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Choosing Here and Now versus There and Later: The Moderating Role of Psychological Distance on Assortment Size Preferences

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Consumers prefer larger assortments, despite the negative consequences associated with choosing from these sets. This article examines the role of psychological distance (temporal and geographical) in consumers' assortment size decisions and rectifies contradicting hypotheses produced by construal level theory. Six studies demonstrate that while consumers prefer larger assortments when the choice takes place in the here and now, they are more likely to prefer small assortments when choices pertain to distant locations and times. This decrease in preference for large assortments is due to psychological distance increasing the similarity of the options in a category, making them appear more substitutable. This effect of psychological distance reverses when consumers consider desirability/feasibility trade-off information inherent in the assortment size decision. These findings point to important outcomes of psychological distance, resolving opposing predictions of construal level theory, and identify boundary conditions for the well-established notion that consumers are attracted to large assortments.

Consumers choose which retailers to shop at and what restaurants to frequent in both proximal and distal situations. These decisions involve the consumer choosing between various assortments, such as ice cream shops with smaller versus larger assortments, or retailers carrying smaller versus larger selections. Although an extensive literature on product assortments has established that consumers tend to prefer retailers that offer a larger assortment compared to those offering fewer choices (e.g., Broniarczyk, Hoyer, and McAlister 1998; Chernev 2006; Huffman and Kahn 1998), research has not considered whether this preference may change depending on the psychological (temporal or geographical) distance of the decision. For instance, imagine a

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consumer planning a vacation in the near future (this weekend) versus a distant future (months away) or to a near versus a distant location. Would her preferences for assortment size change on the basis of the psychological proximity of the decision? Would she plan to shop at different stores or visit a different ice cream shop? In this article, we address this issue by examining whether assortment size preferences are systematically influenced by psychological distance from the choice (Trope and Liberman 2003, 2010).

Studying the role of psychological distance on assortment size decisions also provides a unique opportunity to advance our understanding of construal level theory (CLT; Trope and Liberman 2003, 2010). As we will discuss, CLT points to two contradicting predictions regarding the influence of psychological distance on the assortment size decision. The ability to pit these two predictions against each other not only adds to our understanding of consumers' retailer and assortment size preferences but also provides a fruitful domain to study and advance the current theorizing of CLT. As such, we aim to reconcile these contradicting predictions.

Across six experiments we show that assortment size preference is systematically affected by psychological distance and that the direction of the relationship is based on the

explicit consideration of desirability/feasibility trade-off information. Our findings extend the construal level literature by identifying and rectifying its diverging predictions with an important moderator. In addition, our results contribute to the assortment literature, suggesting that the lure of assortment may not be as universal as previously thought.

The rest of this article is organized as follows. First, we review the product assortment and temporal construal literatures, discussing the two conflicting perspectives in detail. Second, we propose hypotheses that identify the conditions under which each of these opposing effects would be observed. Third, we present six experiments that test our hypotheses and provide evidence for the underlying process and its boundary conditions. Finally, we discuss the theoretical and practical implications of our results.

THEORETICAL BACKGROUND

Preference for Large Assortments

Researchers have conceptualized assortment choice in a hierarchical fashion where a consumer chooses a product assortment in the first phase (e.g., what store to visit) and then chooses a specific product in the second phase (Broniarczyk 2008; Chernev 2006; Kahn and Lehman 1991; Kahn, Moore, and Glazer 1987; Sood, Rottenstreich, and Brenner 2004). Our focus is on the first phase: choice of the assortment. Conventional wisdom, as well as classic economic theory, suggests that when it comes to product assortments—defined as the number of options in a single product category (Broniarczyk 2008; Levy and Weitz 2001)—more is better. That is, having a larger number of options to choose from increases consumer utility. Large assortments increase the likelihood that a consumer will find his or her perfect match or ideal point (Baumal and Ide 1956; Chernev 2003), offer flexibility in making choices and satisfy variety-seeking motives (McAlister and Pessmeir 1982; Ratner, Kahn, and Kahneman 1999), help hedge against preference uncertainty (Kahn and Lehmann 1991), and facilitate consumer preference development (Broniarczyk 2008). In the end, consumers are attracted to retailers that offer larger assortments, and assortment size is an important driver of store choice (Arnold, Oum, and Tigert 1983; Broniarczyk et al. 1998; Hoch, Bradlow, and Wansink 1999; Redden and Hoch 2009).

Recent research has begun to identify when consumers may be less attracted to large assortments. For instance, Chernev (2006) demonstrated that when making an assortment decision, consumers focus on maximizing decision flexibility and mostly ignore the difficulty of making a final choice from these assortments, which, at least partially, underlies the preference for a large assortment. If, however, a consumer's decision focus is shifted to the difficulty of choosing from the assortment, preference for a large assortment decreases significantly. Inherent characteristics of the assortment also moderate preference for the plenty. In particular, larger assortments have an advantage over smaller ones when the options in both sets are relatively low in

attractiveness, but this preference for the plenty is eliminated if both assortments are deemed to be highly attractive (Chernev and Hamilton 2009). Other results suggest that consumers have a stronger preference for retailers offering more variety when the decision is risky (Boyd and Bahm 2009), and they shy away from large offerings if the assortment is difficult to compare (Gourville and Soman 2005). Adding to this literature, we propose an important moderating factor to the attraction of large assortments that has not been explored: the psychological distance of the decision.

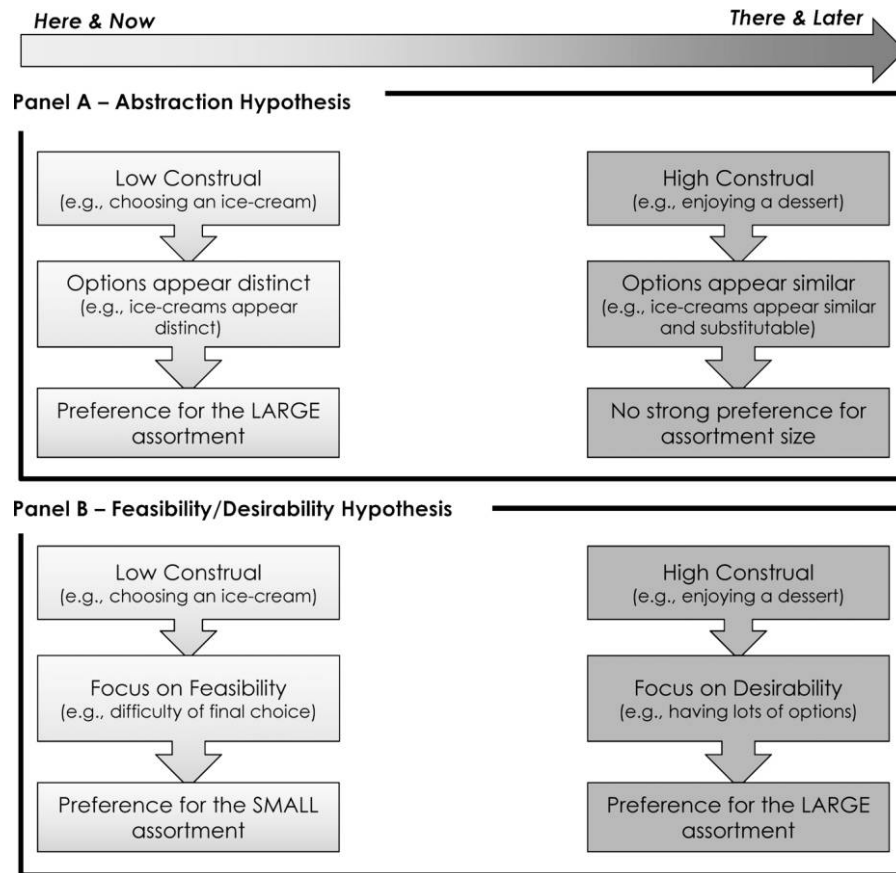
Psychological Distance

CLT posits that the psychological distance of events systematically influences how events are construed and evaluated (Trope and Liberman 2003, 2010). When events take place here and in the present and are happening to us with certainty, we are more likely to construe them in terms of specific, subordinate, incidental, and contextual features that convey details of the information (a low level or concrete construal). On the other hand, when events take place in a distant location, later in time, to others, and/or with ambiguity, consumers construe them in terms of simple, general, superordinate, and decontextualized features that convey the essence of the information (a high level or abstract construal). Consumers construing an event at a high (vs. low) level also place more weight on values and ideals (vs. contextual details; Fujita et al. 2008) and weigh desirability (vs. feasibility) concerns more heavily (Liberman and Trope 1998).

