When Choosing Is No Longer a Burden: the Mitigating Effect of Positive Affect and Novelty on Choice Overload

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Results from four studies show that either positive affect or novelty mitigates the negative consequences of choice overload. People in whom positive affect had been induced, or who had experienced novelty, enjoyed choosing from a large, but not from a small, assortment of jams more than controls and were more satisfied with the selected option. Studies three and four extended these findings to measures of post-sampling satisfaction. It is proposed that positive affect and novelty mitigate the negative consequences of assortment size by enhancing people’s cognitive flexibility and ability to organize material and by promoting a preference for variety.

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Symposium Summary

Taking the Load out of Choice Overload: Strategies for Reducing Cognitive Difficulty in Choice from Extensive Assortments
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Session Overview

Objective of the Session. Choosing from a greater number of options can increase regret and reduce satisfaction with one’s choice (Iyengar and Lepper 2000). Cognitive overload, or the extra effort needed to process information about multiple options, has been proposed as one of the mechanisms underlying the choice overload phenomenon. The objective of this symposium is to outline new strategies for reducing cognitive overload and enhancing people’s enjoyment and satisfaction with choice in the context of extensive assortments.

Topics and Issues. The first paper, by Isen and Spassova, proposes that mild positive affect or novelty mitigate the detrimental consequences of choice overload. Studies one and two showed that people who experienced positive affect or novelty prior to choosing from an extensive assortment were just as satisfied with their choice as people choosing from a small assortment. Studies three and four extended these findings to measures of post-sampling satisfaction and shed light on the underlying mechanisms. The authors propose that positive affect and novelty have beneficial effects on choice overload by enhancing cognitive flexibility and the ability to organize and integrate information. In the second paper, by Inbar et al., time is a resource that allows people to adequately evaluate their choice options and protects them from experiencing cognitive overload. The first study showed that when people are given ample time to make a choice, those choosing from a large array are as satisfied with their selection and experience no more regret than those choosing from a small array. The second and third studies showed that it is the subjective perception of available time that generates choice overload. Even after controlling for the time available to make a choice, feeling rushed fully mediated the impact of assortment size on regret and dissatisfaction with one’s choices. The third paper, by Goodman and colleagues, investigates yet another factor that influences choice difficulty—the common retailer strategy of using recommendations such as a “best seller” sign. Results from four studies show that the extent to which consumers have developed preferences is a key moderator of the effect of best seller signage on choice from large assortments. For consumers possessing more (less) developed preferences, best seller signage in large assortments increases (decreases) the size of consideration sets and exacerbates (attenuates) decision difficulty and regret.

Potential Contribution and Importance. Previous research has suggested that the negative consequences of choice overload on consumer satisfaction can be reversed by factors that simplify the choice process. The papers in this symposium contribute to this research by proposing strategies that enhance consumers’ cognitive resources and make the choice process easier, more manageable, and ultimately more satisfying, without changing the nature or the presentation of the options in the choice set. Furthermore, by investigating new moderators, the papers in this symposium shed light on the nature of the choice overload phenomenon and on the psychological mechanisms underlying it. Cognitive flexibility and the subjective perception of time are introduced as important elements of the choice process, and factors that influence the consumer consideration set are investigated. The scope of this symposium goes beyond research on choice overload; it has implications for judgment and decision making in general as it suggests mechanisms for reducing cognitive complexity and for promoting consumers’ problem-solving abilities.

Extended Abstracts

“When Choosing is No Longer a Burden: The Mitigating Effect of Positive Affect and Novelty on Choice Overload”
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Increasing the size of a choice set has been shown to have negative consequences, such as a greater tendency for consumers to defer choice (Dhar 1997; Tversky and Shafir 1992) or to feel frustrated, confused, and less satisfied with the chosen option (Huffman and Kahn 1998; Iyengar and Lepper 2000; Malhotra 1982). Researchers have argued that these negative outcomes occur because consumers experience “choice overload” (Iyengar and Lepper 2000)—they feel overwhelmed by the extra cognitive effort needed to process information about the numerous options in the choice set. Strategies suggested to decrease choice overload involve simplifying product information (Gourville and Soman 2005), presenting it in an attribute-based as opposed to alternative-based format (Huffman and Kahn 1998), or asking consumers to articulate their preferences explicitly (Chernev 2003).

This research identifies two new factors for reducing choice overload—positive affect and novelty—and explores the specific mechanisms through which they impact consumers’ experience with large choice sets. We propose that positive affect may reduce the effects of choice overload because it enhances people’s cognitive flexibility and their ability to process, organize, and integrate information (Isen 1993; Kahn and Isen 1993). The beneficial effects of positive affect are proposed to be mediated by increased brain levels of the neurotransmitter dopamine (Ashby, Isen, and Turken 1999). Because novelty is also related to increased levels of dopamine, we predict that novelty may also mitigate the effects of choice overload. We test our hypotheses in four studies.

