Perceived Effort in Consideration Set Construction Strategies: Consumers Prefer to Include in Large Product Assortments

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Contribution Statement

This research examines how product assortment size affects a consumer's choice to use either an inclusion or exclusion consideration set construction strategy (Beach 1993; Beach and Mitchell 1990; Bettman and Park 1980; Gilbride and Allenby 2004; Heller, Levin, and Goransson 2002; Levin, Prosansky, and Brunick2001; Nedungadi 1990; Ordóñez, Benson, and Beach1999). We propose that consumers are more likely to use inclusion (vs. exclusion) when faced with a large assortment compared to a small assortment, and that this preference is driven primarily by perceptions of effort, as well as accuracy (to a lesser extent). In six studies, we provide evidence for this perception-based process. We also explore the downstream implications of choice of strategy on choice confidence, the quality of the consideration set, and the actual amount of effort expended to execute a chosen strategy. Our research contributes to several streams of research that are typically viewed as rather distinct: product assortment and overchoice, consideration set construction/pre-screening, and include/exclude strategies. We contribute to the assortment literature (e.g., Broniarczyk 2008; Chernev, Böckenholt, and Goodman2015; Diehl and Poynor 2010; Iyengar and Lepper 2000; Scheibehenne, Greifeneder, and Todd 2010) by demonstrating that assortment size can affect a consumer's perception of and therefore choice of consideration set construction strategy. Our results show another process by which assortment size affects a consumer's general strategy/approach to decision making (Levav, Reinholtz, and Lin 2012; Sela, Burger, and Liu 2009). We contribute to the literature examining consideration set construction and pre-screening (Chakravarti, Janiszewski, and Ülkümen 2006; Desai and Hoyer 2000; Kardes et al. 1993; Mitra and Lynch 1995) by showing that size of the assortment can determine the products that end up in a consideration set by influencing the strategy consumers use to construct it. These results also provide further evidence of the importance of studying consideration set construction as a separate but important phase in the choice process. Finally, we contribute to the literature exploring how consumers' lay understandings of their own mental processes affect their choices (e.g. Galak, Kruger, and Loewenstein 2013; Huang, Dong, and Mukhopadhyay 2014; Mukhopadhyay and Johar 2005).

Abstract

Consumers can construct a consideration set from a product assortment using one of two strategies: including the brands/products they wish to further consider or excluding those they do not wish to further consider. In this research, the authors examine how size of the product assortment affects a consumer's choice of consideration set construction strategy. Five studies provide evidence that consumers are relatively more likely to use an inclusion (vs. exclusion) strategy when faced with a large assortment than a small assortment. This relative preference for inclusion in large assortments is driven primary by the perception that inclusion takes relatively less effort than exclusion, particularly in large assortments. In a sixth study, the authors explore the downstream implications of choice of strategy on both choice confidence and the quality of the consideration set and the actual amount of effort expended to execute a chosen strategy. We find evidence that consumers' perceptions are, at least partially, correct: Exclusion takes more time to execute in large assortments than inclusion and produces lower quality consideration sets about which consumers feel less confident.

Keywords: consideration sets, include/exclude, screening, product assortment, effort

Consumers are inundated with choice. Although they may be attracted to more choice and prefer retailers with larger product assortments (Broniarczyk, Hoyer, and McAlister 1998; Goodman and Malkoc 2012), availability of more options comes at a cost. More choice can make decisions more difficult, leading to dissatisfaction, regret, and choice deferral (e.g., Diehl and Poynor 2010; Goodman et al. 2012; Iyengar and Lepper 2000; Kuksov and Villas-Boas 2010; Scheibehenne, Greifeneder, and Todd 2010; Schwartz 2004). Although extensive research has examined these post-choice consequences, and even more research has examined choice from small assortments, we know little about how consumers manage the choice process from large product assortments (see Levav, Reinholtz, and Lin 2012 for an exception). Thus, an interesting question arises: how may assortment size change the strategies consumers use in the choice process?

When faced with a large assortment, consumers must first figure out a way to reduce the assortment to a more manageable size. Past research on consumer decision making has characterized consumer decision-making as a two-stage process, consisting of this first, critical stage in which consumers form a consideration set of desirable options for further consideration, and a second stage in which a final choice is made from the items in the consideration set (Beach 1993; Beach and Mitchell 1990; Bettman and Park 1980; Chakravarti and Janiszewski 2003; Gilbride and Allenby 2004; Lussier and Olshavsky 1979; Nedungadi 1990; Ordóñez, Benson, and Beach 1999). In this research, we focus on the first stage of this decision process and explore whether consumer choice of consideration set construction strategy varies as a function of assortment size.

Consumers can use one of two general strategies when forming a consideration set – an inclusion strategy (i.e., selecting all the alternatives of interest for further consideration) or an

exclusion strategy (i.e., rejecting all of the alternatives of little interest and considering only the remaining options; Heller, Levin, and Goransson 2002; Levin, Prosansky, and Brunick 2001). Although these two strategies appear as if they are the objective inverse of the other, behaviorally they are not equivalent (Heller et al. 2002; Levin et al. 2001; Ordóñez et al. 1999). Further, these strategies (i.e., include vs. exclude) are also different from decision rules (e.g., conjunctive, lexicographic, elimination-by-aspects (EBA); Hoyer, MacInnis, and Pieters 2013; Yee et al. 2007). Whereas decision rules can be executed by-attribute (e.g., EBA) or by-alternative (e.g., conjunctive) and used in either the screening or the choice phase (Chakravarti, Janiszewski, and Ülkümen 2006; Hoyer et al. 2013), consideration set construction strategies represent a general approach to thinking about forming a consideration set and are used in the screening phase.