These changes in construal have significant consequences for decision making and consumption. For instance, when decisions are construed at a high (vs. low) level, consumers pay more attention to primary (vs. secondary) features (Trope and Liberman 2000) and increase the use of non-alignable (vs. alignable) attributes (Malkoc, Zauberaman, and Ulu 2005). Further, events and objects construed at a higher level are categorized into broader categories (Liberman, Sagristano, and Trope 2002), lead to increased self-control (Fujita et al. 2006) and decreased impatience (Malkoc and Zauberaman 2006; Malkoc, Zauberaman, and Bettman 2010), and have been shown to attenuate a host of context effects (Khan, Zhu, and Kalra 2010). However, this extensive literature has not explored how shifts in construal would affect a consumer's preference between small and large assortments. Put differently, while CLT has clear predictions as to how the choice situation would be represented, the predictions are not as clear for its implications for assortment preference. Consider a consumer who is trying to decide between two ice cream shops. If she is psychologically distant from the decision, she would be more likely to construe these options to serve a higher order abstract goal, such as treating oneself or enjoying a dessert (vs. a lower order concrete goal, such as choosing between two stores). But what would be the implication of these representations? Further examination of CLT produces two opposing predictions. The first prediction we term the *abstraction hypothesis* and the second we term the *feasibility/desirability hypothesis*.

FIGURE 1

OPPOSING PREDICTIONS FROM CONSTRUAL LEVEL THEORY



The abstraction hypothesis is based on CLT’s premise that the very function of a high-level construal is to enable people to mentally transcend the here and now by altering how information is represented and processed (Trope and Liberman 2010). This switch in processing to the more abstract is associated with an increased tendency to search for commonalities among options (Förster, Liberman, and Kuschel 2008), to find overarching themes (Malkoc et al. 2005), and to categorize options into larger and broader categories (Liberman et al. 2002). To the extent that options categorized together are perceived to be more similar (Rosch and Mervis 1975), we would expect abstraction to lead to broader categories and increase the perceived similarity of the options considered. But what would be the effect of such changes in similarity (due to abstraction) on assortment size preference?

Consider the psychologically distant consumer who is deciding between two ice cream shops and construes the task to serve a higher order goal, such as treating oneself to a dessert. She will view ice creams as means to fulfill ends in relation to the usage context (i.e., higher order goals),

will judge the options similar in their ability to fulfill these end goals, and ultimately will find them more substitutable in their ability to satisfy their end goals (Day, Shocker, and Srivastava 1979; Ratneshwar and Shocker 1991). As the consumer perceives the ice creams as more substitutable, either store will fulfill her abstract representation (e.g., treating oneself) and thus decrease her need to choose the ice cream shop with the larger assortment. In contrast, the consumer making a decision for a psychologically proximal time or place will have a low-level representation (e.g., a choice between two stores) and search for differences among options to make a decision. This low representation will highlight differences and make the options appear distinct and less substitutable. As a result, the consumer will require more options to match her preferences and have a higher preference for the large assortment (see fig. 1A for a graphical representation).

The feasibility/desirability hypothesis tells a different story. CLT research has repeatedly shown that psychological distance increases the focus and weighting of desirability attributes compared to feasibility attributes (Liberman and

Trope 1998; Liviatan, Trope, and Liberman 2008; Todorov, Goren, and Trope 2007). Assortment research has shown that when consumers focus on the desirability of large sets (i.e., the desire to have many options, to seek variety, and/or to match preferences), they prefer larger assortments to smaller ones. However, a focus on the feasibility of such large sets (i.e., the difficulty of choosing from a large set) decreases preference for a large assortment (Chernev 2006). Following this logic, a psychologically proximal consumer would weigh feasibility concerns more than desirability and would focus on the difficulty of making a choice from a large set, leading to a preference for the small assortment. In contrast, a psychologically distant consumer would weigh desirability concerns more than feasibility and be more focused on the desirability of the options in a large assortment, leading to a preference for the larger assortment.

Consider again the consumer choosing between two ice cream shops that are psychologically distant. The feasibility/desirability hypothesis would predict that the consumer construing the task as enjoying a dessert would weigh the desirability aspect of this choice more than the feasibility aspects of choosing from a large set. In other words, she would be willing to trade off less feasibility for more desirability and thus prefer a larger assortment. The psychologically proximal consumer, however, who construes the task as choosing an ice cream, would focus on the feasibility of being able to do so and be more willing to trade off less desirability for more feasibility, thus having a greater preference for the smaller assortment (see fig. 1B for a graphical representation).

An important question is when will each of these processes guide consumer choice? We propose that the answer depends on the characteristics of the choice context. Prior research suggests that consumers, left to their own means, do not automatically consider the desirability/feasibility trade-off in an assortment decision. For instance, consumers do not intuitively understand the difficulty of choosing from large assortments (Iyengar and Lepper 2000) and thus fail to focus on such difficulty (Chernev 2006). As important, the demonstrations of feasibility/desirability effects on CLT have consistently provided explicit trade-off information about these two components (e.g., Liberman and Trope 1998; Liviatan et al. 2008; Todorov et al. 2007). Thus, we propose that when consumers are provided with assortment information with no explicit reference to its feasibility or desirability, they will not automatically map the trade-off between feasibility (i.e., difficulty of choosing from this assortment) and desirability (i.e., having a large assortment to choose from) onto the decision. In the absence of this trade-off information, psychological distance will operate through the abstraction hypothesis. That is, the consumer who is psychologically distant will perceive the options as more substitutable and decrease their preference for a larger assortment. More formally, we hypothesize the following:

H1: When the feasibility/desirability trade-off is not salient, increasing psychological distance will decrease preference for the large assortment.

H2: When the feasibility/desirability trade-off is not salient, the effect of psychological distance on assortment choice will be mediated by perceived substitutability of the options.

When the feasibility/desirability trade-off is explicitly considered, however, consumers will focus on this trade-off, and psychological distance will operate through the feasibility/desirability hypothesis and increase the preference for the large assortment. If the choice context reminds consumers of the necessary effort to evaluate each option, along with the desirability of consuming each option, we would expect them to recognize and map the trade-off between increased desirability of having large sets and the decreased feasibility of sorting through them. We hypothesize that once this trade-off is activated, psychological proximity will increase (decrease) the relative weighting of feasibility (desirability) concerns and lead to a greater preference for the more feasible, small assortment option. More formally, we hypothesize the following:

H3: When the desirability/feasibility trade-off is salient, increasing psychological distance will increase preference for the large assortment.

Note that our hypotheses are not a simple application of CLT. Two of the most commonly cited findings in the construal literature are abstraction (e.g., Trope and Liberman 2003, 2010) and in the weighing of desirability and feasibility (e.g., Liberman and Trope 1998). However, no research, to our knowledge, has examined the situations where these two processes make opposing predictions. Preference for assortment size provides a unique opportunity to identify and test moderating conditions. Our theory suggests that the salience of explicit feasibility/desirability information is an important moderator for understanding opposing predictions that often occur within CLT. While the default mechanism behind psychological distance operates through abstraction and the resulting substitutability judgments, feasibility/desirability concerns take precedence and reverse the pattern of results if this trade-off is made salient. These results are noteworthy as they not only establish a boundary condition to the established feasibility/desirability effect but also identify trade-off saliency as a moderator to the process through which construal operates.

We test these hypotheses in six experiments by systematically varying consumers' psychological distance (both temporal and geographical) from the decision and measuring their preference for small and large assortments across an array of product and service categories. Experiments 1A and 1B establish that when the desirability/feasibility trade-off is not salient, the abstraction hypothesis takes precedence, and psychological distance decreases preference for the large assortment (hypothesis 1). Experiments 2 and 3 systematically rule out several alternative explanations, while providing evidence for our theory by directly testing our proposed process of perceived substitutability (hypothesis 2). Experiments 4 and 5 test hypothesis 3 by showing

that the effect of construal on assortment size preference is reversed when desirability/feasibility trade-off information is explicitly considered.

EXPERIMENT 1A: RESTAURANTS

Experiment 1A provides a preliminary investigation of hypothesis 1, which states that in the absence of explicit feasibility/desirability trade-off information, consumers who are psychologically distant from the decision will show a decreased preference for a large assortment compared to consumers who are psychologically proximal. To test this prediction, we showed participants menus from two different restaurants (one with a smaller assortment and one with a larger menu) and asked them to choose a free entrée coupon at one of the two restaurants, in either the near or distant future. We predicted that when participants were choosing a restaurant for the near future, they would prefer the large assortment, and that this preference would be significantly attenuated when the choice is for the distant future.

