Too Much of a Good Thing: Insensitivity to Rate of Consumption Leads to Unintended Satiation

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Repetition of a well-liked stimulus—whether a tasty treat, catchy tune, or favorite piece of art—can cause satiation. This research suggests that rate of consumption moderates that tendency, but that consumers do not fully account for rate in either their predictions or behavior. Consequently, people consume too rapidly, growing tired of initially well-liked stimuli more quickly than if they spaced repetitions. Paradoxically, participants who chose their own (rapid) rate of consumption were less satisfied than those who had their rate of consumption decided for them.

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SESSION OVERVIEW

Research shows that consumers often spontaneously consider and are influenced by their anticipated feelings about consumption experiences, both in the choices they make and in how they feel about these experiences. However, people also commonly get these hedonic predictions wrong, leading them to make suboptimal or unwanted choices (e.g., see review by MacInnis, Patrick, and Park, 2005). This symposium combines 4 papers and a discussant that advance our understanding of why and how hedonic mispredictions occur, by focusing on a relatively new and unexplored explanation: the role of lay beliefs. Beyond simply providing a laundry list of lay beliefs that result in misprediction, the juxtaposition of these papers provokes thinking on when and how lay beliefs can result in misprediction.

First, misprediction can occur if consumers hold consistent, but incorrect lay beliefs. This occurs in two of the present papers, resulting in larger predicted differences in hedonic reactions than are observed in experience. In the Ebert/Meyvis paper, subjects expect the psychological distance of an experience (e.g., reading about a recent versus a distant past event) to impact both processing of the experience and its direct hedonic impact resulting in overprediction of the impact of psychological distance. In the Zhang/Hsee paper, subjects expect that differences between products that are hard to evaluate (such as the resolution of a digital camera) will affect their preferences more than they actually do. Second, consumers may hold lay beliefs that are incorrect but inconsistent across consumers or ones which lead consumers to (incorrectly) expect no impact on their hedonic reactions, resulting in no systematic effect on prediction. This is seen in the Galak/Kruger/Loewenstein paper, where subjects’ enjoyment of repeated listening to songs or drinking beverages is strongly affected by the spacing of consumption, though their predictions show no effect of spacing. Third, consumers may hold accurate lay beliefs, but fail to apply them. This is the case in the Wang/Novemsky/Dhar paper, where consumers mispredict their product enjoyment over time because they fail to apply their accurate lay beliefs on adaptation—beliefs that are easily cued and moderated through subtle changes in product features.

We expect that these four papers, tightly linked around the role of lay beliefs in affective forecasting, will lead to an interesting and thought-provoking symposium. We intend that each presentation will last for 15 minutes, with an additional 15 minutes where the discussant will highlight session themes and moderate audience questions and discussion. The papers contribute to a developing research area relevant to the interests of many ACR members, notably those interested in hedonic consumption, information processing, and judgment and decision making.

EXTENDED ABSTRACTS

“Anticipating Adaptation to Products”

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Many consumer products deliver their value over extended periods of time. However, the level of this utility often diminishes over time due to waning novelty, shifting reference points and expectations, and various other mechanisms. Moreover, this process of hedonic adaptation seems to catch people by surprise (Schwartz 2004). For example, imagine that after much thought, a person chooses to spend $500 extra to buy a high-end stereo with many cutting-edge features instead of a basic model. A few months later, the initial thrill of the new stereo fades, enjoyment falls dramatically, and the person may get caught up in remorse, wondering why he chose the expensive stereo.

The purchase decision for a product with temporally extended enjoyment requires consideration of the product’s utility profile integrated over its life (Kahneman and Snell 1990; Kahneman, Wakker, and Sarin 1997; Nowlis, Mandel, and McCabe 2004). In the current research, we demonstrate that when faced with such purchase decisions, consumers often fail to predict diminishing product enjoyment over time and explore the antecedents and consequences of this prediction error. We show that this failure to predict hedonic adaptation to products arises not because of erroneous beliefs about how experienced utility changes over time, but rather because of a failure to spontaneously consider adaptation and incorporate largely correct beliefs about adaptation at the moment of choice. As a consequence, consumers may over-purchase products and spend excessively on product features even when they have correct intuitions about hedonic adaptation for those products and features.