We propose that consumers' perceptions of the relative effort and accuracy of executing inclusion and exclusion strategies are context-specific and vary as a function of assortment size. Specifically, we find evidence that consumers perceive inclusion to be both less effortful and more accurate in a large assortment than they do in a small assortment, resulting in a greater relative preference for inclusion in large assortments. These differences in perceptions appear to be lay understandings of how these strategies operate; they may not be accurate with respect to actual execution (and past research suggests that decision rules based on elimination are actually less effortful; Johnson and Payne 1985; Payne, Bettman, and Johnson 1988). Finally, we examine downstream consequences to consumer perceptions and choice of consideration set construction strategies. We find that consumers who use inclusion (compared to those using exclusion) in large assortments report more confidence in their decisions and form higher quality

consideration sets in the sense that these sets contain alternatives with greater average and minimum utility.

Thus, our research exists at the intersection of multiple literatures. We contribute to the assortment literature (e.g., Broniarczyk 2008; Diehl and Poynor 2010; Iyengar and Lepper 2000; Scheibehenne et al. 2010) by demonstrating that assortment size changes the decision process by changing consumers' perception and choice of consideration set construction strategy. We contribute to the consideration set construction literature (e.g., Chakravarti et al. 2006; Desai and Hoyer 2000; Kardes et al. 1993; Mitra 1995) by showing that size of the assortment can influence the products that end up in a consideration set by changing the strategy consumers use to construct it. We also contribute to literature exploring factors that affect a consumer's general strategy/approach to decision-making, including assortment size (e.g., Levav et al. 2012; Sela et al. 2009). Finally, we contribute to the literature exploring how consumers' lay understandings of their own mental processes affect their choices (e.g. Galak, Kruger, and Loewenstein 2013; Huang, Dong, and Mukhopadhyay 2014; Mukhopadhyay and Johar 2005).

THEORETICAL BACKGROUND

Screening and Consideration Set Construction

Decision-making is conceptualized as consisting of two stages, (1) consideration set construction, also referred to pre-choice screening, and (2) choice (Beach 1993; Beach and Mitchell 1990; Bettman and Park 1980; Chakravarti et al. 2006; Gilbride and Allenby 2004; Lussier and Olshavsky 1979; Nedungadi 1990; Ordóñez et al. 1999). In the first phase, consumers create a consideration set – a smaller, more manageable subset of all available alternatives that consumers consider further (Chakravarti and Janiszewski 2003; Hauser and

Wernerfelt 1990). Previous empirical findings suggest consideration sets range from 2-8 options, and are small relative to the assortment size (Hauser and Wernerfelt 1990). Considerable work supports the idea that choice is a two-stage process. Choice models have consistently shown advantages for two-stage models (Gilbride and Allenby 2004; Hauser and Wernerfelt 1990), and research on pre-decisional distortion showing that consumers exhibit biased processing toward favored brands even when no choice is required, suggests that consumers spontaneously engage in consideration of available alternatives as a separate phase from choice (Russo, Meloy, and Medvec 1998). Others have documented that the two stages, prescreening and choice, are indeed distinct stages, as attributes can receive differential weighting across the two stages (Chakravarti et al. 2006; Diehl, Kornish, and Lynch 2003).

Several factors can impact consideration set composition, including usage situation (e.g., Desai and Hoyer 2000; Hutchinson, Ramam, and Mantrala 1994; Nedungadi 1990), pioneering advantage (Kardes et al. 1993), advertising (Mitra 1995; Mitra and Lynch 1995), and recommendation signage (Goodman et al. 2013). Though people tend to construct larger consideration sets from larger assortments (Heller et al. 2002; Levin et al. 2001; Ordóñez et al. 1999), consideration sets tend to be limited in size as the goal of a consideration set is to simplify the decision process (Chakravarti and Janiszewski 2003). However, relatively little research has explored the factors that influence what decision-making strategy consumers use to form consideration sets, which is the focus of our research.

The decision-making literature identifies two alternative-based strategies for constructing a consideration set: inclusion and exclusion. The include versus exclude distinction has several aliases but generally refers to the creation of a consideration set, or subset of alternatives, from a larger set of options (e.g., Heller et al. 2002; Irwin and Naylor 2009; Levin et al. 2001). Related

research has used the terms “accept,” “select,” “choose,” or “retain” versus “reject” or “eliminate.” However, these terms are generally used to refer to a *choice* between two (or three) options in the choice phase and not to the consideration set construction phase of the decision process (e.g., Chernev 2009; Meloy and Russo 2004; Shafir 1993; Wedell 1997; but see Ordóñez et al. 1999 for an exception in terminology). A consumer using an include strategy seeks out alternatives to include in the consideration set, which can be done using a by-alternative or by-attribute rule, but either method results in the inclusion of entire alternatives. In contrast, a consumer using an exclude strategy seeks out alternatives to exclude from the consideration set, which are placed into an inept set (Narayana and Markin 1975).

It is important to note that decision makers use include and exclude strategies in the initial phase of decision making when they are paring down an assortment to options that are meaningful to consider. Once the consumer has decided on one of these general approaches (i.e., inclusion or exclusion) to create this meaningful consideration set, they then use decision rules to execute it (e.g., a by-attribute rule like EBA may be used to execute exclusion). In fact, consumers can use a variety of decision rules in the screening process (Bettman, Luce, and Payne 1998); researchers have modeled the variety of rules consumers can use to screen (e.g., conjunctive, disjunctive, and compensatory; Gilbride and Allenby 2004). In this research, we do not explore the specific rules that consumers use once they have decided on a general strategy (include or exclude) to use in the screening phase. Instead, we are interested in how assortment size affects choice of strategy.