Method and Procedure

One hundred thirty undergraduate students completed the study as part of a 30-minute session and received course credit. Participants were told that two restaurants were opening in their area, and the owner was offering coupons for a free entrée on the opening day to encourage foot traffic. Participants were shown the menus for these restaurants (see app. A) and were asked to choose a restaurant. One of the restaurants had seven items on its menu, while the other had 14 items. Psychological proximity of the situation was manipulated with temporal distance, by telling participants that the restaurants were either to open that day (proximal) or next semester (about 5 months later; distal). To ensure that participants did not perceive having more time in the future (Zauberman and Lynch 2005), we told participants that the coupons they have would be valid for the opening day only.

Results

The dependent measure was choice share of the restaurant with a larger assortment. We expected that preference for the larger assortment, which has been repeatedly demonstrated in the literature, would be observed when the decision is temporally proximal and would be reduced or eliminated when the decision is farther out in the future. Confirming this prediction, there was a significant difference in preference based on psychological distance ($\chi^2(1, N = 129) = 3.89, p < .05$). When the restaurants were to open that day, a majority of the participants preferred the restaurant with a larger selection (63%). When the restaurants did not open until the next semester, however, participants were indifferent between the large (46%) and the small assortments (54%).

EXPERIMENT 1B: ICE CREAM

Experiment 1B used a different operationalization of psychological distance—geographical distance—and a separate product category to investigate how psychological distance influences assortment size preference. Participants were asked to imagine being on a vacation either right outside of their town or in a town far away, and they had to choose which store to visit to buy a pint of ice cream. We predicted that participants geographically close to home, and thus psychologically proximal, would prefer the store with a larger assortment. Alternatively, those who imagined being far away would represent this situation abstractly (e.g., finding a place to purchase a dessert), consider the available ice cream options more substitutable, and thus reduce their preference for the store with a larger ice cream assortment.

Method and Procedure

One hundred sixty-one participants were compensated \$.20 to complete the study online via MTurk. The average age of the participants was 32.4 years, 44% of the participants were male ($N = 71$), and 59% of them resided in North America (with India [30%] and Europe [7%] being the other major geographical locations; see Goodman, Cryder, and Cheema [2012] for a review on the use of MTurk).

Participants imagined that they were enjoying a weekend vacation in a rental home either about a mile outside their town (proximal) or about 2,000 miles away from their hometown (distal). They were buying ice cream to snack on, and they had the choice of going to two stores with varying assortment sizes. One of the stores carried six types of ice cream, while the other carried 18 different types of ice creams. Participants were shown the selection in both of these stores (see app. B). To ensure that they did not infer differential quality from the store's size, which has been shown to influence assortment size decisions (Chernev and Hamilton 2009), we informed participants that both stores carried high-quality ice cream.

Results

The dependent measure was choice share of the store with a larger assortment. The results confirmed our prediction and were consistent with experiment 1A. When the vacation home was just outside of town, participants preferred to shop at the store with a larger selection significantly more (85%) than when they were vacationing in a home 2,000 miles away (70%; $\chi^2(1, N = 160) = 4.59, p < .05$).

Discussion

In experiments 1A and 1B, we find that when participants were given the choice between a large and small assortment (with no explicit reference to feasibility/desirability trade-off), those who were psychologically proximal preferred a larger assortment, but when the consumption was farther out in the future (experiment 1A) or in a more distal location

(experiment 1B), this overwhelming preference for the larger assortment retailer decreased significantly. Experiments 1A and 1B provide preliminary support for our theory that in the absence of explicit desirability/feasibility trade-off information, consumers who are psychologically distant from the decision construe the decision abstractly, which makes the available options appear more substitutable in satisfying the general representation. As products appear more substitutable, consumers become more indifferent between large and small assortments.

One might question whether our results are due to consumers' lack of concern or involvement about the outcome when the decision is psychologically distant. If the decision is perceived to be distant and less relevant, then consumers may not have strong opinions and randomly choose between assortments. Participants in experiment 1A, for example, may have been less involved in a decision that was to take place next semester and thus may make a random choice between the two restaurant options. Experiment 1B partially addressed this issue by altering construal with a geographical distance manipulation. That is, participants were making the decision for the same time period, while being on a vacation and the only difference was the physical location of the vacation home. As such, there would be little reason to suspect that the ice cream decision would be less important or involving for participants far away from home. Nonetheless, we investigated this alternative explanation more directly by examining participants' response times in experiment 1B. Examining the log-transformed response times, we found that participants who imagined being on a vacation 2,000 miles away ($M = 1.52$) and just a mile away ($M = 1.48$) spent similar amounts of time making the decision ($F(1, 159) < 1$), suggesting that they were not differentially involved. To investigate this issue in more detail, our subsequent experiment systematically measure involvement with response times, self-reported effort measures, and a memory task. In addition, the following experiments further examine the process behind our results by testing hypotheses 2 and 3.

EXPERIMENT 2

This experiment aimed at providing initial process evidence for our theory (hypothesis 2) while providing evidence against another alternative explanation. Our theory suggests that in the absence of explicit desirability/feasibility trade-off information, psychologically distant decisions are represented more abstractly (e.g., planning a vacation). Under this representation all available vacations appear more substitutable, reducing the need for large assortments. To that end, we measured whether participants perceive the options in this category all alike (very substitutable) or very distinct. Furthermore, this experiment provides evidence against quality inferences as an explanation. In experiments 1A and 1B participants could have inferred that the retailers with smaller assortment were specialists carrying a higher quality (and higher priced) selection. Of course, one could also argue the opposite:

retailers with larger assortments should be more likely to carry a higher quality (and higher priced) selection (see Berger, Draganska, and Simonson 2007). Given that high construal highlights central attributes like quality, one could argue that evaluating two high-quality options might be a reason why participants were indifferent between a small and a large assortment (see Chernev and Hamilton 2009). To provide evidence against this alternative explanation, in experiment 2 we kept the source of assortment (the retailer) constant and measured participants' willingness to pay for these vacations to assess whether psychological distance altered their valuation.

Method and Procedure

Ninety-eight participants completed the study online via MTurk and were compensated \$.20 for their participation. The average age of the participants was 32.2 years, 49% of the participants were male ($N = 47$), and 52% of them resided in North America (with India [32%] being the other major geographical location).

Participants were asked to imagine that they were planning their next vacation scheduled for either this month (proximal) or next year (distal). They were asked to imagine that they called their travel agent to put together a set of vacations to fit their desires and budget constraints. Upon some investigation, the travel agent returned with several vacations that fit their criteria and asked whether they would like to see a small (6 options) or a large (18 options) set of vacations. No other information about the vacations was provided, but to keep the quality inferences constant, we specifically mentioned that the same agent was providing either a small or large set of options. Participants' choice between these assortments was the main dependent variable, and we recorded response time to test potential changes in involvement. Finally, to directly test our theory, participants rated substitutability of the options in the product category by indicating whether they viewed the vacations available in the market to be all very much alike or all very different (1 = alike and 9 = different).

Results

Response Time. Log-transformed response times showed that participants choosing an assortment for a vacation this month ($M = 3.64$) and next year ($M = 3.61$) spent similar amounts of time making the decision ($F(1, 96) < 1$). Consistent with the findings in experiment 1B, these results suggest that participants were not differentially involved.

Willingness to Pay. To test whether participants inferred differences in quality and price, we asked them to indicate their willingness to pay for a vacation in the small or large set of options. A 2 (psychological distance: proximal vs. distal) \times 2 (assortment size: 6 vs. 18) ANOVA produced no significant main effects or an interaction (all $F < 1$), suggesting that participants' perceptions of quality and price were not influenced by psychological distance.

Choice. We predicted that participants would show a strong preference for the larger vacation set only when the decision is temporally proximal and the preference would be significantly attenuated when the decision is farther out in the future. Confirming this prediction, there was a significant difference in choice based on psychological distance ($\chi^2(1) = 4.03, p < .05$). When the planned vacation was this month, a majority of the participants preferred the larger set for their vacation (77%); when the vacation was not planned until the coming year, however, participants were indifferent between the large and small set of vacations (57%).

Substitutability. The main tenet of our theory states that representing events at a higher level highlights the substitutability of the options. We expect that those who are making a decision between two sets of vacations for next year would be more likely to represent the situation abstractly (e.g., choosing a vacation vs. choosing between a large and small set of vacations); thus, they would consider the vacations as more substitutable, which leads to shifts in assortment size preference (hypothesis 2).