In a pilot study, we find that there is a prevalent belief in adaptation for a range of products that are consumed over time. In study 1, we show that people’s predictions of future enjoyment with a product fail to reflect diminishing enjoyment observed in actual experience despite the fact that they expressed a belief in adaptation for that item in the pilot study. In study 2, we demonstrate that intuitive beliefs about adaptation can be cued by prompting people to consider enjoyment with a product at both near and distant points in time, thereby producing better hedonic forecasts. In subsequent studies we show that consideration of adaptation has important consequences for purchase intentions and choice. Specifically, study 3a shows that cued beliefs about adaptation significantly decreases purchase intent for products whose enjoyment people believe will quickly dissipate over time. Study 3b shows that cued beliefs about adaptation influences product feature choices, shifting preferences away from products containing features that people believe they will quickly adapt to. In studies 4 and 5 we provide evidence that salience of prospective duration of product ownership rather than direct attention to diminishing enjoyment is responsible for the effects demonstrated in our preceding studies. Specifically in study 4, we simply ask participants to imagine using a product at different points in time without asking for any hedonic predictions and obtain a similar pattern of results on choice as shown in study 3. In study 5, we show that making multiple product enjoyment predictions over a very short time period (where no adaptation is expected) is sufficient to draw attention to duration and thereby bring beliefs about adaptation to mind. And finally, study 6 examines a boundary of people’s beliefs about adaptation for products. In this study, we test the idea that people may not believe in diminishing enjoyment for products that offer highly variable experiences. We show that very subtle changes in the description of a given product can influence the perceived variability of the product consumption, which in turn moderates the effect of making prospective duration salient on purchase decisions.
In summary, the present research explores how and why predictions of enjoyment with products over time may diverge from experiences even when consumers hold valid intuitive beliefs about adaptation. Moreover, we examine the consequences of this divergence for purchase decisions. Our findings offer important insights for the study of affective forecasting, overspending, and long-term satisfaction. It is important to note how our findings contrast with prior work on affective forecasting. Specifically, previous research suggests that people often hold inaccurate beliefs about affect progression, which in turn leads to prediction errors and suboptimal choices (e.g., Kahneman and Snell 1992; Nelson and Meyvis 2006; Novemsky and Ratner 2003; Wilson et al. 2000). The present research finds that even when intuitive beliefs are accurate, predictions may still diverge from actual experiences, as people frequently fail to incorporate these accurate beliefs into judgments and choices. Our findings also offer insights into issues such as consumer overspending (e.g., buyer’s remorse) and Scitovsky’s “Joyless Economy.”

“Too Much of a Good Thing: Insensitivity to Rate of Consumption Leads to Unintended Satiation”
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Repeated consumption of hedonic experiences is ubiquitous. Consumers eat their favorite foods repeatedly, listen to their favorite songs time and time again, and socialize with the same close friends regularly. Such repetition can lead to satiation. In one study, participants listened to a 45-second sample of a favorite song 15 times in quick succession, rating their enjoyment of the experience along the way. What began as an enjoyable experience became downright unpleasant after only 6 repetitions (Ratner, Kahn & Kahñeman, 1999, Expt 1). Indeed, the notion that repetition decreases enjoyment of pleasurable experiences is a central tenet both of psychological and economic theories of taste (Helson, 1947; 1964; Mas-Colell, Whinston & Green, 1995; although see Zajonc, 1968 for an important exception).

Satiation, however, is not inevitable. A delay between exposures, for instance, can attenuate (and even halt altogether) satiation. Whereas the same song might grow tiresome if repeated in quick succession, a space between exposures reduces satiation. Are consumers aware of the impact of rate on satiation? Do they maximize satisfaction by choosing a sufficient inter-consumption delay between consumption? The present research addressed these questions.

Participants in Study 1 listened to a novel but (initially) well-liked song. Some participants went on to listen to the song 6 more times (experiencers), rating their enjoyment of the song after each iteration. Other participants merely imagined listening to the song repeatedly and predicted these ratings (forecasters). Orthogonal to this manipulation, one condition had a short break between iterations, whereas in the other condition consumption was back-to-back. Rate had a considerable influence on actual satiation, but had no influence on anticipated satiation. Participants enjoyed the song considerably more if there was a delay between consumption, but showed no difference in predicted enjoyment.

One implication of the results of Study 1 is that consumers may choose inter-consumption intervals that fail to maximize their satisfaction. If consumers do not realize the extent to which an inter-consumption delay can prolong liking, then they may not optimally space consumption. The next two studies were designed to test this hypothesis.