Studies one and two provided initial support for the hypotheses. Participants chose from either a small (9 flavors) or a large (45 flavors) assortment of jams, all from the same brand. Black-and-white pictures of the jams, with the flavor indicated, were displayed on the computer screen. Participants indicated their choice of jam, how much they enjoyed the choice process, and how satisfied they were with the chosen jam. Prior to choosing, to induce positive affect, participants were asked to provide first associates to positive common words (study one), and participants in the novelty condition provided first associates to neutral uncommon words (study two), while controls in both studies provided first associates to neutral common words. Among controls, the effects of choice overload previously observed were confirmed. Controls choosing from the large assortment of jams reported feeling more frustrated and tired than controls choosing from the small assortment of jams and were less satisfied with their choice. Among positive affect participants, however, the effects of choice overload were not observed. People in positive affect choosing from the large assortment did not report more frustration or tiredness than people in positive affect choosing from the small assortment, and did not feel
less satisfied with the choice they had made. When choosing from the small assortment, people in positive affect reported the same degree of tiredness and frustration, and the same satisfaction with their choice, as controls. When choosing from the large assortment, people in positive affect reported feeling significantly less tired and frustrated than controls. They also enjoyed the choice process more and were more satisfied with the selected option than controls.

Novelty had a similar beneficial effect on participants’ satisfaction with their chosen product, but not on their frustration or tiredness. In contrast to controls, participants who had experienced novelty did not feel less satisfied with the choice they had made from a large, relative to from a small, assortment. Furthermore, when choosing from the large (but not from the small) assortment, participants in the novelty condition reported enjoying the choice process significantly more than controls. Unlike positive affect, however, novelty did not reduce the experience of frustration and tiredness with the choice process. Participants in the novelty condition reported feeling as tired and frustrated when choosing from the large assortment as controls, and significantly more so than novelty participants who chose from the small assortment.

Studies three and four were designed to test if the observed effects of positive affect and novelty extended to measures of post-sampling satisfaction with real jams, and to shed more light on the underlying psychological mechanisms. We also reduced the number of jams in the two assortments to six (small assortment) and thirty (large assortment) to be more in line with previous manipulations of choice overload. As in the first two studies, positive affect (study three) and novelty (study four) were manipulated by asking participants to provide first associates to positive common (affect condition) or neutral uncommon (novelty condition) words. Participants were run individually. After completing the word-associates task, they were asked to choose from the designated assortment of jams and to complete measures assessing their experience with the choice process. After choosing, participants were given the option to taste the chosen jam and to indicate how much they liked it, how much they regretted their choice, and how many different flavors of this brand of jam they would like to purchase if they became available in a local store. Results were in line with our predictions. Controls choosing from the large assortment experienced more regret about their choice relative to controls choosing from the small assortment and also reported that they were likely to buy fewer flavors of jam. Positive affect and novelty mitigated the negative effect of assortment size on choice regret and purchase intentions. Additional process measures provided support for our hypothesis that positive affect and novelty have their beneficial effect on choice overload by enhancing people’s ability to integrate and categorize information.

Overall, these results support the hypothesis that positive affect and novelty reduce the negative consequences of large assortment size on consumer satisfaction with choice. They confirm previous findings about the beneficial effect of positive affect on cognitive flexibility and problem solving abilities and suggest intriguing possibilities for future research on the impact of novelty on cognitive processes and decision making.

**“Take It Easy: Removing Time Constraints Mitigates Choice Overload”**

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Although it has traditionally been assumed that more options can only increase satisfaction with a choice outcome, recent research has shown that choosing from large arrays of options can be difficult, inducing choice “paralysis” and dissatisfaction with the chosen option (Iyengar and Lepper 2000). This choice overload effect has been attributed to several causes, including the cognitive difficulty involved in evaluating and comparing a large number of options and the emotional burden that this process entails, especially for consumers who are striving to make the best choice (Brenner, Rottenstreich, and Sood; Iyengar, Elwork, and Schwartz 2006; Kahn and Lehmann 1991). Prior research has identified several factors that reduce the cognitive burden created by larger choice sets and thereby mitigate the negative effects associated with too much choice. For example, clearly articulated preferences (Chernev 2003; Huffman and Kahn 1998) allow consumers to identify the best match between their preferences and the available options without engaging in extensive, and sometimes frustrating, processing of these options. On the other hand, suppliers can ease the burden on consumers by selecting options that are easy to evaluate and displaying them in a way that facilitates within- and cross-category comparisons (Broniarczyk, Hoyer, and McAlister 1998; Gourville and Soman, 2005).

In this research we focus on another factor that can reduce the cognitive effort of choosing: sufficient time and resources to consider the available options. We hypothesize that people facing large choice sets will be less satisfied than those facing smaller sets only when they do not have adequate time and resources to evaluate the available options. When time constraints are removed, we expect that people will be as satisfied when choosing from large sets as they are when choosing from smaller sets. Moreover, we argue that it is the subjective feeling of being rushed when making a choice that reduces satisfaction with the chosen options and increases regret for the forgone options. These hypotheses were tested in three studies.