To test this prediction, we examined our substitutability measure. As expected, we found that participants who were choosing a vacation for next year found the available options more alike and substitutable ($M = 5.77$) than those whose decision was proximal ($M = 6.51$; $F(1, 96) = 4.79, p < .05$). Next, we examined whether substitutability predicted the choice of vacation set. A binary logistic regression showed that substitutability was indeed a significant predictor of choice ($\beta = .733, \text{Wald } \chi^2(1) = 19.18, p < .01$). As noted, there was a significant effect of distance on choice ($\beta = -.879, \chi^2(1) = 3.94, p < .05$), and this effect decreased when the mediator was added to the model ($\beta = -.592, \chi^2(1) = 1.38, p > .20$). Furthermore, using the recommended indirect bootstrapping technique for testing mediation with a dichotomous dependent variable (Preacher and Hayes 2008), the results confirm that the conditional effect of psychological distance on assortment size decision operates through substitutability (95% confidence interval [CI] = $-.712, -.019$). These findings provide support for our theory, which indicates that psychological distance increases substitutability of products in a category, which then decreases consumers' preference for larger assortments.

Discussion

Experiment 2 further supports our theory that psychological distance from the decision leads to higher level representations, making options appear more substitutable, and leading participants to be more indifferent between retailers offering large and a small assortments. In doing so, experiment 2 kept the retailer constant, providing evidence against quality inferences as an alternative explanation. As in experiment 1B, decision response times showed no differences, suggesting that differential involvement with the decision is an unlikely explanation for our pattern of results.

This study also directly measured perceptions of substitutability and tested the process behind our effect (hypothesis 2).

We hypothesized that when the decision context lacks explicit desirability/feasibility trade-off information, psychological distance will create an abstract representation of the choice situation, making the available options appear more substitutable, which in return is responsible for the shift in assortment size preference. Thus, we measured the perceived substitutability of available vacations, and the results showed that substitutability mediated our results: psychological distance directly increased substitutability judgments, and the effect of psychological distance on assortment choice was eliminated when we controlled for substitutability. These findings provide the initial support for our theory.

EXPERIMENT 3

Experiment 3 aimed to further test the role of substitutability in determining the relationship between psychological distance and assortment size preferences. Experiment 2 demonstrated that changes in psychological distance altered participants' substitutability judgments, but experiment 2 did not provide the specific set of options to participants, which is common when making an initial choice between two retailers. However, the absence of the exact choice set raises the question of whether participants indeed altered their perceptions of these options or whether they relied on past experiences with small and large assortments. To address this issue, experiment 3 presented participants with actual sets and descriptions of the options. This study also employed a different measure of substitutability to better test hypothesis 2. Finally, to rule out involvement as an alternative explanation more conclusively, we used a memory task to determine whether psychological distance had differential effect on recall through involvement.

Method and Procedure

Eighty-seven native English-speaking undergraduate students completed the study as part of a 30-minute session and received course credit. Participants were asked to imagine that their current blender malfunctioned and that they needed to replace it before their next dinner party. The dinner party was manipulated to take place either the next day (proximal) or at the end of the year (which, at the time, was 10 months away; distal). They were told that they were considering shopping at two stores, both offering good-quality blenders. The store with the small (large) assortment carried six (18) options.

Participants were then presented with the full set of options for both of these stores, in addition to a description about each of the blenders (see app. C for an example). To create nonoverlapping and counterbalanced sets, we used a total of 24 different blender descriptions. From these descriptions we created four separate versions, rotating which set of six (of 24) blenders represented the small assortment, with the remaining 18 representing the large set. Participants randomly received one of the four pairs of stores. Thus, all of the participants saw the same 24 options, but whether a

particular option belonged to the small or large assortment was counterbalanced. The counterbalancing factor did not have an effect or interact with psychological distance (all $F < 1$) and thus was dropped from further analysis.

Participants were informed that they would be making a choice of blender but first needed to choose which store to visit. After viewing the options, participants were asked to indicate the similarity of the options available to them ("When you think about all the blenders offered at these two stores, how similar are all these blenders?"). Next, they chose the store (assortment) they would like to shop at, followed by an actual choice from their chosen assortment. Finally, we measured involvement with a three-item scale ("How much effort did you put into the choice?" "How much thought did you give to this decision?" and "How serious would the consequences be if you made a poor decision?") on a 9-point scale.

After completing this task, participants took part in unrelated studies for 20 minutes. Afterward, they were given the memory-based involvement measure, which presented them with 12 blenders and were asked to circle the blenders that they thought they saw during the earlier part of the study. Of these 12 blenders, six of them were blenders participants actually saw and the remaining six were new blenders not previously viewed by participants.

Results

Involvement Measures. We first analyzed the self-reported involvement measure. The three-item measure of involvement proved to be reliable (Cronbach's $\alpha = .84$) and was averaged to create an involvement index. However, participants who were psychologically distal ($M = 3.89$) reported similar levels of involvement as those that were proximal ($M = 3.69$; $F(1, 85) < 1$). Next, we examined the response times. The log-transformed response times also showed that participants choosing an assortment for a vacation this month ($M = 2.22$) and next year ($M = 2.31$) spent similar amounts of time making the decision ($F(1, 85) < 1$). Next, we coded the memory task. For each participant, we counted (1) the number of blenders that they have previously seen and were able to identify correctly and (2) the number of blenders they have incorrectly identified as previously seen. We then created an index score subtracting the latter from the prior. As predicted, the memory index did not show any differences between the psychologically distal condition ($M = 1.17$) and proximal condition ($M = .75$; $F(1, 85) = 1.34$, $p > .25$). Taken together, the results from this memory index measure, response times, and self-report measures of involvement provide convincing evidence that participants' involvement was not altered by psychological distance.

Choice. We predicted that participants would show a strong preference for the store with the larger assortment only when the decision is temporally proximal and the preference would be significantly attenuated when the decision is farther out in the future. Confirming this prediction, there

was a significant difference in choice on the basis of psychological distance ($\chi^2(1, N = 85) = 5.67$, $p < .05$). When the dinner party took place the next day, a majority of the participants preferred the store with the larger assortment (74%); when the dinner party was not until the end of the year, however, participants were indifferent toward the large and small assortments of blenders (49%).

Substitutability. Our theory suggests that the default mechanism behind psychological distance operates through abstraction and the resulting substitutability judgments. Thus, we predict that consumers making a decision for the end of the year would be more likely to consider the options as more substitutable, which in return would decrease the preference for the large assortment (hypothesis 2).

Examining our substitutability measure, we found, as expected, that participants who were choosing a store to shop at for the end of the year found the available options more similar ($M = 6.89$) than those whose decision was proximal ($M = 6.26$; $F(1, 85) = 3.93$, $p = .05$). Next, we examined whether substitutability predicted the choice of vacation set. A binary logistic regression controlling for participants' involvement with the decision showed that substitutability was indeed a significant predictor of choice ($\beta = -.394$, Wald $\chi^2(1, N = 85) = 4.09$, $p < .05$). As noted, there was a significant effect of distance on choice ($\beta = -.538$, $\chi^2(1) = 4.57$, $p < .05$), and this effect decreased when the mediator was added to the model ($\beta = -.448$, $\chi^2(1) = 2.99$, $p > .05$). Furthermore, using the recommended indirect bootstrapping technique for testing mediation with a dichotomous dependent variable (Preacher and Hayes 2008), the results confirm that the conditional effect of psychological distance on assortment size decision operates through substitutability (95% CI = $-.404, -.002$). These findings provide support for our theory, which indicates that psychological distance increases substitutability of products in a category, which then decreases consumers' preference for larger assortments.

Discussion

Experiment 3 further supports our theory that psychological distance from the decision leads to higher level representations, making options appear more substitutable, and leading participants to be more indifferent between retailers offering large and a small assortments. By using memory measures, in addition to response times and self-report measures, experiment 3 provides conclusive evidence against involvement as an alternative explanation.

This study also provided participants with the actual set of options and directly measured the effect of psychological distance on perceptions of substitutability. We hypothesize that when the decision context lacks explicit desirability/feasibility trade-off information, psychological distance influences participants' representation of the choice situation and make the available options appear more substitutable, shifting assortment size preferences. We proposed that a similarity-based process drives perceptions of substitutabil-

ity in product usage, and we tested this process by measuring participants' perceived similarity of the available blenders. The results showed that this measure of similarity mediated our results: psychological distance directly increased similarity judgments, and a mediation analysis using the bootstrapping technique provided evidence for this mediation. Taken together, the results of experiment 3 provide further evidence for hypotheses 1 and 2. Next, we turn to the examination of hypothesis 3, which addresses cases where desirability/feasibility trade-off information is salient from the decision context.

