More Than a Mental Barrier? the Effect of Perceived Product Distance on Consumers’ In-Store Purchase Decision Processes

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This paper finds that psychological distance at the point-of-sale negatively effects purchase abandonments and unplanned buying—variables with monetary importance to retailers. By including process measures obtained from point-of-sale observations we show that this is because consumers’ decision-making processes are more goal-oriented when perceiving a high distance to a product.

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Modern Strategies in Retailing: Choice Architecture and Purchase Decisions

Paper #1: When Consumers Prefer to Include: Consideration Set Construction Strategies from Large Product Assortments
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Paper #2: More Than a Mental Barrier? The Effect of Perceived Product Distance on Consumers’ In-Store Purchase Decision Processes
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Paper #3: The Desire to Acquire Wish List Items: The Ironic Effect of Choosing to Delay Aspirational Purchases
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SESSION OVERVIEW

Consumers face purchase decisions with large sets of possible options on a daily basis. To select an acceptable or desirable product amidst the overwhelming variety, consumers may employ sets of decision heuristics to simplify the decision (Bettman et al. 1998). These heuristics can determine whether consumers are satisfied with their purchase, or if the consumer even purchases anything at all.

But, what can the retailer do to structure consumers’ choices to influence consumer decision strategies and bolster purchase likelihood? An enormous line of research has explored how changing the choice architecture or default option can drastically affect individual behavior (Johnson and Goldstein 2003), while other work has shown that various decision aids can affect search processes and choice (Dellaert and Haubl 2012; Haubl and Trifts 2000). Yet, there are still many modern innovations in retailing, in addition to the consideration of expanding assortment issues (Iyengar and Lepper 2000; Scheibehenne, Greifenender, and Todd 2010) that may have implications for consumer behavior. How may these innovations affect consumers’ decisions, and can they inform the theory of consumer behavior? How might the size of the assortment otherwise influence how consumers consider what to buy? Can providing consumers with wish-lists on which to place desired goods increase the likelihood they’ll ultimately return to purchase those items? Does allowing consumers the opportunity to try on a smaller set of options at home improve purchase likelihood? How may in-store layouts affect purchase abandonments?

This session addresses how various modifications in assortment structure and choice architecture can influence consumers’ decisions in both in-store and online settings. Goodman and Naylor investigate how large assortment sizes cause consumers to use inclusion-based (vs. exclusion-based) selection strategies as a method of minimizing choice difficulty. Gartmeier, Mau, and Reinartz explore how perceived product distance in the store can reduce purchase abandonments by increasing target-orientation in the decision-making process. However, this perceived product distance may also cut unplanned purchases unless purchase impulse is simultaneously increased. Hamilton and Popovich study the use of wish-lists in online retail settings. Contrary to theories that might predict these wish-lists would increase purchase likelihood, they instead find that the wish-lists segment purchase choices into multiple stages and ultimately depressed purchase intentions. Weingarten and Kahn study how imposing a delay between the assortment viewing stage and the consideration set stage can affect purchase likelihoods. Counter to lay intuitions that the delay or waiting hurts satisfaction, they find an improvement in purchase satisfaction and likelihood after a delay between the decision stages. These projects examine how both assortment structure and decision aids across both in-store and online settings may affect consumers’ purchase decisions, and have substantial implications for retailers in terms of how to structure their choice architecture.

Given the range of topics in this session, it should appeal to researchers who are interested in choice overload, consumer choice behavior, choice architecture, time preference, variety, and heuristic decision-making more broadly.

When Consumers Prefer to Include: Consideration Set Construction Strategies from Large Product Assortments

EXTENDED ABSTRACT

When visiting both online and brick-and-mortar retailers, consumers are bombarded with an overabundance of choice, and research has documented the costs associated with choosing from large assortments (e.g., Iyengar and Lepper 2000; Kuksov and Villas-Boas 2010; Scheibehenne, Greifenender, and Todd 2010). Yet, little attention has been given to how consumers manage choice from retailers offering large assortments. Many consumer choices are made in a hierarchical fashion (Kahn and Lehmann 1991), and consumers often narrow down the choice set to a more manageable consideration set (Chakravarti, Janiszewski, and Ulkuemén 2006). But how do consumers narrow large assortments to smaller sets? And what factors affect the strategy consumers use to form a narrower set?