Perceptions of Effort and Accuracy of Inclusion and Exclusion as a Function of Assortment Size

Although inclusion and exclusion may appear to be mirror images of each other, behaviorally they are not equivalent, much like defaults (Johnson and Goldstein 2003) and select/reject tasks (Shafir 1993) are not equivalent. They not only produce different outcomes (e.g., exclusion produces larger consideration sets) but also involve fundamentally different approaches to screening based on different implied status quos (Heller et al. 2002; Levin et al. 2001; Yaniv and Schul 1997). In exclusion, because action is required to exclude an alternative in the assortment (e.g., mentally or physically marking out an alternative to remove it from further consideration), the implied status quo when the consumer first views the assortment is that a given option is already in the consideration set by default. He or she must act to remove it. In contrast, for inclusion, the implied status quo when first viewing an assortment is that a given option is not yet in the consideration set since the consumer must take action to include it. Thus, the default state of inclusion is a consideration set of nothing, whereas the default state of exclusion is a consideration set that increases with assortment size.

This status quo difference would still lead to similar levels of effort to create a final consideration set, except for the fact that consideration sets are unlikely to increase in size as fast as assortments increase in size. Consideration sets tend to stay small relative to a large assortment, and a sample of over 40 studies showed consideration sets in the 2-8 range across a variety of product categories (with assortment size ranging from 6-47; Hauser and Wernerfelt 1990, p. 394). This makes sense as consumers have a goal to limit the size of a consideration set because the purpose of a consideration set is to simplify the decision and avoid the consideration of options with low utility (Chakravarti and Janiszewski 2003; Mitra 1995). Therefore, we propose that consumers will perceive exclusion as more effortful than inclusion as the assortment

size increase. Because of this perception, consumers will prefer inclusion (vs. exclusion) when forming a consideration set from a large (vs. small) assortment[1].

It is important to note that related research on the effort required to execute various decision-making rules (Bettman et al. 1998; Payne et al. 1988) seems to make the opposite prediction. An EBA rule is a very efficient heuristic for making decisions and requires fewer mental steps (or elementary information processes (EIPs); Johnson and Payne 1985) compared to other rules. Why, then, do we predict that consumers will perceive exclusion as more effortful? First, we are making predictions about perceptions, which may not necessarily match actual effort. Second, as discussed, EBA (a by-attribute rule) can be used for exclusion (a by-alternative strategy), but exclusion (and inclusion) is a by-alternative strategies that does not require EBA and likely uses a combination of different rules to execute. Third, people generally believe they have control over their mental processes and attention (Wegner 2002). As a result, in inclusion, consumers likely believe that they can easily look at an assortment and identify the ones they like, ignoring the ones they do not like. They (perhaps erroneously) believe that they can do so without devoting significant attentional resource to the alternatives in the assortment in which they are not interested, resulting in the perception that inclusion is less effortful, takes less time, and does not require examining every item in the assortment. Whether this is actually true is debatable, but these perceptions likely stem from an overconfidence in one's ability to quickly and easily identify the most desirable options while directing one's attention away from undesirable options.

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[1] This statement is not meant to imply that consumers are always unlikely to use an exclusion strategy. There may be additional contextual factors that facilitate different strategies, particularly when a consumer is still searching on the web in a virtually undefined decision space.

This confidence in one's ability to focus only on good options likely spills over to perceptions that inclusion is also more accurate in the sense that it is likely to result in a consideration set that contains the options the consumer perceives as most desirable. Since the "action" involved in consideration set construction using inclusion is focused on good alternatives and not bad alternatives (i.e., one must mentally or physically circle desirable options to include them), consumers using inclusion are naturally focused on desirable alternatives. This is consistent with past work showing that people focus on positive attributes when choosing and on negatives when rejecting (Meloy and Russo 2004; Shafir 1993). As a result of this differential focus on desirable versus undesirable alternatives in inclusion versus exclusion, we predict that consumers will perceive inclusion as relatively more effective at ensuring good options end up in one's consideration set. Because the status quo is different for exclusion (Heller et al. 2002), with all alternatives already in the consideration set, the perception is that one must look at every item in the assortment (even alternatives that are undesirable) in order to remove those that are undesirable. Although this differential focus on good and bad options between include and exclude is roughly equivalent in a small assortment, it changes in a large assortment. As assortment sizes increase, so does the greater focus on eliminating bad options in exclude relative to a focus on good options in include, simply because there are more bad options eligible for removal (even if the consideration set size grows, the possibility of bad options increases). Thus, we propose that this focus on bad alternatives relative to good will lead consumers to perceive exclusion as less accurate than inclusion in creating a consideration set as assortment size increases.

Although we predict that consumers perceive relative differences in both the effort and accuracy of inclusion in large versus small assortments, we suspect that perceptions of effort

rather than accuracy are likely to be the more important driver of strategy choice in the retail contexts we study for two reasons. First, consumers are cognitive misers (Kahneman 2011), which makes effort considerations more important than accuracy in a typical retail environment, especially given consumer tendency to satisfice in many product categories (Simon 1955; Stüttgen, Boatwright, and Monroe 2012). Second, even "inaccurate" decisions still result in relatively desirable products being in one's consideration set. Consequences of lowered accuracy in most retail contexts are not particularly high, reducing the importance of accuracy considerations.

Finally, it is important to reiterate that we propose that consumers make a strategy decision based on their perceptions of effort and accuracy, which may not necessarily match actual effort and/or accuracy. These perceptions are lay understandings of the differences between the two strategies that ultimately guide strategy choice. A lay theory need not be accurate to influence decision making (Haws, Reczek, and Sample 2017), and lay theories about mental processes influence a variety of consumer decisions (Galak et al. 2013; Huang et al. 2014; Mukhopadhyay and Johar 2005). We make no claims about the reality of executing the two strategies because it would depend on which decision rule or rules (Payne, Bettman, and Johnson 1993) are used to execute the include or exclude strategy. Instead, we propose that consumers' lay understanding of how to execute these strategies drives their choices.

