to use products that symbolize the self. Research has shown that consumers will cease using products that are identity-inconsistent \((\text{Berger and Heath 2008})\) and often look for products with more identity-consistent characteristics \((\text{Ward and Broniarczyk 2011})\). More recently, research has demonstrated that consuming identity-consistent products, relative to those that are inconsistent, slows down satiation \((\text{Chugani, Irwin, and Redden 2015})\). On the other hand, self-symbolic products may help individuals affirm and protect various self-aspects \((\text{Gao, Wheeler, and Shiv 2009; Rucker and Galinsky 2008; Sivanathan and Pettit 2010})\); saving them for this purpose may prove beneficial in the long run.

We conducted our first study in a lab session to examine the degree to which a self-symbolic product would be consumed. We disguised the experiment as a taste test for a new bottled water offering. All participants were given a bottle of water from a fictitious brand to sample, but half of the participants were given a bottle of water with a custom label that included their name printed on it. All participants were asked to open, taste the water, and to evaluate the water. Participants were then told that the water bottle was theirs to keep, and they could drink the rest of the water whenever they liked. Then, participants completed a series of unrelated studies for the remainder of the 30-minutes lab session. At the end of the lab session, a lab manager measured their water consumption as they were collecting other materials from the participants. Each bottle was measured to determine how much water participants drank from the bottle. We found that participants ended up consuming less of the water when the bottle had their name on it \((M_{\text{name}} = 14.87\% \text{ vs. } M_{\text{plain}} = 35.6\%); F(1, 82) = 5.94, p = 0.017)\), suggesting that they may be more likely to save, rather than consume, self-symbolic goods.

In study 2, we wanted to replicate the conservation of self-symbolic goods while also testing whether and when consumers save such goods for later use. The study utilized a paradigm where participants received a notebook, which was either related to their university identity \((i.e., \text{“Notes of [school mascot]” or a control notebook (i.e., “Notes”)})\), as a “thank you” gift for participation. After receiving their notepads, students sat down at a computer station, where two pieces of scrap paper and a writing utensil were placed, to complete a series of computerized studies. Contained in these studies were some difficult problems that would require a pen and paper to solve \((e.g., 8384 \times 1103 = ?; \text{ calculator use was prohibited})\), and their use of the notebook would be examined. The session concluded by asking participants to rate their notepad on aesthetics and scarcity, as well as measures capturing their level of connection with the university.

As predicted, participants given the identity-related notepad were less likely to use the notepad than those given the plain notepad \((17.24\% \text{ vs. } 45.45\%; 
\chi^2 = 10.51, p = .0012)\). Importantly, the identity notepad was not rated as significantly better \((M_{\text{identity}} = 4.38 \text{ vs. } M_{\text{plain}} = 4.25); F(1, 111) = .17, p = .68)\), or more scarce \((M_{\text{identity}} = 5.66 \text{ vs. } M_{\text{plain}} = 5.69); F(1, 111) = .02, p = .89)\) that the plain notepad. Furthermore, a significant interaction term in a logistic regression that also included a participant’s notepad condition and connection to the university demonstrates that participants were less likely to use the identity related notepad when they felt more connected to that identity \((b = .41, \text{ Wald } \chi^2 = 3.93, p = .047)\). Moreover, there was a significant \((a = .05)\) Johnson-Neyman point at 4.4180, suggesting that those who reported connection scored greater than 4.4180 \((75.22\% \text{ of participants})\) were less likely to use the notepad when it was linked to their identity.

As consuming products has been suggested to reaffirm and protect the self \((Larrick 1993)\), study 3 used a similar notepad paradigm, with a participant’s personal identity \((i.e., \text{“Notes of [participant’s first name]”})\). Those who have a strong desire to protect the self will be likely to use the self-symbolic \((i.e., \text{identity})\) good to serve their protection motives and therefore less likely to save the good for later use. Thus, we expected self-protection motives to moderate our effect such that the conservation of the self-symbolic good \((relative \text{ to a plain good})\) will be stronger among those with low self-protection motives.

We found that participants with the named notepads were marginally less likely to use them \((54.9\% \text{ vs. } 68.6\%); p = .077, \text{ one-tailed})\) and more likely to take their notepads with them at the end of the lab session \((78.4\% \text{ vs. } 47.1\%); p = .0011)\). We also found that their self-protection motives interacted with notepad condition to predict the likelihood of using the notepad \((Wald \chi^2 = 2.99, p = .084)\); individuals with low self-protection motives demonstrated a lower likelihood of using the named notepad compared the plain notepad, but there was no effect of notepad on usage at high levels of self-protection \((\text{Johnson-Neyman point at } - .46 \text{ SD from the mean}; a = .05)\).

The results from three studies illustrate an interesting paradox. Although consumers prefer products that reflect their identities, they may actually be less likely to use these products. Furthermore, the results demonstrate that this relationship may be more pronounced for individuals who are highly motivated to protect themselves. These findings suggest that the relationship between one’s identity and their consumption goes beyond the initial purchase.

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