Money Muddles Thinking: the Effects of Price Consideration on Preference Consistency

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In this research, we study the possible role of price in impeding consistent (i.e., transitive) consumer choice. We hypothesize that prices make buying decisions less transitive because of the inherent imprecision of mapping monetary assessments onto predicted utility. The results of five experiments provide convergent support for this prediction. We show that this effect is robust across different preference elicitation methods and persists even when participants are merely asked to consider how much a product might cost. Furthermore, the effect is attenuated for price conscious consumers or when we label the attribute "price" as "quality rating" instead.

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SESSION OVERVIEW

The notion of preference consistency lies at the roots of understanding, predicting, and influencing consumer behavior. Most marketing activities such as market segmentation, new product development, marketing communications, and customer management are based on the premise that consumers behave in somewhat consistent patterns. A substantial body of research in preference construction (see Lichtenstein & Slovic 2006 for a recent collection of work in this literature) has established that consumers do not always have stable preferences; in contrast, their preferences can be susceptible to a host of context effects such as changes in the number (Iyengar & Lepper 2000) or composition (e.g. Huber, Payne, & Puto 1982, Simonson 1989) of the choices they have.

This session brings together a series of three papers that examine how thinking about one’s consumption experiences and given product information in different ways can differentially affect the consistency and stability of one’s preferences. Specifically, the degree of consistency in consumers’ preferences can change as a result of how consumers think about their related retrospective consumption experiences, the given attribute information of the products to be consumed, and the associations between these products and consumers’ self identities.

Using a series of four experiments in three distinct domains—food, social interaction, and music—Galak, Redden, and Kruger demonstrate that making more salient related (vs. unrelated) intervening experiences since the last consumption episode can reduce the degree of product satiation and enhance the consistency of preferences over time. Simply having a wide variety of experiences might not be enough for consumers to recover from satiation since consumers tend to experience “variety amnesia;” rather, for consumers to “restore” their preferences to the products they most preferred and to maintain consistent preferences over time, thinking about the variety of their past related experiences might be essential.

On the other hand, Lee, Bertini, and Ariely find that how consumers think about the given product information can also influence the consistency of their preferences. In particular, they examine how the availability of price information can impact consumers’ preference consistency given the inherent imprecision of mapping between monetary assessments and predicted utility. The results of a series of five experiments converge toward the same conclusion: when consumers think about prices during their purchase decisions, their choices are less consistent and transitive. Interestingly, price conscious consumers who are chronically more adept at thinking about how prices can affect their utility are less susceptible to such a negative effect of price consideration on preference consistency.

Nonetheless, the consistency of consumers’ preferences over time depends not only on how consumers think about given product attributes but also the relationships between these products and their self identities. Through a series of three studies, Amir and Mazar show that consumers’ preferences for products or experiences that are closely associated to consumers’ self identities, when these identities are formed (e.g. during adolescence) or significantly changed (e.g. due to a life changing event such as marriage), will remain relatively stable throughout consumers’ lives. Such preference consistency does not apply to products that are not associated with consumers’ identities and does not depend solely on the consumers’ age or the novelty of the products.

Overall, given the fundamental relevance of these papers’ topics to consumers’ every day lives, this special topic session should be of great interest not only to marketing researchers and psychologists, but also to anyone who is fascinated by the factors that determine how consistent our preferences are over time.

References


EXTENDED ABSTRACTS

“The Construction of Satiation: Recalling Related Intervening Experiences Accelerates Recovery from Satiation”

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Consumers typically enjoy something less as they have more of it. Although such satiation is often inevitable, it does not last forever. For example, listening to a song several times in a row will get tedious, but presumably will not affect one’s enjoyment of that song a year from now. We explore this temporal aspect of satiation, and show how consumers can recover from satiation more quickly.

In a process termed “spontaneous recovery” (Thompson and Spencer 1966), people seem to recover from satiation and once again enjoy their favorites with the simple passage of time. Likewise, satiation also seems to dissipate as people have other intervening experiences. For example, people salivate less from a taste of lemon after 10 trials, but a novel taste can immediately restore their salivation (Epstein et al. 1993). It seems that either the passage of time or the presence of different experiences helps people recover from satiation. We focus on how satiation depends on the salience of intervening experiences from the past.

