History Matters: When Waiting Increases Patience in Intertemporal Choice

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In this research, we examine the effect of a waiting experience on intertemporal choice. Previous research attests that people become impatient as they get closer to making a choice between a smaller-sooner reward and a larger-later reward, hence they prefer the smaller-sooner reward. We predict that the wait experience, as one moves from distant to near choices, influences the perceived value of choice options in a way that increases patience. Across four studies we show that waiting increases preference for larger-later rewards. This increase in patience is associated with an increase in the perceived value of the waited category.

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SESSON OVERVIEW

One of the most robust findings over decades of research in intertemporal choice is that people are dynamically inconsistent; they are more patient for future trade-offs than for near trade-offs (e.g., Ainslie 1975; Strotz 1955; Thaler 1981). Previous research has provided different theoretical explanations (e.g., Hoch and Loewenstein 1991; Liberman, Trope and Stephen 2007; Loewenstein 1996; Zauberman and Lynch 2005), examined its boundary conditions, e.g., in the domain of consumer behavior (e.g., Malkoc and Zauberman 2006; Malkoc, Zauberman and Ulu 2005; Soman 1998) and investigated consumers’ coping strategies (e.g., Ariely and Wertenbroch 2002; Wertenbroch 1998).

Despite the extensive research done in this field over the years, this session demonstrates that it remains a fertile area for continued research. The session presents three papers, each focusing on different aspects of the dynamic inconsistency problem. In particular, they demonstrate that (1) dynamic inconsistency might not be as serious a problem as pervious research has suggested. It might be even reversed when consumers are moving from distant to near choices. (2) Sophisticated consumers are willing to adopt commitment strategy even with the prospect of real financial losses, which is proved to be very effective in solving dynamic inconsistency problem. (3) Concern for dynamic inconsistency might lead consumers to be overly prudent, which systematically drives consumer preferences and decisions.

Dai and Fishbach demonstrate in four studies that the actual movement towards the options can increase consumers’ patience, which is contrary to the prediction based on models of dynamic consistency. They show this pattern of results in hypothetical as well as real waiting and monetary consequences, with cash and consumer products. They also show that this is because consumers infer from their wait experience that they value the category more, which in turn leads to greater preference for larger later reward.

Giné, Karlan & Zinman examine consumers’ precommitment strategy in a field experiment in a Philippine bank. Substantial proportion of smokers sign up to a savings account (CARES) designed to help them quit smoking. They deposit money into the account and agree to let the bank forfeit their entire balance to charity if they fail a urine test six months later. Compared with those in the control condition, those who signed up to the CARES program were about 30% more likely to pass the test. The result suggests that sophisticated consumers are willing to pay premium for such commitment products, and that these commitment products are effective in helping achieve self control.

In the third paper, Kivetz and Keinan argue that consumers often suffer from a reverse form of dynamic inconsistency problem, namely excessive farsightedness (“hyperopia”) and future-biased preferences. It shows that consumers (a) require special entitlement justifications to indulge (e.g., through hard work or perceived excellence); (b) perceive themselves as suffering from insufficient indulgence, and consequently, correct this imbalance in their lives by pre-committing to future hedonic experiences; and (c) regret (in the long-run) their supposedly farsighted acts of choosing virtue over vice.

Overall, the three papers were chosen for this session because (1) they center on the same dynamic inconsistency problem, and examine new boundary conditions, which greatly enrich our understanding of intertemporal choice and self control. (2) In terms of methodology, the session represents both behavioral and economic approaches. Different approaches complement each other and can potentially inspire new insights for future research. Together, the three papers form a cohesive set of explorations into some fundamental issues of intertemporal choice.

EXTENDED ABSTRACTS

“History Matters: When Waiting Increases Patience in Intertemporal Choice”
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An underlying assumption in the literature of intertemporal choice is that people are better able to commit to larger-later reward over a smaller-sooner reward a long time in advance compared with a short time in advance (Ainslie and Haslam 1992; Frederick, Loewenstein, and O’Donoghue 2002). It follows that people become more impatient as they get closer to making a self-control choice between a smaller-sooner reward and a larger-later reward. For example, research on the common difference effect (Frederick et al. 2002) attests that a person prefers a smaller-sooner reward (e.g., one apple today over two apples tomorrow) when the options are presented in the near future, but prefers the large-later reward when the options are presented in the distant future (e.g., two apples in 101 days over one apple in 100 days). However, whereas previous research compared distant and near futures, it is less clear how the actual movement from distant to near choices influences preference. For example, would waiting for 100 days before making a choice make one more or less likely to prefer two apples tomorrow over one apple today?