EXPERIMENT 4

The goal of experiments 4 and 5 was to further examine key elements of our framework by directly testing hypothesis 3, which states that when there is explicit desirability and feasibility trade-off information, the effect of psychological distance will reverse: a shorter psychological distance will increase preferences for smaller assortments. Consistent with prior work (Chernev 2006), we theorize that consumers do not inherently incorporate the difficulty (i.e., feasibility) information into their decisions, but once primed or explicitly given this information (as it has been the case in the CLT literature) they are able to act upon it. In particular, we argue that when consumers are presented with explicit trade-off information, the inherent desirability/feasibility trade-off will be activated. For instance, consider a consumer presented with a choice between a high desirability (i.e., large assortment) but low feasibility (i.e., long choice time) option and a low desirability (i.e., small assortment) but high feasibility (i.e., short choice time) option. When this desirability/feasibility trade-off information is salient and explicitly considered, a more proximal decision will lead to a higher (lower) weighting of the feasibility (desirability) attribute, thus increasing the preference for the highly feasible option—the small assortment. However, when this trade-off information is not explicitly considered (as observed in experiments 1–3), it is greater psychological distance that will increase the preference for the small assortment. In other words, we expect a reversal of our effect when explicit trade-off information is present.

Method and Procedure

Two hundred one participants completed the study online via MTurk and were compensated \$.20 for their participation. The average age of the participants was 31.95 years, 50% of the participants were male ($N = 101$), and 49% of them resided in North America (with India [37%] being the other major geographical location). The study followed a 2 (psychological distance: proximal vs. distal) \times 2 (trade-off information: salient vs. not salient) between subjects design.

Participants were asked to imagine that their current blender malfunctioned and that they need to replace it before their next dinner party. The dinner party was manipulated to take place either tomorrow night (proximal) or at the end of the year (which, at the time, was 3 months away; distal).

They were told that they were considering shopping at two stores, both offering good-quality blenders. The store with the small (large) assortment carried four (24) options. To encourage consideration of the desirability/feasibility trade-off information, we varied the saliency of the desirability/feasibility trade-off information. Those who were assigned to the trade-off salient condition were told, "Based on your experience, you estimated that examining each blender will take about 3–5 minutes." Those not primed with trade-off information were not given this extra information. Participants indicated their choice, and we recorded their response times. Finally, we measured self-reported purchase involvement with the same three-item measure used in experiment 3.

Results

Pretest. To make sure that our manipulation indeed made desirability/feasibility trade-off more salient, an additional 95 participants completed a pretest. Participants completed the same task, where they were randomly assigned to either receive the additional instructions (trade-off salient) or not. Next, they were asked to indicate to what extent they would focus on the feasibility/desirability trade-off. ("If you had to choose between these two stores, to what extent would you focus on the trade-off between getting a large set with many desirable options and the difficulty of making a choice from such a large set?") Levine's test for equality of variances failed ($F = 1.58, p > .1$); thus, the analyses used the adjusted degrees of freedom.) The results indicated that participants who received the additional instructions focused on the feasibility/desirability trade-off to a greater extent ($M = 5.69$) than those who did not receive this information ($M = 4.88$; $t(91.46) = 1.96, p = .05$). These findings confirm the effectiveness of our manipulation.

Involvement Measures. The three-item measure of involvement proved to be reliable (Cronbach's $\alpha = .74$) and was averaged to create an involvement index. A 2 (psychological distance: proximal vs. distal) \times 2 (trade-off information: salient vs. not salient) ANOVA, with this index as the dependent variable, did not produce a significant main effect or an interaction (all $p > .14$). Of particular interest, participants who were psychologically distal ($M = 5.20$) and proximal ($M = 5.27$) reported similar levels of involvement with the task ($F(1, 197) < 1$), providing further evidence that participants' involvement was not altered by psychological distance. The log-transformed response times showed that psychologically distal participants spent marginally more time making a decision ($M = 3.37$) than those who were psychologically proximal ($M = 3.20$; $F(1, 199) = 3.18, p = .08$), suggesting that participants who were psychologically distal from the decision were not less involved.

Choice. We predicted that when trade-off information was not salient, the choice results would replicate our previous studies showing that more psychological distance de-

creases choice of the large assortment. However, in the trade-off salient condition, the effect would reverse, and less psychological distance would decrease choice of the large assortment.

We ran a logistic regression model that used construal, trade-off saliency, and their interaction as the predictor variables. As expected, psychological distance did not produce a main effect ($\beta = -.073$, Wald $\chi^2(1, N = 197) < 1$), and trade-off saliency produced a marginally significant main effect ($\beta = -.289$, Wald $\chi^2(1, N = 197) = 3.26$, $p = .07$), indicating that participants were marginally less likely to choose the larger assortment when they were given the feasibility trade-off information. More importantly, and as predicted, a significant two-way interaction confirmed our prediction ($\beta = .406$, Wald $\chi^2(1, N = 197) = 3.84$, $p = .05$, see fig. 2). A closer examination finds that results in the trade-off nonsalient condition replicated the pattern found in experiments 1–3, showing that participants who planned to purchase a blender in the distant future were less likely to choose the large assortment (63%) than those who planned to shop in the proximal future (84%; $\beta = -.551$, Wald $\chi^2(1) = 5.12$, $p < .05$). Alternatively, when trade-off information was salient, the effect reversed, and we found that participants who were psychologically proximal were less likely to choose the large assortment (53%) than those who were psychologically distal (72%; $\beta = -.479$, Wald $\chi^2(1, N = 197) = 8.96$, $p < .01$).

Discussion

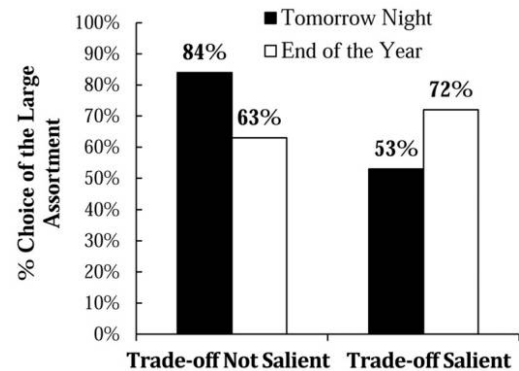
This experiment identifies the saliency of trade-off information as a key moderator to the desire for large assortments and provides further support for our framework. While experiments 1–3 show support for the abstraction hypothesis, experiment 4 shows support for the feasibility/desirability hypothesis when feasibility/desirability trade-off information is salient. In the absence of explicit trade-off information, the preference for large assortments diminishes when consumers are psychologically distant from the decision. When explicit trade-off information is made salient, however, we find the opposite results: the preference for large assortments diminishes for psychologically proximal consumers.

EXPERIMENT 5

While results of experiment 4 support our hypothesis, a further investigation is necessary to provide further evidence of a key tenet to our process. In experiment 5 we also operationalize the saliency of desirability/feasibility trade-off information in a less heavy-handed and retail-relevant manner. In this experiment we employed a subtle manipulation that operates through the prior choices consumers make, by not only highlighting the feasibility of the decision but also the desirability of having a large assortment. Specifically, before making the target choice between a small and a large assortment, we asked participants to make a product choice from another assortment. We varied the as-

FIGURE 2

EXPERIMENT 4: CHOICE OF THE LARGE ASSORTMENT AS A FUNCTION OF PSYCHOLOGICAL DISTANCE AND DESIRABILITY/FEASIBILITY TRADE-OFF SALIENCE



sortment size of this first choice to be from either a smaller or larger set compared to the target assortments. We reason that having already made a choice from a large set should prompt participants to think about the trade-off between the heightened desirability of having many options and the decreased feasibility of choosing among them. Alternatively, making an earlier choice from a smaller assortment will be relatively easy and activate neither desirability nor feasibility concerns; thus, choosing from a smaller assortment will not make desirability/feasibility trade-off information salient. In accordance with hypothesis 3, we expect to see psychological distance decrease the preference for the large assortment when the prior choice was from a small set (trade-off information not salient) but increase it when the prior choice was from a large set (trade-off information salient).

Method and Procedure

One hundred forty-five participants completed the study as a part of a 45-minute session and were paid \$10 for their participation. The study followed a 2 (psychological distance: proximal vs. distal) \times 2 (trade-off information: salient vs. not salient) between-subjects design.