In Study 2, participants consumed a well-liked drink (Starbucks Mocha Frappuccino) while watching a 10-minute television program. In one condition, participants drank the beverage as quickly (or slowly) as they wished. In the other condition, participants were limited to one-sixth of the beverage at six evenly spaced intervals throughout the duration of the 10-minute program (i.e., every 100 seconds). Not surprisingly, participants consumed more quickly when left to their own devices than when an inter-consumption delay was imposed upon them. Also as predicted, participants enjoyed the beverage more when consumption was spaced than when they consumed at their own (faster) rate.

Of course, one explanation for the results of Study 2 is that instead of failing to realize that they would enjoy the beverage more if they slowed their consumption, they simply lacked the self-control to do so. After all, there is no shortage of studies that attest to the occasional difficulty people have in avoiding temptation, even with full awareness that they are doing so (Loewenstein, 1996). Would participants choose a similarly sub-optimal rate of consumption if they made their choices in advance, prior to the influence of immediate temptation? Our third and final study was designed to find out.

Participants once again were offered the opportunity to repeatedly consume a well-liked stimulus while watching a television program. This time, however, participants who chose their own rate of consumption did so prior to the experiment. Specifically, participants were told they would be given 6 Hershey’s Kisses during a 20-min television program and asked to choose their inter-consumption interval (from a minimum of 10 to a maximum of 200 seconds). Importantly, participants were instructed to select the interval they thought would maximize their enjoyment of the chocolates. As in Study 2, another group of participants had no such choice and consumed the Kisses at the maximum possible inter-consumption interval (200 sec). As in Study 2, participants who chose their own rate of consumption consumed the chocolates more rapidly than those who were assigned the maximum inter-consumption interval. Also as in Study 2, this resulted in decreased enjoyment.

Taken together, the results of these studies suggest consumers underestimate the impact of rate on satiation, and consume more rapidly than is optimal. In studies 2 and 3, paradoxically, participants asked to maximize their utility were less satisfied than those who had their rate of consumption decided for them. It appears that insensitivity to rate of consumption can lead to unintended satiation.

“Affective Forecasting and Psychological Distance: The Surprising Impact of Distant Events”
Jane Ebert, University of Minnesota, USA
Tom Meyvis, New York University, USA

Would you prefer to see a film based on a true story or a similar film that is entirely fictional? Does it matter if the true story occurred recently or 10 years ago? A growing literature shows that, when making experiential consumption decisions such as these, consumers are influenced by their anticipated feelings about the experience (see MacInnis, Patrick, and Park, 2005, for a recent review). Research also finds that these hedonic predictions tend to be inaccurate. In particular, consumers tend to overestimate the enduring hedonic impact of an experience. This impact bias has been demonstrated for a broad range of positive and negative hedonic experiences, such as relocations, winning prizes, receiving gifts, failing to lose weight, and electoral defeats (see reviews Kahneman and Snell, 1992, and Gilbert, Driver-Linn and Wilson, 2002). Explanations of this bias have focused on the lack of consideration by predictors of the internal and external context around the focal hedonic experience, such as how feelings will change or the effects of experiences that occur subsequent to the
focal hedonic experience (Gilbert et al. 1998; Gilbert and Wilson 2000).

In contrast to this work, we explore a process by which people mispredict the impact of a hedonic experience by overconsideration of the context around the focal hedonic experience. In particular, we demonstrate that people overestimate the dulling impact of contextual factors that increase the psychological distance of a target event. As a result, people underestimate the intensity of their emotional reaction to reading fictitious or historical stories, and to winning a prize that will only be made available later.

In 4 studies, we compared people’s predicted versus actual hedonic reactions to events that were either psychologically close or distant. In studies 1-3, participants read emotion-inducing newspaper stories (e.g., about a student dying from meningitis). Experiencers were first given information about the story context. Psychologically distant experiencers were told the story was “fictitious” (studies 1 and 3) or about an event that “happened 10 years ago” (study 2), while psychologically close experiencers were told the story was “real” (studies 1 and 3) or about an event that “happened recently” (study 2). Experiencers then read the story and rated their affective reactions. Predictors read the story and then predicted their reactions if they had first been given the information about the story context. Finally, in study 4, we use a new emotional experience and psychological distance manipulation: receiving a prize in 6 weeks (psychologically distant) or immediately (close).

Across all studies, predictors predicted a greater influence of psychological distance on their emotional reactions than experiencers actually experienced. Most often, predictors accurately predicted emotional reaction to the psychologically close experience and underestimated emotional reaction to the psychologically distant experience. Furthermore, study 3 rules out a differential salience or demand explanation for this effect. Indeed, the effect persists even when participants in the experience condition are explicitly reminded of the manipulation immediately prior to the dependent measures, ruling out an account based on a greater salience of the manipulation in the predictor condition. Furthermore, when the psychological distance information was said to be presented after the story, the predictors were reliably less sensitive to this information (than when it was said to be presented before the study), showing that predictors only relied on the information when they thought it would influence the processing of the story—and were not merely reacting to experimental demand.