Downstream Consequences of Consideration Set Construction Strategy Selection

Various research has documented downstream consequences to the screening process (e.g., Chakravarti et al. 2009; Diehl 2005; Lussier and Olshavsky 1979; Nedungadi 1990), and there are important differences in the nature of the consideration sets produced using inclusion

versus exclusion. Compared to consideration sets produced by exclusion, sets produced by inclusion are generally smaller (Heller et al. 2002) and more selective because a given option has a lower chance of being retained in the final set with inclusion (Levin, Jasper, and Forbes 1998; Yaniv and Schul 2000; Yaniv et al. 2002). Further, ethical attributes receive more weight in consideration sets formed via exclusion due to task/goal compatibility (Irwin and Naylor 2009).

Based on past research we might expect that the choice to use an include strategy in a large assortment has downstream consequences as well. Given that the status quo in inclusion is that suboptimal options are left out of the set by default, we predict that consumers are less likely to accidentally include sub-optimal alternatives in their consideration sets. In contrast, given that the status quo in exclusion is that suboptimal options are left in the set by default, the potential for error is higher. This potential for error can be overcome with effort in small assortments where it is relatively easy for consumers to put effort into examining every alternative in the assortment. In contrast, in large assortments consumers are more likely to accidentally fail to exclude an undesirable alternative because of the increased effort required to examine the larger number of alternatives in the assortment. Thus, we propose that exclusion (vs. inclusion) produces consideration sets with more sub-optimal alternatives when used in a large assortment compared to a small assortment.

Finally, we also propose that consumers' confidence in the outcome of their consideration set construction process will differ as a function of strategy and assortment size. This prediction is based on regulatory fit theory (Higgins 2000, 2005), which proposes that when consumers feel that they have used the "right" approach to a decision, their experience of the correctness of that process transfers to the chosen object (Avnet and Higgins 2003). This prediction is also consistent with work on metacognition suggesting that perceptions of difficulty

lower confidence in choice (Alter et al. 2009). Thus, we predict that when consumers face a large assortment and use inclusion – the strategy that they perceive to be more accurate and less effortful – they will feel more confident in their consideration set than when using exclusion.

OVERVIEW OF STUDIES

We test our predictions across six experiments. Studies 1A and 1B provide initial support that consumers prefer an include strategy when faced with a large (vs. small) assortment across two product categories and two elicitations of strategy selection. Study 2 provides further evidence for this effect and demonstrates that different perceptions of effort and accuracy between include and exclude strategies mediate the effect of large assortments on strategy preference. Study 3 demonstrates that when consumers are primarily thinking about effort they express greater preference for inclusion in a large assortment. In study 4, we develop an interactive shopping interface, test whether our effect is robust to presentation of the assortment in categories versus randomly, measure actual effort, and begin to explore the downstream consequences of consideration set construction strategy. Finally, in study 5, we manipulate consideration set construction strategy and assortment size, finding evidence that using inclusion (vs. exclusion) in large assortments leads to greater consumer confidence and a higher quality consideration set.

STUDY 1A: INITIAL TEST

The primary goal of study 1A was to test our central hypothesis, that consumers are more likely to use an include (vs. exclude) consideration set construction strategy when faced with a large (30 alternatives) versus small (6 alternatives) product assortment.

Method

Seventy-seven undergraduates from various colleges at a large university participated in the study in exchange for extra credit in their introductory marketing class. Sample size was unexpectedly small due to the number of available participants; thus we more than doubled the sample size in study 1B.

All participants were first asked to read instructions about consideration set construction strategies (see Appendix A for details) and were told that they would receive the chocolate they chose later in the study. The experimenter also verbally explained to the participants that two strategies exist to form "a smaller group of chocolates that you would actually consider buying. People can either circle the options they like, or they can cross out options they do not like." Participants were then instructed to either circle (include) or cross-out (exclude) chocolates to form a consideration set of options that they "would actually consider buying" (adapted from Heller et al. 2002).

Participants were then presented with a planogram representative of how products might be displayed at a high-end chocolate retailer like Godiva, or in a non-store environment such as a catalog or online retailer. Each planogram contained pictures of either a small (6) or large (30) assortment of chocolates, depending on condition (see Appendix A for exact stimuli). The small assortment was created such that a full range of chocolate attributes were represented (i.e., white, milk, and dark chocolates, some with nuts, some without, some fruit, some not), but not every

possible combination was available (which is also true of the large assortment because of the variety of nuts and fruits available).

After participants constructed their consideration set, they made a final choice of chocolate from their set. They then went into another room and received their chosen chocolate (or a comparable alternative if it was not available). Our primary dependent variable was a dichotomous variable, consideration set construction strategy choice (include or exclude).

Results and Discussion

As predicted, participants were more likely to construct their consideration set with an include strategy in the large assortment condition (54%) compared to the small assortment condition (31%, $\chi 2$ (1, n = 77) = 4.18, p = .041, OR = 2.63, φ = .23). We also measured consideration set size. The distribution of consideration set size was skewed, with a mean of 8.10, median of 4, and a range from 2 to 29, suggesting that a few participants may not have understood the instructions to form a smaller subset of alternatives. We used the recommended studentized residuals method (McClelland 2000) to determine whether some observations were skewing the results. Five participants with studentized residuals of greater than two were eliminated from the analysis (revised consideration set size M = 7.06, median = 4, range 2-23). The results remained significant: participants were more likely to use inclusion in the large assortment (56%) compared to the small assortment condition (31%, χ^2 (1, n = 72) = 4.59, p = .032, OR = 2.84, φ = .25). In sum, study 1A demonstrates that consumers are more likely to use an include strategy when choosing from a large compared to a small assortment.