The recall of past consumption plays an important role in determining satiation. People eat less candy if the wrappers from each piece remain visible (Polivy et al. 1986), and consume less food when they more fully account for how much they have already had (Wansink 2004). Remembering past consumption episodes seems to increase satiation for an item. We ask the complementary question of whether focusing on past episodes that were different has the inverse effect of reducing satiation for a particular item.

It is unlikely that recalling all past experiences accelerates one’s recovery from satiation. We examine the distinction between
the recall of related and unrelated experiences. Specifically, we predict that thoughts of unrelated experiences should have little impact on recovery. For example, thinking about music likely won’t make one feel less satiated with respect to sushi, as music has little to do with food. In contrast, thinking about things related to sushi, such as other types of cuisines, should help the recovery process. More generally, thoughts of other experiences will accelerate recovery only when they fall within the same consumption context.

Finally, we distinguish between thinking about any episodes and thinking about intervening episodes. When consumers decide what to consume, thoughts of related experiences play a role in determining the amount of satiation felt. However, these thoughts can be of any experience that a consumer has had (intervening) or may have (future). We predict that that much like actual dishabilitating experiences (Rolls, Rowe, and Rolls 1982), which necessarily occur since the last time a stimulus was consumed, only thoughts of intervening experiences will accelerate recovery. For example, when deciding what song to listen to, a consumer may think about songs he has recently heard or songs that he will potentially hear in the future. Thoughts of the former should decrease satiation, while thoughts of the latter should not. More formally, we predict that feelings of satiation should decrease when intervening experiences are made salient.

We find support for these predictions across four empirical studies. The first study finds that people had a greater preference for a flavor of jelly bean that they had satiated to when they were reminded of other jelly beans that they had also consumed. The second and third studies extend and replicate this effect in the domains of social interaction and music. When participants thought of “all the other music they listened to” or “all the other friends they hung out with” during the past two weeks, they wanted to hear their favorite (and presumably most satiated) song and hang out with their close friend more so than when no such thought generation task occurred. The third study also finds that this recovery from satiation appears only when listing friends they have spent time with in the past two weeks (i.e., it broke up the repetitive experience), and not for friends they expected to see in the upcoming two weeks. The fourth and final study rules out some alternative explanations in a controlled longitudinal study related to music consumption. Three weeks after being satiating to a preferred song, participants enjoyed that song again more when they thought of all the other musical artists they had heard in the intervening time, as compared to when they thought of unrelated experiences. Importantly, this difference was only present for a satiated song, and not for another unsatiated song that they also preferred.

Many see satiation as an inevitable, but temporary, negative consequence of consumption. Although seeking out variety likely helps counter satiation, this research suggests that simply having variety is not enough. People seem to forget about this variety when they once again think about and focus on their favorite. Despite the fact that consumers work hard and pay a price to surround themselves with a great deal of variety, they seem to succumb to some sort of “variety amnesia” and forget the abundance that they live in. It seems that people construct and recover from satiation in the moment based on past episodes that easily come to mind. We find that the simple act of recalling related intervening experiences reduces satiation.

References


“Money Muddles Thinking: The Effects of Price Consideration on Preference Consistency”
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Price is an integral part of every buying decision. Consumers not only interpret prices as signals of product/service quality (Gerstner 1985) but can also be influenced by prices in their degree of involvement with the purchase process (Wathieu and Bertini, forthcoming) and their subsequent post-purchase consumption experience (Shiv, Carmon, and Ariely, 2005).

More fundamentally, in this work, we explore consumers’ ability to use this important attribute—price—in their decision making. Specifically, we examine the effects of prices on the reliability and consistency of consumers’ preferences, or consumers’ capacity to consider prices and interpret them the same way every time they make a purchase decision. Prior research has consistently demonstrated the general dissociation between monetary assessment and predicted utility and the ill-defined hedonic representation of money in the minds of consumers (Amir, Ariely, and Carmon, forthcoming). Based on the inherently imprecise mappings between price evaluations and predicted utility, we hypothesize that price considerations can deteriorate the consistency of buying decisions.