We predict that the wait experience as a person moves closer to making a choice increases patience such that people are more likely to choose the larger-later reward than before, or compared with people who face a near future choice. We propose that this happens because people learn about their preference by observing their own behavior and the wait experience signals to a person that the category of items (e.g., apple) is desirable. This heightened value inferred from wait further leads to increase in preference for larger-later reward (per magnitude effect, Frederick et al. 2002).

We tested this proposition in four studies. The first three studies compared intertemporal choice in (1) near future condition (e.g., a small reward today vs. a large reward in 20 days) (2) distant future condition (e.g., a small reward in 30 days vs. a large reward in 50 days), and (3) near future + wait condition (e.g., the above near future choice + the person has waited 30 days before making the choice). Study 1 examined the effect of waiting use monetary reward. We found that in the wait condition, the choice share of the large-later options was higher than in the distant future condition, which was higher than the near future condition. Study 2 replicated the same effect with products (MP3 player). Furthermore, it also showed that this increased patience is associated with increase in liking for MP3 player in the wait condition than in the other two conditions. The same finding was demonstrated in study 3 with real waiting experience and real monetary reward ($50 vs. $55 lottery):
the choice share of the large-later option was the highest in the wait condition, then the distant future condition, and lowest in the near future condition. We further found that increased patience in the wait conditions was associated with an increase in the perception of money.

In the final study, we tested whether perceived wait, similar to actual wait, increases patience. In addition, this study examined whether wait experience signals that the product is valuable (value inference), rather than that wait is less costly to the individual (cost inference). We manipulated waiting by asking half of the participants their waiting experience since the last time they had Godiva chocolate (for the other half we didn’t ask this question, which served as control group). Similar to study 1-3, we found that for choice between smaller sooner reward (i.e., 12 pieces of Godiva chocolate in 6 days) and larger later reward (16 pieces of Godiva chocolate in 48 days), salience of wait increased patience and thus preference for the larger-later option. Whereas for choices between getting the same reward for free later (e.g., 16 pieces of Godiva chocolate in 48 days) or sooner (paying $3 premium to get the same option in 6 days), wait increased preference for expediting, which suggests a decreased patience. This later result is noteworthy because value inference would predict preference for expediting (due to increased value) whereas cost inference would predict preference for postpone (due to lower cost estimation of waiting). These results suggest further that consumers infer from wait that they value a category more, rather than that they are the type who can wait (or that waiting is not that painful).

“Put Your Money Where Your Butt is: A Commitment Savings Account for Smoking Cessation”

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The use of cash incentives, generally referred to as conditional cash transfer programs, to alter behavior in health and anti-poverty programs is becoming more common, as evidenced by the spread of PROGRESA-type anti-poverty campaigns. One less-utilized method for applying cash incentives to behavior modification is the commitment contract. A commitment contract is essentially a contract on one’s own behavior, made with one’s own money—if a behavior benchmark is met, the individual gets his money back; if it is not met, the individual forfeits his money.

Green Bank of Caraga in the Philippines, together with Innovations for Poverty Action and the World Bank, recently tested a commitment contract to help Filipino smokers quit. Under the contract, participants deposited money into a bank savings account and agreed to forfeit their balance if six months later they failed a urine test to detect nicotine (failure to take the test was equated with failure to quit). Bank marketers offered the product by approaching smokers in public places. The marketers administered a short survey, provided a standard pamphlet with information on smoking’s harmful effects and how to quit, and then made one of three randomly assigned offers: 1) the commitment contract; 2) aversive “cues”: graphic, pocket-sized pictures of the negative health effects of smoking modeled on Canada’s cigarette packaging mandate; 3) nothing.