STUDY 1B: TEST VIA COMPUTER INTERFACE

Study 1B tested our central hypothesis using a different elicitation procedure than that used in study 1A. One potential criticism of study 1A is that circling and crossing out alternatives is not the typical way in which consumers execute an include or exclude strategy in the marketplace. Therefore, in study 1B we used a different elicitation procedure and a different product category to provide evidence for the generalizability of the effect. Participants used a computer interface to drag and drop alternatives rather than circling or crossing out alternatives on a paper and pencil planogram. Study 1B also used a new product category, writing pens.

Method

One hundred ninety-two undergraduates participated in the study in exchange for course credit. Sixteen participants did not form a consideration set (i.e., they formed a set size of 0 or left all 32 options in the set), leaving us with 176 usable responses. Sample size was set by maximizing the number of participants available through the participant pool.

Participants viewed a display of either 32 (large assortment) or 6 (small assortment) pens via computer. The small assortment was created such that a full range of pen attributes were represented (i.e., blue vs. black ink, click vs. cap, gel vs. ball point, fine vs. medium point). Participants were informed that five participants would be randomly selected to receive a box of the pens they selected as their final choice. Participants were first asked, before making that choice, to form “a smaller group of pens that you would actually consider.” They were told that they could choose to exclude, and drag and drop pens that they did not like to the unlabeled box on the right, or they could include, and drag and drop pens that they did like to the unlabeled box on the right. Participants then checked a button to indicate whether they wanted to include or

exclude (our dependent variable) and then were able to proceed to drag and drop pens into the box. Thus, if they chose to include, the box on the right was an include box, and if they chose to exclude, the box was an exclude box. As a check to ensure participants were following instructions, we included an attention check that asked participants whether they included pens, excluded pens, did a little of both, or could not remember. After the study, five participants were randomly selected and received a box of the pens they chose.

Results and Discussion

Consistent with study 1A, participants were more likely to construct their consideration set with an include strategy in the large assortment condition (76%) compared to the small assortment condition (63%, χ^2 (1, n = 176) = 3.85, p = .05, OR = 1.91, φ = .15). We also examined whether the effect could be explained by participants not understanding the task and/or not following directions by conducting another analysis that excluded participants that incorrectly answered the attention check (e.g., a participant that chose to include but then indicated they excluded, did both, or could not remember, n = 23). We again found the same results: Participants were still more likely to include in the large assortment condition (77%) compared to the small assortment condition (62%, χ^2 (1, n = 153) = 4.48, p = .034, OR = 2.13, φ = .17). If we eliminate outliers (n = 3, using McClelland 2000 method, with studentized residuals > 2), the results become even more reliable (large assortment = 79%, small assortment = 63%, χ^2 (1, n = 173) = 5.54, p = .019, OR = 2.23, φ = .18).

Thus, the results of study 1B replicate those of study 1A in a new product category. Participants were relatively more likely to use inclusion over exclusion when the assortment they faced was large versus small. In study 2 we test (1) whether consumer perceptions about the

effort and accuracy of these strategies are context dependent, as we propose, and (2) whether these beliefs mediate the difference in choice of strategy in large versus small assortments.

STUDY 2: MEASURING PERCEIVED EFFORT AND ACCURACY

In study 2, we seek to replicate our basic effect that consumers are relatively more likely to use inclusion over exclusion to form consideration sets when assortments are large versus small. We do so in a new product category, with a larger sample size, and using a realistic scenario in which consumers likely have experience forming consideration sets (i.e., deciding which subset of ice creams to sample in an ice cream shop). We also measure perceptions of the relative ease and accuracy with which participants believe they can execute the two strategies when faced with a large (30 alternatives) versus small (6 alternatives) product assortment.

Method

We recruited 400 Mechanical Turk (MTurk) workers to participate in the study and received 408 responses (46% male, $M_{age} = 37.6$).[2] Though our reliability results from studies 1A and 1B were $p < .05$, they were all very close to the $p < .05$ cutoff. Thus, we doubled the sample size in this study to be conservative and increase power.

We asked participants to, "Imagine that you are at an ice cream shop to buy a pint of ice cream to take home. The ice cream shop allows customers to try samples of all of their ice cream

[2] Due to a programming error, the first few participants did not receive a completion code after completing the survey, and some decided to return the HIT instead of notifying the researcher. We quickly fixed the error, but MTurk does not count participants that return the HIT, which is why we received 408 responses.

flavors before choosing one to buy." They were informed that the, "decision will take place in TWO stages. Stage 1: Tasting Set: Identify a subset of all the ice creams that you would like to try a small sample of – this is your tasting set. Stage 2: Final Choice: After tasting all of the ice creams in your tasting set, choose only one to buy a pint of. This is your final choice." Participants then read instructions similar to study 1A that described the include and exclude processes in stage 1, with a few minor changes. The instructions discussed ice creams instead of chocolates, and we eliminated the "narrow down" language used in the previous instructions, which may have biased participants toward one strategy. On the next page, participants viewed two pictures (side by side) of either a large (30) or small (6) assortment of ice cream flavors, depending on the condition (see Appendix B). In order to make sure participants understood the mental process behind the decision to include or exclude, one picture depicted an exclude strategy with x's on some of the flavors and the other depicted an include strategy with o's on some of the flavors. Each ice cream in the assortment was shown with a picture and name of the ice cream, and we avoided simple flavors (e.g., vanilla, chocolate). The small assortment was a subset of options from the large assortment with the goal of representing different broad categories of ice cream flavors (e.g., one chocolate flavor: chocolate peanut butter blast; one mint flavor: mint chocolate chunk; one fruit flavor: mango tango; etc.). Participants were then asked our main dependent variable, "Which strategy, include or exclude, would you choose to form your tasting set?" on a 7-point scale where 7=definitely include and 1=definitely exclude.