To test this hypothesis, we investigated whether the availability of price information for a set of ten differentiated products (t-shirts) affects the consistency of sequential choices in pair-wise comparisons. As a measure for preference consistency, we computed the number of transitivity violations (i.e. for any a, b, and c, a ≥ b, b ≥ c, c ≥ a, where ≥ denotes relative preference) across experimental conditions (Kendall and Babington Smith 1940; Lee, Amir, and Ariely, forthcoming). Across five experiments, we consistently found that when consumers considered prices in their decision making, their preferences were more intransitive.

In Experiment 1, participants (N=103) were randomly assigned to one of two conditions: in the price condition, both the pictures and prices of the t-shirts were presented to participants, while in the no-price condition, only the pictures of the t-shirts were available. Consistent with our basic hypothesis, the results revealed that participants in the price condition made significantly more intransitivity errors than those in the no-price condition (p=.01).

This result was replicated in Experiment 2 (N=43) in which we used a different preference elicitation method—a ten-point relative preference rating scale—instead of binary choice. Additionally, we modified the experimental procedure to test an alternative explanation: in Experiment 1, participants in the no-price condition were never given the t-shirts’ prices; thus, differential learning across conditions could have contributed to the different degrees of
preference consistency. To test this account, in Experiment 2, we showed all participants (in both conditions) the prices of all ten t-shirts before the choice task. (We used this modified design in all subsequent experiments.) Similar to Experiment 1, participants in the price condition made significantly more intransitivity errors than those in the no-price condition (p<.05), demonstrating that the negative impact of price on preference consistency is the result of differential availability of price information during choice and does not depend on how preferences are elicited.

One alternative account of the above results is that participants in the price condition had “more” information than those in the no-price condition during choice, and the salience of this additional information could have made it more difficult for participants in the price condition to integrate different attributes in their decision making. We rule out this alternative account in Experiment 3 (N=174) by demonstrating that it is the type of information, and not the availability of more information, that influences the stability of consumers’ preferences. Specifically, participants were randomly assigned to one of three experimental conditions: in the price condition, participants were asked to consider how much they thought each t-shirt would cost when making their choices, whereas in the experience condition, participants were asked to consider how it would feel to wear each t-shirt; in the no-info (control) condition, participants were simply asked to choose the t-shirt they preferred within each pair without any specific instructions to consider any particular decision factor. Thus, unlike the earlier experiments, the t-shirts’ prices were never displayed on the screen in all three conditions. The results revealed that participants in the price condition made significantly more transitivity errors than participants in both the experience condition (p=.03) and the no-info condition (p=.03), indicating that, rather than the mere availability of prices during choice, it is the active consideration of such prices that deteriorates preference consistency over time.

The results of Experiment 3 were conceptually replicated in Experiment 4 (N=194) using a 2 (Price: present, absent) x 2 (Quality Rating: present, absent) between-subjects design: participants were shown both the prices and quality ratings of the t-shirts, one of the two pieces of information, or neither during choice. A 2X2 ANOVA returned a main effect of price on preference consistency [F(1, 190)=4.065, p=.045]; however, neither the main effect of quality ratings [F(1, 190)=3.322, p=.07] nor the interaction effect between price and quality ratings [F(1, 190)=7.732, p=.01] was statistically significant, providing further evidence that the negative effect of price consideration on preference consistency cannot be adequately explained by an information complexity account.