There are two strategies consumers use to narrow down a set—include and exclude. From a normative perspective, an include strategy should lead to the same outcome as an exclude strategy; however, research shows that strategy selection can bias the decision process (e.g., Chakravarti et al. 2006; Heller et al. 2002; Irwin and Naylor 2009). In this research we investigate how the choice context affects the strategy consumers use to narrow the choices offered by a retailer. We provide evidence that consumers are more likely use an include (vs. exclude) strategy when faced with larger assortments and when they are in a maximizing mindset, and this strategy can bias choice.

In study 1a we presented participants with a planogram of either a small (6) or large (30) assortment of chocolates and asked them to narrow down their options by either circling the options they like or crossing out options they do not like. Participants were more likely to use an include (vs. exclude) consideration set strategy in the large (M=56%) compared to the small assortments (M=31%), χ²(1, N=72)=4.48, p < .05. Further, this strategy affected consideration set size: Participants had considerably smaller consideration sets after using an include (M=5.61) compared to an exclude strategy (M=8.14, F(1,68)=55.04, p < .001), and this was especially the case when faced with a large assortment (F(1,68)=50.06, p < .001).

Study 1b replicated these findings using a different procedure and product category. Participants viewed a display of pens via com-
puter and narrowed down a set of 32 (6) by dragging-and-dropping pens that they want to either include or exclude for/from further consideration. Again, participants were more likely to use an include strategy in the large (M=77%) compared to small assortment (M=62%, $\chi^2(1,N=153)=4.48, p < .05$).

These results suggest that consumers shift to an include strategy when faced with a large assortment because large assortment change the decision process. In addition to creating more difficulty, large assortments also raise expectations (Diehl and Poynor 2010) and lead decision makers to focus on positive reasons to justify their choices (Sela, Berger, and Liu 2009). Thus, we expected maximizers to be especially likely to use an include strategy because maximizers will be more likely to raise their expectations and feel the need to justify their choice.

Study 3a used the same pen paradigm as study 1b, but participants in the lab were asked to sort pens into a bag that they would either consider (include) or not consider (exclude) for purchase later in the study. After narrowing down the set, they made a final choice, received their pen, and responded to the the 13-item maximize/satisficer scale (Nenkov et al. 2008). Again, participants were more likely to use an include strategy in the large assortment condition (M=.50) compared to the small (M=.36, Wald $\chi^2(1,N=208)=4.02, p < .05$). There was also a marginal assortment by maximize/satisficer interaction (Wald $\chi^2(1,N=208)=3.14, p = .077$), whereby maximizers were more likely to use an include strategy in large assortments (M=.59) compared to small (M=.33, Wald $\chi^2(1,N=208)=6.81, p < .01$). Study 3b was the same design using pens and chocolates with the procedure in study 1a, and found the same results: Participants were more likely to use an include strategy in the large assortment condition ($p < .05$), and there was the same assortment by maximize/satisficer interaction ($p < .05$).

Study 4 manipulated maximizer/satisficer mindset (Ma and Roes 2014) and assortment size. We asked MTurk participants to narrow down vacations that they were considering from either a large (30) or small (6) set. Participants dragged-and-dropped potential vacation destinations into a box labeled as either include or exclude. Again, those in the large assortment were more likely to include (M=.86) than those in the small (M=.72, Wald $\chi^2(1,N=287)=4.21, p < .05$). There was also a marginal interaction with maximize/satisficer (Wald $\chi^2(1,N=287)=3.16, p = .075$), whereby maximizers were more likely to use an include strategy in large assortments (M=.92) compared to small (M=.79, Wald $\chi^2(1,N=208)=9.90, p < .01$).