On the next page, we measured participants' perceptions of both an include and an exclude strategy in terms of effort and accuracy. Specifically, we measured how much overall effort they thought it would take to execute both strategies, whether they thought they would have to think about every option in the assortment (vs. ignoring some), and how accurate they

thought each strategy would be. To measure effort, we asked participants how much they agreed with the following three statements, about both inclusion and exclusion (7-point scale where 1=completely disagree, 7=completely agree): “Using an exclusion [inclusion] strategy would require the appropriate amount of effort for forming my tasting set” (reverse scored), “Mentally crossing out (X) [circling (O)] the ones I don’t/do want (exclusion) [(inclusion)] would be a feasible way to form my tasting set” (reverse scored), and “Using an exclusion/inclusion strategy would take more time than I want to spend on deciding which flavors to taste”. We summed the three exclude scores to create an exclude effort index ($\alpha = .76$) and the three include scores to create an include effort index ($\alpha = .72$). To measure whether participants perceived that they would need to think about every flavor (option thought) we asked them to response to the following item for both inclusion and exclusion on the same 7-point scale: “I would not have to think about every single flavor in the display if I used an exclusion [inclusion strategy]” (reverse scored). To measure accuracy, we asked participants to respond to the following two items for both include and exclude: “Some flavors that I actually don’t like that much might end up in my tasting set if I use exclusion/inclusion” (reverse scored) and “The flavors that I like the best will definitely end up in my tasting set if I use exclusion [inclusion].” We summed the two exclude scores to create an exclude accuracy index ($\alpha = .45$) and the two include scores to create an include accuracy index ($\alpha = .56$). Due to the low Cronbach alphas, we also conducted and report separate analyses for these measures.

We note that these perceptions were collected after participants had chosen a strategy but before they executed it. Participants did not, in fact, actually execute their strategies; they simply chose one and then reported their perceptions of both strategy options. As a result, these measures reflect the *a priori* lay understandings consumers have of the two strategies as a

function of assortment size (which is what we believe guides choice of strategy) and not a post-experience evaluation of their actual experience executing the strategy. Finally, participants entered the year they were born, their gender, and any comments they had for the researcher.

Results

Choice of Consideration Set Construction Strategy. To analyze choice of consideration set construction strategy, we compared relative preference for inclusion in the large and small assortment conditions. Consistent with studies 1A and 1B, participants indicated that they would be more likely to use an include strategy in a large assortment (M = 5.69, SE = .15) compared to a small assortment (M = 4.97, SE .14, F(1,406) = 11.74, $p < .001$, $\eta^2_p = .028$).

Perceptions of Effort and Accuracy by Strategy and Assortment Size. To analyze perceptions of effort and accuracy by strategy and assortment size, we performed a two-factor mixed ANOVA with assortment size (between-subjects factor) and include/exclude (within-subject factor) as independent variables and perceptions of effort, option thought, and accuracy as the dependent variables. When we analyzed perceptions of effort using the effort index, we found a main effect of both strategy and assortment size, such that effort was perceived to be higher in exclusion (M = 3.91, SE = .08) than inclusion (M = 2.58, SE = .07, F(1,404) = 137.91, $p < .001$, $\eta^2_p = .14$) and in a large assortment (M = 3.48, SE = .06) than a small assortment (M = 3.04, SE = .06, F(1,404) = 29.83, $p < .001$, $\eta^2_p = .07$). More centrally to our predictions, we also found a significant assortment by strategy interaction (F(1,404) = 64.25, $p < .001$, $\eta^2_p = .14$, see Figure 1). In the large assortment, participants perceived an exclude strategy (M = 4.66, SE = .11) as more effortful than an include strategy (M = 2.31, SE = .10, t(188) = 12.77, $p < .001$). In the small assortment, the difference was smaller, but participants still perceived an exclude

strategy (M = 3.26, SE = .10) as more effortful than an include strategy (M = 2.82, SE = .09, t(216) = 2.89, *p* = .004).