Six months after marketing the bank team returned and administered urine tests to participants from all three groups. Subjects offered the commitment contract, regardless of whether they accepted or not, were 3.1 percentage points more likely to pass the test than the control group (a 38.8 percent increase). Those offered the contract who had previously reported a desire to quit smoking at some point in their lives were 4.3 percentage points more likely to pass. The impact was even more substantial among those who signed a commitment contract. Signers overall were 29 percentage points more likely to pass the test than the control group; signers who’d stated their intention to quit at some point were 33 percentage points more likely to pass. Acceptance rates for the contract were almost double the acceptance rates reported from previous randomized controlled trials for smoking cessation aids such as the nicotine patch or gum. Success rates of those who accepted the commitment contract in this study were double reported rates of success achieved with the help of the patch or gum. (The impact of the cards was about the same as the reported impact of patches or gums.)

This product is motivated specifically from models of time inconsistency. Clearly someone with no inconsistency, no “dual-self” model of behavior, would opt in to such a contract. Hence, the mere preference for the contract is itself evidence supporting such models, and the success of the contract in changing behavior further reinforces the theoretical motivation behind the contracts.

The study also found that acceptance of the commitment contract was heavily dependent on the ease with which participants could make subsequent deposits. Some participants offered contracts were also offered a deposit collection service by the bank; all others would have been required to go to a bank branch to make deposits. Uptake of the contract without deposit collection was so low that the offer was dropped, and everyone subsequently offered the contract was also offered deposit collection. Success in quitting, unsurprisingly, was also strongly correlated with the number of deposits made.

There is still much to learn. Would a commitment contract that offers a better return be more popular, and possibly more effective, than the one designed for this study? Do those who quit using a commitment contract take up smoking again after the contract ends? Did the bank staff who came to collect weekly deposits provide a de facto reminder that was a major element in quitting success? Despite these outstanding questions, the results suggest that non-profits and policy-makers should experiment with commitment contracts in addition to conditional cash transfers in their health and anti-poverty programs.

“Hyperopia: A Theory of Reverse Self Control”

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Our religions, mythologies, and fables admonish us to overcome temptation, exercise self-discipline, and heed the future (see Adam and Eve, Odysseus, and the Ant and the Grasshopper). Social scientists, too, offer helpful strategies for increasing willpower and avoiding indulgence (e.g., Ainslie 1975; Trope and Fishbach 2000). The seemingly universal espousal of prudence and farsightedness as noble goals is reflected in the voluminous literature in the social sciences on self-control. This body of research is premised on the notion that people are short-sighted (myopic) and easily tempted by hedonic “sins,” such as overbuying (oniomania), splurging on tasty but unhealthy food, and indulging in luxuries (e.g., Prelec & Herrnstein 1992; Thaler 1980).

The current paper advances an alternative approach. Specifically, the universality of myopia is challenged and it is proposed that people often suffer from a reverse self-control problem, namely excessive farsightedness (“hyperopia”) and over-control. Such hyperopia leads people to deprive themselves of indulgence and instead overly focus on acting responsibly, delaying gratification, and doing “the right thing.” The present research examines the processes underlying hyperopia (e.g., guilt, justification), the way
people cope with hyperopia (e.g., by pre-committing to indulgence), and the consequences of over-control (e.g., long-term regret).

The paper begins by reviewing and integrating the empirical evidence regarding the antecedents and consequences of hyperopia, including the findings that people (a) require special entitlement justifications to indulge, relying on such justification cues as hard work or perceived excellence (Kivetz and Simonson 2002; Kivetz and Zheng 2006); (b) perceive themselves as suffering from insufficient indulgence, and consequently, correct this imbalance in their lives by pre-committing to future hedonic experiences (Kivetz and Simonson, 2002b); and (c) regret (in the long-run) their supposedly farsighted acts of choosing virtue over vice (Kivetz and Keinan 2006; Keinan and Kivetz 2008).

The paper also reports new direct evidence for hyperopia and supports the notion that hyperopia involves time-inconsistency and preference reversals due to variations in the intensity of guilt. Specifically, a series of studies demonstrates that people select pleasurable consumption and vices when the consequences of their decisions are psychologically distal (e.g., temporally delayed, hypothetical, improbable, abstract, or self-irrelevant) but reverse their decision when the consequences are psychologically proximal (e.g., temporally imminent, real, vivid, or self-relevant). Such reversals are more pronounced among people with a chronic tendency to experience guilt. Finally, the presented paper attempts to generalize the self-control construct by reconciling myopia and hyperopia using a distinction between self-control lapses and self-control dilemmas.

REFERENCES