In the first part of the study, we asked participants to imagine that they were shopping in a store and were interested in buying chocolate. We varied the size of this store's assortment to be either large (47 options), for the trade-off information salient condition, or small (9 options; see app. D), for the trade-off information not salient condition. Participants were asked to make a choice from the assortment and indicate their satisfaction. Next, presented as an unrelated study, participants imagined that two stores were opening in their area and the owner was offering coupons for a free chocolate on opening day to encourage foot traffic. Participants viewed the chocolate options for these stores (see app. E) and were asked to choose a store. One of the

stores was said to carry 14 items (five more than the small prior choice), while the other carried 42 items (five less than the large prior choice). Psychological distance of the situation was manipulated by informing the participants that the stores were either to open that day (proximal) or at the end of the summer (about 3 months later; distal). Participants indicated their relative preference between the stores (1 = small assortment, 9 = large assortment).

Results

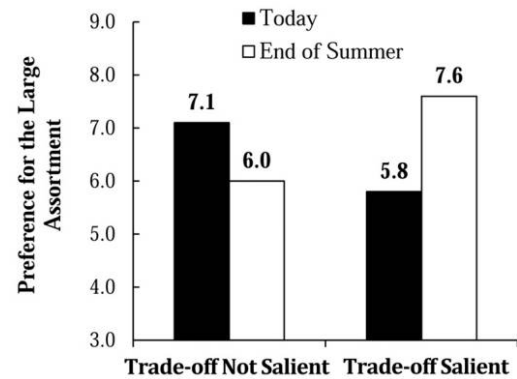
Pretest. To make sure that this subtle manipulation indeed made desirability/feasibility trade-off more salient, an additional 119 participants completed a pretest. Participants completed the prime where they were randomly assigned to either make an initial choice from nine or 49 chocolates. Next, they imagined making the choice between these stores (14 vs. 42 options) and asked to indicate to what extent they would focus on the feasibility/desirability trade-off. (“If you had to choose between these two stores to what extent would you focus on the trade-off between getting a large set with many desirable options and the difficulty of making a choice from such a large set?”) The results indicated that participants who previously made a choice from the large set focused on the feasibility/desirability trade-off to a greater extent ($M = 5.65$) than those who made a choice from the small set ($M = 4.79$; $t(117) = 2.002$, $p < .05$). These findings support the idea that an earlier decision made from a large set would make the desirability/feasibility trade-off more salient.

Response Time. A 2 (psychological distance: proximal vs. distal) \times 2 (trade-off information: salient vs. not salient) ANOVA, using the log-transformed response times as the dependent variable, did not produce significant main effects or interactions (all $p > .1$). Replicating our previous findings, these results suggest that construal did not influence participants’ involvement.

Relative Preference. We predicted that when desirability/feasibility trade-off information is not salient, the choice results would replicate our previous studies showing that psychological distance decreases preference for the large assortment. However, when the trade-off information is salient, the effect would reverse and psychological distance would increase preference for the large assortment.

A 2 (psychological distance: proximal vs. distal) \times 2 (trade-off information: salient vs. not salient) ANOVA supported this prediction with a significant interaction ($F(1, 141) = 11.46$, $p < .01$; see fig. 3). Neither of the main effects was significant (all $F < 1$). A closer examination of the interaction shows that when the feasibility/desirability trade-off information was not salient, the results replicated the pattern found in experiments 1–3: participants who planned to visit the store in the distant future preferred the large assortment to a lesser extent ($M = 6.0$) than those who planned to shop in the proximal future ($M = 7.1$; $F(1, 58) = 3.17$, $p = .08$). Alternatively, when the feasibility/

FIGURE 3
EXPERIMENT 5: PREFERENCE FOR THE LARGE ASSORTMENT AS A FUNCTION OF PSYCHOLOGICAL DISTANCE AND DESIRABILITY/FEASIBILITY TRADE-OFF SALIENCE



desirability trade-off information was salient, the effect reversed, and we found that participants who were psychologically distal showed a higher preference for the large assortment ($M = 7.64$) than those who were psychologically proximal ($M = 5.83$; $F(1, 83) = 9.88$, $p < .01$).

Discussion

The results of experiment 5 provide further support for our theoretical framework by demonstrating the critical role of feasibility/desirability trade-off information salience. Supporting hypothesis 3, we showed that priming desirability/feasibility trade-off information from a prior difficult choice decreases the appeal of large assortments when consumers are psychologically proximal. In the absence of this explicit trade-off information, the preference for large assortments diminishes when consumers are psychologically distant from the decision. By showing participants the full choice set, experiment 5 also provides generalizability and additional evidence to support our hypotheses.

From a theoretical perspective, the results of experiments 4 and 5 are important because they identify a key boundary condition for the well-established outcomes of psychological distance while reconciling the contradicting predictions of CLT. Our research examines the situations in which CLT makes two opposing predictions about the effect of psychological distance, and we show that the salience of trade-off information is a key moderator in our understanding of how psychological distance affects decision making. While the presence of explicit desirability/feasibility trade-off information leads to shifts of desirability/feasibility weighting, the absence of such trade-off information leads psychological distance to operate through shifts in the general representations (i.e., abstraction) of the decision and shifts in perceived substitutability.

GENERAL DISCUSSION

In this article, we examined the role of psychological distance on consumers' assortment size preferences. CLT leads to two contradicting hypotheses regarding the role of psychological distance on the assortment decision. The abstraction hypothesis proposed that greater psychological distance leads consumers to represent the choice task at a higher, more abstract level, making the available options more substitutable, and thus decreasing the need for and choice of a large assortment. The feasibility/desirability hypothesis, however, suggested that psychologically proximal choices increase the attention to feasibility (vs. desirability) concerns and thus decreases the appeal of large assortments. Our experiments show that the default mechanism operates through the abstraction hypothesis, thus decreasing the preference for large assortments when consumers are choosing assortments or retailers in distant time or space. However, we also show that the desirability/feasibility hypothesis operates when desirability/feasibility trade-off information is salient. When this information is salient, the effect reverses, and it is psychological proximity that decreases preference for large assortments. We demonstrated these effects across time and space, multiple product and service categories, and when the actual options in the assortment were both absent (experiments 2 and 4) and present (experiments 1A, 1B, 3, and 5).

Experiments 1A and 1B find support for our abstraction hypothesis. Manipulating psychological distance in terms of time (i.e., 1 day vs. 5 months) and space (i.e., 1 vs. 2,000 miles), these studies find that consumers are less likely to choose large assortments when the choice was psychologically distant. Experiments 2 and 3 extended our results to additional categories, ruled out alternative explanations, and further tested our proposed abstraction process by measuring substitutability, providing support for hypothesis 2 with mediation data.

While experiments 1–3 lend support for the abstraction hypothesis, experiments 4 and 5 examined the relationship between psychological distance and assortment size when feasibility/desirability trade-off information is salient. Consistent with hypothesis 3 and the feasibility/desirability hypothesis, when trade-off information was salient, participants making a decision for the near future decreased their preference for a large assortment. When these explicit trade-offs were not salient, however, it was participants making a decision for the distant future that decreased their preference for a large assortment.

Theoretical and Practical Implications

Our results have important implications for assortment and CLT literatures. CLT has identified a host of consequences to changes in construal (Eyal et al. 2004; Fujita et al. 2006; Liberman and Trope 1998; Trope and Liberman 2010), and two of the most cited are shifts in weighing for desirability and feasibility (Liberman and Trope 1998) and shifts in the representations of the situation (Trope and Lib-

erman 2003, 2010). Yet no research to date has examined situations where these two processes predict opposing effects. Choice of assortment size is one of these situations, and it provides a unique opportunity to identify and test moderating conditions. In this research, we contend that when feasibility/desirability information is not salient, the well-established shift in the weighing of desirability/feasibility attributes is not observed, and instead, construal leads to changes in the abstraction of representations. When trade-off information is salient, feasibility/desirability concerns take precedence and drive choice. These results are noteworthy as they not only establish a boundary condition to when feasibility/desirability effects will affect choice, but they also identify trade-off information saliency as a key moderator to the process through which construal operates.

The results also contribute to the substitutability and similarity literature by demonstrating the effect of psychological distance on substitutability judgments and decision making. Day and Bartels (2008) have shown that while similarity judgments in the distant future will be mostly driven by commonalities, judgments in the present are based more on differences. We extend their findings and suggest that psychological distance increases perceptions of similarity and influences substitutability, and this can occur even when explicit attributes are not presented.