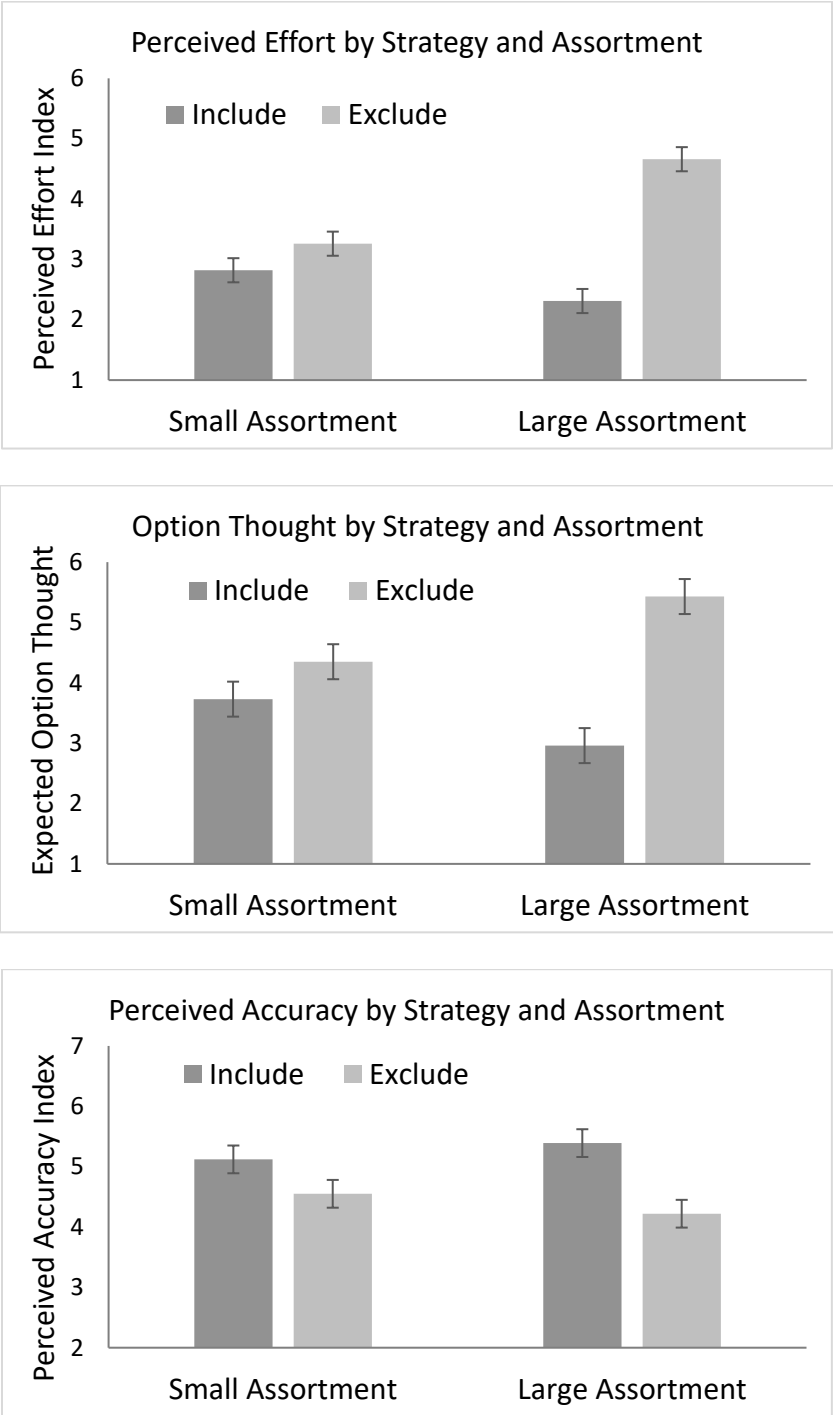
The results of the same analysis using option thought as a dependent variable showed a similar pattern. There was a significant main effect of strategy, such that participants believed they would have to think about every option in the set to a greater degree in exclusion (M = 4.86, SE = .11) than inclusion (M = 3.37, SE = .11, F(1,406) = 90.96, *p* < .001, η^2_p = .18), but there was not a significant effect of assortment (F(1,406) = 1.21, *p* = .27). More centrally to our predictions, there was a significant assortment by strategy interaction (F(1,406) = 32.50, *p* < .001, η^2_p = .07). In the large assortment, participants perceived that an exclude strategy (M = 5.43, SE = .15) would lead them to think more about each option in the assortment than an include strategy (M = 2.96, SE = .16, t(190) = 9.65, *p* < .001). In the small assortment, the difference was smaller, but participants still perceived that an exclude strategy (M = 4.35, SE = .14) would lead them to think more about each option in the assortment than an include strategy (M = 3.73, SE = .15, t(216) = 3.04, *p* = .003).

Finally, when accuracy was used as a dependent variable in the same analysis, we found a significant main effect of strategy, such that inclusion (M = 5.25, SE = .08) was perceived to be more accurate than exclusion (M = 4.39, SE = .08, F(1,406) = 54.40, *p* < .001, η^2_p = .12), and no main effect of assortment (F(1,406) = .06, *p* = .81). We also found a significant assortment by strategy interaction (F(1,406) = 6.47, *p* = .011, η^2_p = .02). In the large assortment, participants perceived an exclude strategy as less accurate (M = 4.22, SE = .12) than an include strategy (M = 5.39, SE = .11, t(190) = 7.09, *p* < .001). In the small assortment, the difference was smaller (F(1,406) = 6.47, *p* = .011), but participants still perceived an exclude strategy (M = 4.55, SE =

.11) as less accurate compared to an include strategy (M = 5.12, SE = .10, t(188) = 3.41, p < .001).

Since the Cronbach's alpha between the two accuracy measures was relatively low, we also conducted separate analyses for these two measures, which were about confidence about retaining good options and about excluding bad options, respectively. Examining confidence about good options, there was a main effect of strategy, such that inclusion (M = 5.59, SE = .08) was perceived to be more accurate than exclusion (M = 4.25, SE = .10, F(1,406) = 91.80, p < .001, η^2_p = .18), and there was no main effect of assortment (F(1,406) = .30, p = .58). We also found a significant assortment by strategy interaction (F(1,406) = 6.57, p = .011, η^2_p = .02). In the large assortment, participants perceived that an exclude strategy would be less accurate (M = 4.02, SE = .15) than an include strategy (M = 5.75, SE = .11, t(191) = 8.45, p < .001). In the small assortment, the effect was not as large but remained significant ($M_{\text{exclude strategy}}$ = 4.45, SE = .14 vs. $M_{\text{include strategy}}$ = 5.45, SE = .12, t(188) = 5.06, p < .001). Examining concerns about bad flavors, inclusion (M = 4.90, SE = .10) was perceived to be more accurate than exclusion (M = 4.54, SE = .10, F(1,406) = 7.14, p = .008, η^2_p = .02), and there was no main effect of assortment (F(1,406) = .01, p = .93). Further, the assortment by strategy interaction was only marginally significant (F(1,406) = 2.83, p = .094, η^2_p = .01). In the large assortment, participants perceived an exclude strategy to be less accurate (M = 4.42, SE = .15) than an include strategy (M = 5.03, SE = .14, t(191) = 3.14, p < .001); however, there was no difference in the small assortment ($M_{\text{exclude strategy}}$ = 4.65, SE = .14 vs. $M_{\text{include strategy}}$ = 4.78, SE = .14, t(188) = .7, p = .49). In sum, the analyses suggest that the effect of assortment and strategy on accuracy is driven more by consumers being confident that good flavors will make it into the consideration set as opposed to concerns about bad flavors ending up in the set.