Study 5 examined the downstream consequences of an include strategy on the decision process. To establish causality, we manipulated the type of strategy (include vs. exclude). Analyzing written thought protocols, we found that participants using an exclude strategy expressed fewer positive thoughts (F(1,127)=16.97, $p < .001$) and more negative thoughts (F(1,127)=15.70, $p < .001$), and they deliberated more on alternatives that were not in the consideration set ($M_{include}=.51$ vs. $M_{exclude}=.45$, $F(1,127)=15.45, p < .001$). In addition, these participants focused more on negative attributes (F(1,126)=4.67, $p < .05$) compared to those using an include strategy.

In sum, this research shows how decision context systematically effects consideration set construction strategies used by consumers, biasing the decision process towards an include strategy. Consumers are more likely to use an include strategy when faced with larger assortments, and when consumers are in a maximizing mindset. Thus, consumers in a maximizing mindset and facing large assortments will process the choice differently—they will focus more on positive attributes and thoughts, and elaborate less on alternatives outside of the consideration set.

More Than a Mental Barrier? The Effect of Perceived Product Distance on Consumers’ In-Store Purchase Decision Processes

EXTENDED ABSTRACT

Retailing managers regularly face decisions regarding distances, such as temporal or spatial distances in terms of how to present a product in the physical store environment. For example, in a grocery retailing context, retailers increasingly use refrigerator units equipped with glass doors in order to achieve energy and cost savings. Moreover, in a series of pre-studies that we have conducted in cooperation with two leading German grocery retailers, we find that having customers choose from refrigerators with glass doors increases their perceived distance to a particular product because the consumer is not able to immediately and directly experience the product. This example shows that consumers make increasingly purchase decisions involving physical and psychological distance in the store. As consumers’ physical and psychological distance from a product strongly influences consumers’ preferences and decisions, the impact of distance looms large at the point-of-sale (POS).

Interestingly, despite the fact that there is growing interest among practitioners and researchers alike to understand the antecedents and consequences of psychological distance in a retail setting, there is virtually no insight how consumers’ in-store decision behavior, such as unplanned buying, changes depending on the actual and psychological distance at the POS. Instead, most research analyzing psychological distance in retailing mainly focuses on the relationship between psychological distance and price perceptions, assortment size preferences, and product preferences. Specifically, Bornemann and Homburg (2011) show that with increasing psychological distance, people are more likely to construe price according to its high-level and desirability implications for quality and less likely to focus on its role as monetary sacrifice. Goodman and Malkoc (2012) find that while consumers prefer large assortments when choices take place in a psychologically proximal situation, they are more likely to prefer small assortments when choices pertain to psychologically distant situations. But this effect reverses when consumers consider desirability/feasibility trade-off information inherent in the assortment size decision. Mogilner, Aaker, and Pennington (2008) show that consumers prefer promotion- (vs. promotion-) framed products in psychologically close situations whereas promotion- (vs. prevention-) framed products become more appealing in a psychologically distant situation. Although these empirical studies have made important contributions to the topic, they do suffer from the following limitations: First, the studies focus on well-established antecedents of psychological distance, such as temporal, social, and geographical distance. However, this focus does not capture the diversity of psychological distances occurring in a retail setting. Second, the studies do not cover the link between psychological distance at the POS and in-store decision-making—although construal level theory (CLT) almost predicates that psychological distance will influence purchase decisions at the POS. Third, the studies address consumers’ preferences and behavior solely in fictitious purchase scenarios in which participants have to imagine the purchase situation. Participants are fully aware of this situation and make their decisions consciously—a circumstance that might not be representative for in-store purchase decisions. Therefore, in contrast to existing research on psychological distance, our study examines how the perceived product distance influences consumers’ purchase decision processes at the POS. In particular, our contributions to the literature are as following: First, we identify a new antecedent of psychological distance, i.e., physical...
barrier—an instrument that is commonly used in retailing. Second, we examine the well-established phenomenon of psychological distance in a new context, i.e., in-store decision-making. Specifically, we investigate the effect of psychological distance on purchase decisions at the POS, such as unplanned buying and purchase abandonments, and hence, examine new consequences of psychological distance that are of monetary importance to retailers. Third, we explain the underlying process of this effect by including process measures that we obtain from observations at the POS. Fourth, we show a mechanism that plays a major role in daily purchase decisions and hence, influences the effect of perceived product distance on in-store purchase behavior, namely purchase impulse. Fifth, in contrast to existing research that mainly uses laboratory experiments, we additionally conduct a field study which allows us to examine natural purchase decisions that are made unconsciously in the complexity of reality—an important extension when investigating psychological factors in daily purchase decisions, especially in the context of unplanned buying. Nevertheless, a laboratory experiment serves to validate and generalize our main findings.