Our findings also suggest that the ubiquitous "lure of assortment" may not be as universal as previously thought. Previous studies focused on consumers making assortment decisions without reference to when or where the decision would take place. We demonstrate that the timing and location of the decision is an important factor in assortment choice and, in turn, retailer choice. From a more practical perspective, our results suggest that the role of assortment in retail store choice may be limited to psychologically proximal situations, and retailers that are far away—in space or time—will not require such a large product assortments to lure consumers. However, if information about the feasibility of the choice is made salient, then psychological proximal consumers will shy away from large assortments. Such situations of psychological distance are common and predictable: consumers planning for future and/or distal consumption (e.g., vacations, insurance, retirement), as well as retailers and resorts serving large geographic areas. Retailers with smaller assortments should highlight the costs of choosing if the decision is taking place here and now but not highlight these costs if the decision is psychologically distant. The reverse strategy is true for retailers of larger assortments.

Limitations and Future Research

Our research proposes several implications that are worthy of future research. For instance, we propose that psychological distance, due to substitutability, is an important factor driving preferences for larger assortments, and it is likely to also affect assortment perceptions, which are influenced by similarity and categorization (Mogilner, Rudnick, and Iyengar 2008; Morales et al. 2005). Psychological distance is also likely to influence satisfaction, variety, and

satiation. Distance could decrease the expectations of an assortment, which affects choice satisfaction (Diehl and Poynor 2010). Similarly, broader categorizations lead to more satiation (Redden 2008), suggesting that the effect of psychological distance on substitutability could increase satiation and variety seeking.

Future research should investigate the fact that other drivers could affect substitutability. We conceptualize substitutes as products that have a similar use and are defined around product categories, which are themselves fuzzy and dependent on the situation, product, and user (Srivastava, Alpert, and Shocker 1984). Substitutability could also depend on what attributes are salient and whether consumers are focused on similarity or dissimilarity (Dhar, Nowlis, and Sherman 1999) or whether attributes are replaceable, which leads to increased variety seeking (Nowlis, Dhar, and Simonson 2010).

We do acknowledge that the assortment decision is complex, and other processes could be operating alongside psychological distance and substitutability. For instance, resource slack (Zauberman and Lynch 2005) could affect consumers' preferences for larger assortments when time resources are scarce. While resource slack could explain some of our effects when we manipulated psychological distance in terms of time, it does not predict the interactions found in experiments 4 and 5, nor does it explain four results due to geographical distance. One potentially fruitful area for future research may be investigating any relationship between geographical distance and resource slack and how resource slack may influence assortment size preferences.

One question that our research evokes is why, given classic economic theory, would consumers want less choice when the choice is psychologically distant and feasibility information is not salient? Recent economic theory suggests that a smaller assortment can be the optimal choice when options become more substitutable (Kuksov and Villas-Boas 2010). Perhaps we should be questioning the basic assump-

tion that people will always want more choice. Are there other reasons (other than feasibility concerns) for *not* preferring larger assortments? One such reason might be to conserve and only "take what you need." Recent research suggests that people can value conservation and having less (Zhu and Kalra 2012), and many cultures prefer to have some choices made for them (Iyengar 2010). There are also virtuous reasons to want less and to "satisfice"—satisficers have been shown to be happier individuals (Schwartz et al. 2002), suggesting that they might be the better-adapted consumer. From our results we cannot say that a desire for conservation leads consumers to prefer less choice, but the results are certainly consistent with the notion.

There are two sides to the "paradox of choice" (Schwartz 2004): the lure of assortment and the negative consequences from too many choices. While research has begun to investigate strategies to mitigate these negative consequences—such as managing expectations (Diehl and Poynor 2010), offering recommendation signs (Goodman et al. 2010), providing default options (Botti and Iyengar 2006), removing time constraints (Inbar, Botti, and Hanks 2010), and providing more lower-level and congruent categories (Mogilner et al. 2008; Morales et al. 2005)—some have questioned it altogether (Scheibehenne, Greifeneder, and Todd 2010; but see Chernev, Böckenholt, and Goodman 2010). Yet relatively little attention has been given to understanding the first phase of the paradox (the lure of assortment). While it is important to know how consumers cope and respond to more choice, it may be possible for consumers to avoid such large assortments altogether. This research adds to our knowledge about consumers' attraction to more choice and shows when more choice may be unnecessary, unattractive, or simply avoided in the first place. While future research should continue to examine how consumers choose from large assortments, it is important to understand when and why consumers are so attracted to more choice in the first place.

APPENDIX A
STIMULI FOR EXPERIMENT 1A

<i>RESTAURANT A</i>	
<p><i>Cobb Salad</i> Chilled and diced fire-grilled chicken, crisp bacon, avocado, cheddar cheese, egg, black olives, tomatoes, and bleu cheese on salad greens.</p> <p><i>Garlic Chicken Primavera</i> Juicy garlic sautéed chicken breast served over fettucine and tossed with sun-dried tomatoes, bruschetta marinara, and summer vegetables.</p> <p><i>Sizzling Chicken and Cheese</i> A sizzling skillet of onions and peppers together with garlic-marinated chicken breasts over melted American and Mexican cheeses. Served with our creamy mashed potatoes.</p> <p><i>Classic Cheeseburger</i> Fire-grilled with two slices of melted American cheese.</p>	<p><i>Grilled Cedar Salmon</i> Our cedar smoke seasoning brings memorable flavor to a firegrilled 7-oz. salmon filet, complemented by savory rice and vegetables.</p> <p><i>Rib eye</i> Seasoned 12 oz. Rib eye brushed in garlic butter, grilled, and then served up in a hot skillet alongside sautéed onions and mushrooms, garlic mashed potatoes, and garlic toast.</p> <p><i>Baby Back Ribs</i> A half-rack of tender baby back pork ribs, fire-grilled and glazed with our tangy barbecue sauce. Served with lightly battered shrimp, onion strings, fries, and a side of barbecue sauce for dipping.</p>
<i>RESTAURANT B</i>	
<p><i>Grilled Greek Chicken Salad</i> Crisp romaine lettuce, tomatoes, black olives, pepperoncini, cucumbers, sliced seasoned chicken, and Mediterranean vinaigrette tossed together and topped with red onion and crumbled feta cheese.</p> <p><i>Bruschetta Chicken Pasta</i> We toss al dente angel hair pasta with fresh bruschetta marinara and top with juicy strips of fire-grilled, marinated chicken breast. Drizzled with our balsamic glaze and shavings of Parmesan cheese.</p> <p><i>Chicken Fingers</i> Served with honey mustard dressing and fries.</p> <p><i>Butterfly Shrimp</i> A dozen battered shrimp, deep-fried until golden-brown and crispy. Then we serve them on top of fries with our tangy cocktail sauce.</p> <p><i>Bacon Cheeseburger</i> Our mouthwatering all beef patty covered with melted American cheese and crispy bacon.</p> <p><i>Rubbed Flat Iron Steak</i> We rub 8 oz. of USDA Choice beef with a zesty, peppery blend of fresh garlic and oregano. Then we fire-grill it to your order and serve with our parmesan-crust red potatoes and a fresh lime wedge to squeeze.</p> <p><i>Grilled Pork Chops</i> Two tender, juicy 8-oz. center-cut chops, mesquite-grilled to perfection. (Available barbecued or Cajun.)</p>	<p><i>Chicken Caesar Salad</i> We toss crisp, chopped romaine lettuce with our own creamy, garlic Caesar dressing, mound it high and top it with chunky strips of hot, sautéed chicken breast, parmesan cheese, and garlic-butter croutons.</p> <p><i>Chicken Pasta Alfredo</i> Our creamy Alfredo sauce bathes al dente fettuccine pasta ribbons. All topped off with juicy chicken—sautéed with red bell peppers in our special Cajun butter—finished with parmesan shavings.</p> <p><i>Asian Garlic Chicken</i> Two plump chicken breasts are sautéed and topped with our tangy garlic sauce. We serve them with savory rice, broccoli florets, and stir-fried mushrooms, onions, and red peppers.</p> <p><i>Fish & Chips</i> Served with fries and tartar sauce.</p> <p><i>Turkey Burger</i> We fire-grill a well-seasoned turkey patty, then serve it on a toasted whole-wheat bun with all the garnishes plus a mound of crispy fries.</p> <p><i>Classic Sirloin</i> A generous 10-oz. cut, expertly seasoned and fire-grilled just the way you like it.</p> <p><i>Pulled Pork Sandwich</i> Slow-cooked pork tossed with our signature barbecue sauce and basted with our smoky-sweet sauce. Piled on a toasted bun with crispy frizzled onions, served with fries.</p>

APPENDIX B

STIMULI FOR EXPERIMENT 1B

Store A

Vanilla	Green Tea
Pina Colada	Banana
Peach	Cookie Dough

Store B

Chocolate	Peanut Butter	Coconut
Kiwi	Pistachio	Orange
Cinnamon	Rum Raisin	Egg Nog
Apple	Cheesecake	Mint
Dulce de Leche	Maple Syrup	Wild Berries
Coffee	Pumpkin Pie	Pear