Study 1 examined whether encouraging people to take their time when choosing would ameliorate the negative effects of choosing from a large set. Participants were assigned to choose and eat a Godiva chocolate from either a small (6 chocolates) or a large (30 chocolates) array, under conditions of low or high time pressure. In the high time pressure (rushed) condition, the experimenter remained in the room with participants and stood directly behind them while they chose. In the low time pressure (unrushed) condition, the experimenter encouraged participants to take as much time as they wanted and left them alone in the room while they made their choice. After choosing, participants consumed their chocolate and completed a questionnaire that measured their satisfaction, enjoyment, and regret with their choice. Consistent with prior research, participants under high time pressure were less satisfied with their choice and experienced greater regret when choosing from the large set than when choosing from the small set. However, as predicted, this difference was entirely eliminated among participants under low time pressure.

Study 2 expanded upon these findings by demonstrating that it is the subjective feeling of being rushed during the decision process that accounts for reduced satisfaction when choosing from large choice sets. Participants chose a DVD from a small (6 DVDs) or a large (30 DVDs) array, with the understanding that they had a 1 in 10 chance of winning the DVD they selected. They then completed the same choice enjoyment, satisfaction, and regret measures as in the previous study, as well as a measure of the extent to which they felt rushed during the choice process. Replicating prior research, participants experienced greater regret and lower satisfaction when choosing from a large set than when choosing from a small set. Participants also felt more rushed when choosing from a large set than when choosing from a small set. A mediational analysis revealed that the impact of set size on satisfaction with the decision outcome can be attributed to subjective feelings of time.
pressure, as feeling “rushed” fully mediated the impact of set size on regret and dissatisfaction with one’s choices.

Study 3 bolstered the results of Study 2 by manipulating the actual amount of time participants had to make their choice. As in the previous study, participants chose a DVD from either a small (6 DVDs) or a large (30 DVDs) array. Participants in the rushed condition were given exactly 30 seconds to make their choice and were shown a timer which counted down how many seconds were still available to complete the choice task. Participants in the unrushed condition were given unlimited time and saw no timer. Supporting previous results, those who chose from a larger set under time pressure felt more rushed than other participants and subsequently felt less happy with their choice.

In conclusion, this research contributes to our prior knowledge by showing that one of the factors contributing to the greater psychological burden of making a choice from a large set, as compared to a small set, is the perception of not having enough time for making this choice. Our results suggest that it is the perceived feeling of being rushed through the decision process, rather than the objective amount of time available to consumers when making a choice, that induces lower satisfaction and greater regret when choosing from large choice sets.

“Simplify or Intensify? Best Seller Signage on Consumer Decision-Making from Large Assortments”

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Despite the increased cognitive load required to process large assortments, consumers are attracted to such broad options (Arnold, Oum and Tigert 1981; Broniarczyk, Hoyer, and McAlister 1998); however, they experience negative consequences, such as greater decision difficulty and regret, when they ultimately must make a choice (Iyengar and Lepper 2000; Chernev 2003). In four studies we examine whether a common retailer strategy—the use of recommendations such as a “best seller” sign—attenuates or exacerbates these negative consequences in consumer choice. The studies show that the negative consequences in consumer choice in large assortments is exacerbated when signs create conflict in the decision making process.

The first study manipulated the presence of a best seller recommendation in a small assortment (6 chocolates) and a large assortment (30 chocolates). After making a choice, participants indicated their anticipated regret and difficulty with the decision across multiple measures taken from previous research. The study showed that instead of reducing the negative consequences associated with choice, best seller signs actually exacerbated decision difficulty and anticipated regret when consumers face large assortments.

The second study manipulated the location of the sign and measured participants consideration sets. The results replicated the findings from study 1 and showed that signs increased the number of signed and non-signed options in consumers’ consideration sets in large assortments. This increase in consideration set size mediated the effect of signs on decision difficulty and experienced regret. The study also shows that the findings only hold when signs are on a viable, high preference option that has the potential to conflict with consumers’ preferences.

The third and fourth studies provide additional evidence that the best seller signs lead to the increased difficulty and consideration set size due to conflict with consumers’ preferences. Generalizing the findings to other product categories (i.e., organic juices and designer chairs), Study 3 manipulated preference development and the presence of a sign and found that participants with more developed preferences reported experiencing greater decision difficulty when choosing from a large assortment when a sign was present versus absent. On the other hand, participants with less developed preferences exhibited the opposite pattern of results and showed that signs reduced difficulty, regret, and the size of the consideration set.

Interestingly, signs have this effect on the choice process without changing the final option that is chosen; none of the three studies showed an increase in choice share of the signed options. Study 4 manipulated the number options that participants could chose by either having participants buy one chocolate or allowing consumers to buy multiple chocolates. Study 4 also measured preference development via subjective knowledge. We again find that best seller signage led participants with more (less) developed preferences to create larger (smaller) consideration sets, primarily due to greater consideration of non-signed options. If limited to a single choice from a large assortment, the number of options considered was related to regret, with participants with more versus less developed preferences more likely to experience regret when a best seller sign was present. However, if free to act on their larger consideration sets, participants with more versus less developed preferences were more likely to buy multiple options when a best seller sign was present in a large assortment. Implications for consumers and retailers are discussed along with avenues for future research.

REFERENCES