Based on CLT, we propose that the decision-making process is more focused and goal-oriented under conditions of a high level of perceived product distance. Our dependent variables are amount of purchase abandonments, i.e., whether a product, once considered, is rather purchased than returned to the shelf, and amount of unplanned purchases, i.e., whether products are being purchased that were not part of the original shopping list. Using a quasi-experimental between-subjects design that involves one factor with two levels—low vs. high level of perceived product distance—our field study (N = 1172) shows that a consumer’s perceived product distance influences his or her decision behavior at the POS: Consumers in the high distance condition, i.e., choosing from refrigerators with glass doors, have significantly less visual and physical product contacts compared to those in the low distance condition, such as choosing from refrigerators without glass doors. Further, the amount of purchase abandonments significantly decreases in the high distance situation meaning that consumers are indeed more goal-oriented and focused. Moreover, the increased target-orientation of consumers leads to a significantly decreased number of unplanned purchases in the high distance condition compared to the low distance condition; an effect that can have negative monetary consequences for retailers. These findings point to important outcomes of psychological distance in a real store environment. Further, the laboratory experiment shows that the negative effect of psychological distance on unplanned purchases can be reduced by increasing a consumer’s purchase impulse, a variable that could easily be incorporated by retailers using, for example, in-store coupons or product tastings.

The Desire to Acquire Wish List Items: The Ironic Effect of Choosing to Delay Aspirational Purchases

EXTENDED ABSTRACT

Consumers have always had the ability to defer certain purchases, but doing so has gotten easier over time. Most major retailers including Amazon, Target, and Barnes and Noble have a wish list option integrated into their websites which gives consumers the ability to save products for future consideration. This research focuses on the increasingly popular use of wish lists to keep track of the consumer’s own potential future purchases.

By encouraging reconsideration of attractive options, wish lists facilitate a type of choice deferral that has not been thoroughly investigated in previous research on deferral. Previous work has primarily examined the factors that increase the likelihood of postponing a choice, including incomplete information (Greenleaf and Lehmann 1995; Gunasti and Ross 2009), the lack of a clearly dominant option (Chernev 2006; Dhar and Simonson 2003; Iyengar, Huberman, and Jiang 2004), and search difficulty (Putis and Srinivasan 1994). In contrast, wish list usage often entails the selection of a most preferred alternative—it is only the purchase itself that is deferred.

Previous research points to two possible ways that wish list usage could impact consumer decision making. One possible effect of wish lists is to serve as an interruption of the goal to acquire a desired item. According to this view, placing an item on a wish list is likely to increase the likelihood that it will eventually be purchased. This goal-directed choice account predicts that this shift in preference is caused by an increase in the importance of desirability attributes, relative to feasibility attributes, after the wish-list interruption.

In contrast, we propose that wish lists serve as choice partitions, segmenting a unitary purchase decision into a two-stage decision: First, whether to place an item on a wish list, and second, whether to subsequently purchase the wish listed item. We predict that, contrary to conventional wisdom and the predictions of some goal-directed choice theories, the use of wish lists can decrease likelihood of purchase, relative to a decision making process without the use of a wish list for desired offerings. We predict that desirability attributes (e.g., why consumers want a product) are relatively more important in the first stage, in which consumers are considering whether to put an item on a wish list. Conversely, in the second stage when consumers decide whether to purchase a wish-listed item, feasibility attributes (e.g., how the product will be acquired and used) should be relatively more important.