APPENDIX C

SAMPLE OF A STORE WITH SMALL ASSORTMENT (SIX OPTIONS) FOR EXPERIMENT 3

<p>Cuisinart HB-154PC Smart Stick Hand Blender With Attachments With its powerful 200-watt motor, this immersion hand blender quickly purees soups, blends batters, mixes beverages, and more. The unit's unique blade provides extremely smooth and even blending, while its protective blade guard helps prevent splattering. The blender includes a powerful chopper for chopping or mincing a wide variety of foods, plus a whisk attachment that allows for optimal whipping results. Other useful features include a lightweight design, an easy-to-grip ergonomic handle, and simple push-button control. This blender measures 3 by 3 by 14-1/8 inches and carries a 3-year limited warranty.</p>	<p>Hamilton Beach 50242N WaveMaker 10-Speed Blender Quality and style combined into one essential kitchen appliance. Hamilton Beach blenders are built to last and backed up with a 3-year limited warranty. The patent-pending Wave-Action System ensures smooth drinks every time, and each blender is designed with convenience and easy cleanup in mind. Highlights: Wave-Action system continuously forces mixture down into the blades for smooth results. 450 Watts peak power. Large 40 -Ounce jar. Stainless steel Ice Sabre blades. No ice chunks - this is the result of the new wave action system that blends everything in the jar and not just the lower portion of the jar contents. Blender measures 3-3/4 by 3-3/4 by 12-1/2 inches. 2-year warranty.</p>	<p>Cuisinart SmartPower CBT-500 Premier 600-Watt Blenders Count on Cuisinart for ultimate power and state of the art functionality. This 600 watt blender can power through your toughest blending jobs—including ice crushing. The large 50oz. glass jar gives you the capacity to double or triple recipes and features a dripless pour spout. Heavy duty cast metal and stainless steel construction is incredibly durable and adds sophistication to any kitchen. Count-up timer with continuous alarm. Push button controls. The blender measures 6-7/8 by 8 by 15 inches. 3-year warranty.</p>
<p>Oster 6873 14 Speed Blender Combination Food Processor Making cooking and entertaining more of a pleasure than a chore, this countertop appliance is a blender and a food processor in one convenient unit, delivering twice the performance options in half the counter space. Its powerful 450-watt motor and 5-cup glass blender jar allows for quickly and easily liquefying frozen fruit, whipping up creamy smoothies, making finely textured pureed soups, and more. With easy-to-use push-button controls, the blender offers 14 speeds to accommodate any mixing job, plus a pulse option when an extra burst of power is needed. For additional help reducing prep time in the kitchen, simply replace the blender with the unit's food-processor bowl for slicing, dicing, and chopping. Its All Metal Drive shaft stainless-steel blade removes for easy cleaning and handy cord storage helps to keep countertops tidy. An attractive addition to any kitchen.</p>	<p>Cuisinart BFP-603 SmartPower Deluxe Blender and Food Processor Cuisinart introduces the SmartPower Deluxe Duet Blender and Food Processor—truly a dynamic duo that lets you do it all. The blender uses its smart power and sophisticated electronics to mince delicate herbs, whip up smoothies, even chop ice. Put on the food processor work bowl to slice, shred, chop or mix up a dip. With its sturdy die-cast base, this 2-in-1 workhorse can handle anything you toss at it—or into it.</p>	<p>KitchenAid KHB300 Hand Blender A great gift for those with small kitchens, this hand-held blender and its accessories take the place of several larger appliances. Included are a regular blending blade (which can be immersed 8 inches into soup pots or deep bowls), a wire whisk for beating eggs and batters, and an enclosed chopper for nuts, cheese, and fresh herbs. Also included are a four-cup mixing beaker with a snap-lock lid, useful for storing blended ingredients, as well as a drawstring bag to keep all the components together. The immersion blender measures 17 by 3 by 6 inches. KitchenAid covers the blender with a 1-year, hassle-free replacement warranty.</p>

APPENDIX D

NONSALIENT (NINE OPTIONS) AND SALIENT (49 OPTIONS) FEASIBILITY/DESIRABILITY TRADE-OFF INFORMATION FOR EXPERIMENT 5

<input type="radio"/> Milk Caramel Embrace	<input type="radio"/> Petit Mousse	<input type="radio"/> Dark Ganache Bliss
<input type="radio"/> Cinnamon Blush	<input type="radio"/> Pecan Caramel Duet	<input type="radio"/> Raspberry Chocolate Premiere
<input type="radio"/> Orange Crescent	<input type="radio"/> Raspberry Caramel Duet	<input type="radio"/> Open Oyster

<input type="radio"/> Hazelnut Belgique	<input type="radio"/> Raspberry Chocolate Premiere	<input type="radio"/> Hazelnut Praliné	<input type="radio"/> Dark Truffle Heart	<input type="radio"/> Petite Mousse	<input type="radio"/> Chocolate Lune
<input type="radio"/> Dark Lion of Belgium	<input type="radio"/> Milk Lion of Belgium	<input type="radio"/> Pecan Caramel Duet	<input type="radio"/> Raspberry Caramel Duet	<input type="radio"/> Milk Caramel Embrace	<input type="radio"/> Dark Caramel Embrace
<input type="radio"/> Cashew Raspberry Caramel Cluster	<input type="radio"/> Pecan Caramel Cluster	<input type="radio"/> Almond Crunch	<input type="radio"/> Pecan Crunch	<input type="radio"/> Cherry Cordial	<input type="radio"/> Raspberry Cordial
<input type="radio"/> Coconut Pyramid	<input type="radio"/> Raspberry Star	<input type="radio"/> Macadamia Mosaic	<input type="radio"/> Whole Almond Praliné	<input type="radio"/> Orange Crescent	<input type="radio"/> Midnight Swirl
<input type="radio"/> Twilight Swirl	<input type="radio"/> Dark Ganache Bliss	<input type="radio"/> Milk Ganache Bliss	<input type="radio"/> White Ganache Bliss	<input type="radio"/> Dark Ganache Heart	<input type="radio"/> Cinnamon Blush
<input type="radio"/> Coffee Feather	<input type="radio"/> Raspberry Ganache Twirl	<input type="radio"/> Praliné Crescent	<input type="radio"/> Open Oyster	<input type="radio"/> Milk Praliné Heart	<input type="radio"/> White Praliné Heart
<input type="radio"/> Almond Praliné Raindrop	<input type="radio"/> Hazelnut Praliné Raindrop	<input type="radio"/> White Demitasse	<input type="radio"/> 72% Dark Demitasse	<input type="radio"/> Milk Demitasse	<input type="radio"/> Mint Demitasse
<input type="radio"/> Dark Mint Medallion	<input type="radio"/> Dark Chocolate Truffle	<input type="radio"/> Double Chocolate Raspberry Truffle	<input type="radio"/> Pecan Pie Truffle	<input type="radio"/> Black Raspberry Truffle	

APPENDIX E

SMALL AND LARGE ASSORTMENT STIMULI FOR EXPERIMENT 5

Store A (14 Options)		Store B (42 Options)					
Liqueur cordials	Chocolate covered blueberries	Pumpkin bark	Blueberry acai bark	Porcini mushroom truffles	English almond toffee	Almond crunch	Peanut butter and jelly bark
Chocolate covered espresso beans	Malted milk balls	Peppermint bark	Chocolate dipped strawberries	Courvoisier truffles	Pecan bark	Pumpkin seed crunch	Coffee toffee bark
Vanilla caramel	Cashew toffee	Chocolate dipped apricot	Cashew toffee	Chocolate covered black berries	Cranberry pecan bark	Dark chocolate (75%) bark	Bear claw
Chocolate covered almonds	Kreta olive oil truffles	Chocolate covered raspberries	French truffles	Molasses puffs	Crème mints	Merlot salt caramel	Chardonnay salt caramel
Peanut butter pretzel bites	Chocolate dipped oranges	Milk chocolate bark	Peanut butter truffles	Chocolate caramel lollipops	Nonpareils	Chocolate cherry bark	Salted margarita caramel
Pumpkin malted milk balls	Fig truffles	Chocolate covered almonds	Almond bark	Raspberry crèmes	Fine almond marzipan	Chocolate covered cherries	Sunflower crunch
Chocolate covered cranberries	Chocolate covered marshmallows	White chocolate bark	Heavenly marshmallow pecan bark	Walnut crunch	Dark chocolate (60%) bark	Malted milk bark	Black sesame crunch

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