Finally, in Experiment 5 (N=50), we further tested our hypothesis by using an individual difference factor—price-consciousness (Lichtenstein, Ridgway, & Netemeyer 1993). We posit that price-conscious consumers chronically focused on paying low prices should find it easier to map between prices and predicted utility; thus, the availability of price information should be less likely to degrade their preference consistency, compared to consumers who are less price-conscious. Indeed, a 2 (price vs. no-price) X 2 (price-consciousness: high, low) ANOVA revealed a significant main effect of price [F(1, 46)=4.193, p=.046], a significant main effect of price-consciousness [F(1, 46)=7.271, p=.009], and a significant interaction effect between both factors [F(1, 46)=6.152, p=.017] on preference consistency. Planned comparisons further revealed that whereas the availability of price information led to greater preference inconsistency among relatively non-price-conscious participants [t(23)=2.532, p=.019], it did not affect the preference consistency of price-conscious participants [t(23)=.482, p=.63].

References

“The Most Influential Age Hypothesis: Does the Self Cause Predictable Preferences?”
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Preferences are formalized as the basis for behavior ranging from our everyday actions to the most significant choices in life. One of the traditional assumptions of many social sciences is that such dispositions are relatively stable throughout our lives. Life after all, demands some stability in our motivations to survive, procreate, and belong (Maslow 1943). The hallmark of this stability assumption has been the ability to predict or forecast behavior, which in turn enables the modeling of human behavior—a necessity in disciplines such as economics or public policy aiming at increasing social welfare. In this paper we attempt to shed light on the situations in which this crucial assumption is more likely to hold and its antecedents.

A growing body of research in psychology and decision making has accumulated evidence that preferences are often unstable and dependent on transient aspects of the situation. For example, preferences for risk and reward are reference dependent (Kahneman & Tversky 1979) and thus, depend on the framing of the situation (Epley et al. 2006; or McKenzie 2004; Ariely, Loewenstein, & Prelec 2003). Even preferences for high involvement decisions, such as how much to pay for real estate (Simonsohn & Loewenstein 2003) or which university to pick, may depend on recent, albeit less relevant experiences. Choosing whether to accept an offer for an experience or offered to be paid for it. In sum, there are many examples for which people do not seem to have well-defined predictable preferences.

Yet, at the same time, there exists evidence that some preferences are predictable. Most notably, Holbrook and Schindler (1989) contrasted people’s age with their ratings of songs and find an inverted-U shape peaking at the early twenties (23.47 years old).
Their results suggest that “People seem to develop preferences for popular musical styles (typically those which prevail among their current circle of friends) during late adolescence or early adulthood, and these preferences over other styles of music tend to prevail for the rest of their lives.” The mixed evidence about the stability of preferences begets questioning what mechanism might lead to their development and what may be the resulting domains in which we might expect relatively stable preferences.

In this work we investigate one theory implying the development of such stable preferences: “The most influential age hypothesis”. Emerging from a vast stream of research in social and developmental psychology, this theory builds upon the idea that identity is a rather stable trait, which is formed during late adolescence (Baumeister 1998; Erikson 1968; Kroger 2000;). To the extent that some preferences are driven by one’s identity, the formation of one’s self may not only influence downstream attitudes (Lord, Ross, & Lepper, 1979; Visser & Krosnick, 1998) but also preferences. Based on this idea and Holbrook and Schindler’s (1989) findings about the influence of the early adulthood age on preferences for popular music, we suggest that similar to moral principles, social schemas, and languages, preferences for products or experiences that are closely associated to one’s identity, when it is formed or significantly changed, will remain relatively stable throughout our lives. We report three studies in support of our theory.

We begin by looking at movies and asking experts (Study 1) as well as lay people (Study 2) two simple questions: What are their favorite movies, and at what age did they see the those movies? Our data does not support a recency effect story. In contrast, we find that both, experts as well as lay people have very strong preferences for movies they have seen as early adults. We show that our results cannot be explained by age of the participant, age of the movie, nor any other movie attribute. We therefore conjecture that products or experiences that are somehow linked to one’s identity-formation will be more likely to make a long lasting, predictable impression, and consequently lead to rather stable preferences. In our final study we explicitly compare the preferences for products related to one’s identity (e.g., movies) versus products not related to one’s identity (e.g., portable music players) to show that only preferences for the former, when linked to identity-changing events such as marriage or becoming a parent, leave a lasting impression.

References