Five experiments tested these predictions. The first study demonstrates decreased purchase intent for items placed on a wish list relative to a scenario in which they are given an equivalent choice without a wish list. A product placed on a wish list was less likely to be purchased than an item in an otherwise similar purchase decision context without a wish list (F(1, 100) = 5.58, p < .05). In a related study, willingness to pay was also significantly lower in the wish list condition than in the purchase condition (F(1, 88) = 4.17, p < .05).

The second study revealed that using a Wish List, Shopping Cart, or Saved for Later list to defer a purchase for later consideration will each similarly induce a two-stage decision-making process, regardless of the specific label of the delay device. The mean purchase likelihood in the purchase (without delay) condition was significantly higher than each of three delay mechanisms (e.g., purchase vs. wish list (t(78) = 2.42, p < .05). Thus, decreased purchase likelihood seems to be driven by delay rather than by the aspirational nature of labeling the delay mechanism a “Wish List” vs. another often-used label (e.g., Shopping Cart, Saved for Later list).

The third and fourth studies examine the underlying process, demonstrating a primacy of desirability over feasibility in initial wish list product evaluations. In experiment 3, desirability attributes were more important relative to feasibility attributes for the decision to put the item on the wish list, as compared to the decision to purchase the item after it had been on a wish list (F(1, 51) = 46.95, p < .001). In experiment 4, a repeated measures MANOVA revealed that there was a significant interaction between the two factors of desirability/feasibility and decision stage (pre- vs. post-wish list; F(2, 127) = 5.40, p < .01). The importance of desirability attributes was significantly higher and the importance of feasibility attributes was significantly lower for the pre-wish list decision than the importance of feasibility attributes for the post-wish list decision.

The fifth study shows the effect of wish list usage on choice, revealing a within subjects preference reversal, with different options selected for a wish list and chosen for purchase. Participants
were relatively more likely to place a more desirable item on a wish list, and relatively more likely to choose a more feasible item from a wish list to purchase ($\chi^2(1) = 19.49, p < .05$). In addition, many of the participants who initially chose the more desirable option switched their preference to the more feasible option ($z = 3.75, p < .0001$).

These five experiments demonstrate that, contrary to conventional managerial wisdom, placing items on a wish list can lead to decreased purchase likelihood. We propose that a wish list effectively partitions a one-stage purchase decision into a two-stage decision: first placing the item on the wish list and later reevaluating the item for possible purchase. We proposed and provide evidence for a greater focus on desirability attributes in the first stage of the decision and a greater focus on feasibility in the second stage as the process driving the observed decrease in purchase likelihood. Our results suggest that deferring a purchase by using a wish list can function as a means of consumer self-restraint when shopping, whereas retailers may face a potential danger in providing a wish list, particularly for highly desirable products. Wish lists are an important aspect of adding ease and convenience to the online purchase experience. However, retailers may ultimately need to work on reestablishing consumers' desire for their wish listed items.

**Deciding Now and Later: The Benefit of Delay in Staged Decision-Making**

**EXTENDED ABSTRACT**

One advantage of online assortments is that without the physical constraints, the assortments can be quite large. Although these large assortments can increase variety perceptions (Broniarczyk, Hoyer, and McAlister 1998; Kahn and Wansink 2004) and hence attract consumers, too much variety can potentially damage satisfaction and purchase (Iyengar and Lepper 2000; Scheibehenne, Greifeneder, and Todd 2010). Further, for some categories it is difficult to determine preferences without examining the physical product. To solve these problems, many retailers have offered consumers the opportunity to “try on” products that might consider buying at home. We investigate how the structure and timing of such consideration sets, or “home try-on sets,” can have on ultimate purchase likelihoods and satisfaction from large online assortments.

With “home try on programs,” customers can select a consideration set of products from a virtual assortment to try on at home free of charge. However, under this set up there is a delivery delay that separates when the customers view the assortment from when they consider the smaller choice set. The delivery can potentially take up to a few days, which may either have a positive or negative effect on ultimate purchase likelihoods. Past research has offered evidence that the delay can affect decision making positively because of anticipation effects (Loewenstein 1987) or unconscious thought operations (Dijksterhuis 2004), or negatively due to the stress of waiting (Buell and Norton 2011), or indeterminately because of changing preferences over time (Frederick, Loewenstein, and O’Donoghue 2002).