These results suggest that, when choosing between options that vary on attributes related to psychological distance, consumers will be influenced by these attributes more than they should, e.g., preferring films based on stories that are true and occurred recently when, in actual fact, they would be equally happy with films based on fictional or older stories. More generally, this approach connects the affective forecasting literature to work in judgment that examines unwanted or over-correction, such as work on mental contamination (Wilson and Brekke, 1994). Given the frequency of these effects in judgment, we suspect that this process may prove a common source of systematic error in hedonic prediction.

“Inconsistency Between Predicted and Actual Sensitivity of Evaluation or Liking to Attribute Values”
Jiao Zhang, University of Miami, USA
Christopher Hsee, University of Chicago, USA

Will a consumer watching TV in her home have a better experience if the TV has a 50-inch screen or a 42-inch one? More important, can she accurately predict the difference in her experience between the two alternative scenarios? Overprediction may lead the consumer to buy the 50-inch TV without having better experience she believes she will. Building on previous research (Hsee & Zhang, 2004), in the present research, we further examine the question of whether consumers would overpredict how sensitive their evaluation of or liking for an outcome is to the value of that outcome when they face it alone in consumption.

In Study 1, conducted in China, most participants believed that by smelling a sample of a perfume they could tell whether the perfume was from an expensive brand or a cheap brand and accordingly their liking for that perfume would be high or low. The participants were then randomly assigned to three groups, in which they smelt a piece of tissue paper scented with a drop of an expensive perfume (Chanel No. 5, 500 RMB a bottle), or one scented with a drop of a cheap perfume (a local brand, 50 RMB a bottle), or simply a piece of ordinary scented tissue paper (about 2 RMB a pack). Contrary to the participants’ belief, there was no significant difference in how much they liked the perfume across the three groups. Liking for the expensive perfume was higher than that for the cheap perfume, though only slightly, for another group of participants who tried all of three samples. The results suggest that although an expensive perfume may be more pleasant to the nose than is a cheap perfume, the difference is likely to be exaggerated in consumers’ belief.

In Study 2, also conducted in China, a group of “white-collar” employees in a big company were asked to indicate whether they would buy a 5-megapixel, 3000 RMB digital camera rather than a 1-megapixel, 500 RMB one, assuming that the other features were identical between the two cameras. Most of the participants chose to buy the 5-megapixel camera. The participants were also asked to indicate whether they believed that if they were presented with an 8”x10” size photo (the largest size they said they would ever use to print photos) they would be able to tell, according to the sharpness of the photo, whether it was taken by a 5-megapixel or a 1-megapixel digital camera. Most of them believed they could. Then, the participants were presented with either a photo with a 5-megapixel resolution or one with a 1-megapixel resolution and asked to rate the sharpness of the photo; the content of the two photos was identical. It turned out that the two photos received a similar rating. Considering the fact that the participants’ average salary was 4000 RMB, the finding is quite dramatic.

Such misprediction is less likely to happen for consumers who are knowledgeable about the attribute under evaluation and consequently have the relevant reference information to evaluate the desirability of a value on that attribute even when facing it alone. This idea was tested in Study 3, conducted in the U.S. A group of students from a large Midwestern university was randomly assigned to be predictors or experiencers. The experiencers were presented with either a 1-megapixel or 5-megapixel photo and asked to rate its sharpness; the photos had the same content and size (8”x 10”). The predictors were presented with both photos and told that each photo would be viewed by a separate student who was similar to them. The predictors were asked to predict the sharpness rating each photo would receive. All the participants were asked to report their knowledge about photography on a five-point scale ranging from 1 (not knowledgeable at all) to 5 (very knowledgeable). Participants who gave a rating of 4 or 5 were classified as experts and the rest, novices. As we expected, among novices, predictors overpredicted the impact of photo resolution on experience of photo sharpness; among experts, no overprediction occurred. Experts were sensitive to photo sharpness even when viewing a photo in isolation.

In sum, the findings of the three studies suggest that consumers tend to believe that a higher value on a positive attribute will translate into better experience. Unless they have acquired knowl-
edge from past experience with values on that attribute or relative reference information is provided at the time of consumption, systematic overprediction often occurs.

REFERENCES