We hypothesize that the delay between a home try-on set and the initial viewing of a large assortment will increase satisfaction and purchase intentions for two reasons. First, the delay may influence consumers’ decision strategies in constructing their consideration sets. Knowing about the delay may shift the set of strategies used in screening during the assortment step that may have downstream consequences on satisfaction during the try-on step post-delay (Beach 1993; Bettman, Luce, and Payne 1998; Chakravarti and Janiszewski 2003). Second, the delay may decontextualize the choice to minimize regret (Kahneman and Miller 1986; Ritov and Baron 1995) for unselected options (that would otherwise depress satisfaction and purchase intentions) from a previous stage because those options will be less accessible after the passage of time.

We first demonstrate that most consumers’ intuitions lie counter to our hypotheses. Participants responded to a scenario regarding buying either shoes or glasses with a new company that enables customers to try the product at home before purchase. This service was described to have a few-day delay in delivery. This new company was also said to be considering introducing a service with immediate delivery (within an hour); some participants also learned this company would charge a small fee for this service. Participants were asked to indicate if they would prefer the few-day delivery or the immediate delivery (or indifference), and how likely they would be to buy with three or five pairs and with or without a delay. Finally, participants selected from a list of decision strategies that would best describe what they would do with three pairs, with five pairs, and with a few-day delivery or with immediate delivery. No differences in patterns were seen between shoes vs. glasses, so we collapsed their results.

Participants indicated a preference for immediate delivery over a few-day delivery (and indifference) when there was no fee (69.23%, 8.33%, and 22.44%, respectively; (2) = 95.12, $p < .001$), but were fine with a few-day deliver over immediate delivery or indifference when there was a fee (46.50%, 33.76%, and 19.74%, respectively; (2) = 16.87, $p < .001$). Participants also thought they would be likelier to buy with immediate delivery ($F(1, 312) = 88.12, p < .001$) and with five pairs to try ($F(1, 312) = 58.43, p < .001$). Participants also believed they would use different choice strategies depending on if they had three or five pairs to try ((1) = 8.97, $p = .003$) and if they had an immediate vs. a few-day delivery ((1) = 5.91, $p = .015$). This initial study suggests that contrary to our hypotheses, consumers would prefer immediate delivery (no delays) and to have more options to try. However, consumers indicated they would employ different decision strategies based on a delay and try-on set size, which may have implications for their actual satisfaction.

We also conduct two lab studies that suggest, contrary to consumer beliefs, the benefit of a delay between assortment and try-on. In study one, participants simulated selecting pairs of glasses from an online assortment in the lab. Participants first picked either three or five pairs from a large virtual assortment of glasses that they were instructed they would try on in the lab. Some participants then received the pairs they selected and could try them on before indicating their satisfaction with their chosen set and likelihood of purchase. Other participants, upon selecting pairs for their consideration set, experienced a brief delay and completed an unrelated filler task before receiving their consideration set. Participants who experienced the delay were more satisfied with their consideration set ($F(1, 114) = 9.03, p = .003$), and indicated higher purchase intentions ($F(1, 114) = 5.46, p = .021$). This study provides initial evidence, with a simulated delay in the lab, that a delay in decision-making can improve satisfaction and purchase intentions.

In study two, the delay was lengthened such that participants either selected a consideration set of three or five pairs of glasses a few days in advance or in the lab before receiving their consideration set in person. When controlling for category involvement (Zaichkowski 1994), we found an interaction: delay improved consideration set satisfaction for those who picked five pairs, but not for those who picked three pairs ($F(1, 219) = 4.14, p = .043$). These participants who had a delay also more positively anticipated their try-on when they selected five rather than three pairs ($F(1, 79) = 7.74, p = .007$). We thus find confirmatory evidence with a real delay that under some conditions, a delay can improve product satisfaction.
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