FIGURE 1



Mediation of Strategy Selection by Perceptions of Effort and Accuracy. Finally, we conducted a mediation analysis to test whether differences in effort and/or accuracy mediate the

effect of assortment size on strategy preference. As previously discussed, participants in the large (vs. small) assortment condition perceived exclusion to be relatively more effortful and less accurate than exclusion. Thus, we wanted to test whether these differential perceptions in effort and accuracy across inclusion and exclusion lead to strategy choice. To conduct the analysis, we created two difference scores to use as mediators: (1) an effort difference score (subtracting the include effort index from the exclude effort index) and (2) an accuracy difference score (subtracting the include accuracy index from the exclude accuracy index). We ran Model 4 from Hayes (2013), which is the basic mediation model and allows us to test both mediators simultaneously. We included a contrast to test whether one mediator had a stronger indirect effect than the other. The results (5000 bootstraps) showed that assortment size had significant indirect effects on strategy choice through both effort (95% CI: .330, .593) and accuracy (95% CI: .013, .114) perceptions. However, the effect of effort was significantly stronger than the effect of accuracy (95% CI: .286, .533).

Discussion

Study 2 provides direct evidence that consumers perceive exclusion to be both relatively more effortful to execute and less accurate than inclusion to a greater extent in large versus small assortments. Our option thought measure provides evidence that part of these increased effort perceptions is due to the fact that the implied status quo in exclusion requires participants to consider all of the options in an assortment while the implied status quo in inclusion does not. Accuracy and effort perceptions mediate the greater likelihood of choosing inclusion in a large assortment, although the effect for perceived effort is stronger, suggesting that the perception that inclusion is easier in large assortments is the main driver of the effect we observe. In study

3, we directly test, using moderation, whether it is primarily differential perceptions of the effort or accuracy of inclusion and exclusion in large assortments that shape consumers' greater likelihood of using inclusion in this context.

STUDY 3: MANIPULATING EFFORT AND ACCURACY

In study 3, we prime participants to either focus on effort or accuracy before choosing a consideration set construction strategy. We predict that those primed to think about effort will show the effect we have obtained in all of our previous studies (i.e., choosing inclusion over exclusion to a greater extent in large vs. small assortments). In contrast, we predict that those primed to focus on accuracy will show no difference in likelihood of selecting inclusion over exclusion as a function of assortment size. In other words, it is only when consumers are thinking about minimizing effort that our effect obtains, providing process evidence that the greater likelihood of using inclusion for a large assortment is indeed driven by perceptions that this strategy is easier to execute in this context than an exclusion strategy. Although consumers may perceive inclusion to be relatively more accurate than exclusion, we do not expect this perception to be a primary driver of strategy choice.

Method

We recruited 600 Mechanical Turk (MTurk) workers to participate in the study and received 602 responses (50% male, $M_{age} = 36.6$).[3] Workers who participated in study 2 were not

[3] Two workers decided not to return the HIT and thus were not counted by MTurk in our sample size target of 600.

eligible to participate in study 3. Since our reliability results from studies 1A and 1B were close to $p < .05$ and our goal was to moderate the effect, we tripled our sample size to be conservative and increase power.

The study was a 2(Assortment: Large vs. Small) x 2(Prime: Effort vs. Accuracy) between-subjects design. The procedure for the study was similar to that of study 2, with a few minor changes. As in study 2, participants imagined shopping for a pint of ice cream and needing to form a tasting set, which we described as "a subset of all the ice creams that you would like to try a small sample of." Ice creams and assortments (30 vs. 6) were the same as in study 2.

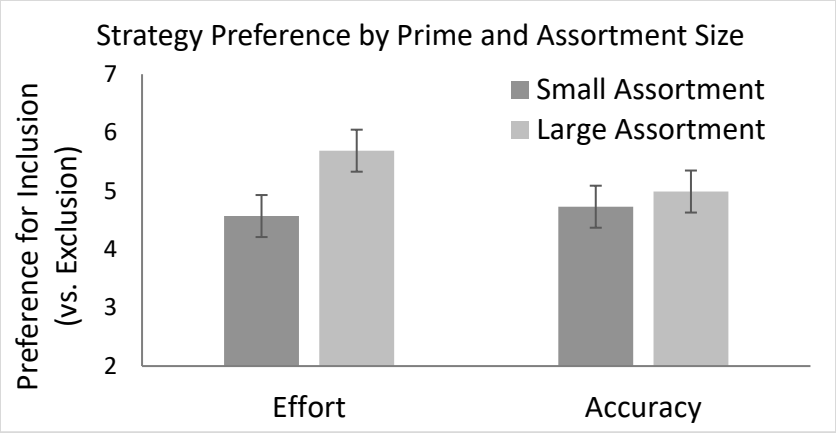
In the effort condition, participants viewed the assortment along with visualizations of the two assortment strategies (x's or o's) and were given an effort prime: "Please consider the time and effort each strategy, include and exclude, will take for you. One strategy or the other may be more effortful for you or take more time than you would like to spend on the decision. In fact, in prior studies people report that evaluating each option requires some effort. Some people find one strategy or the other more feasible for this decision." In the accuracy condition, participants viewed the assortment along with an image of the Apple "thinking face" emoji considering two flavors of ice cream, and they were given an accuracy prime: "Please consider how accurate each strategy, include or exclude, will be for you. Consider what types of flavors you like and don't like. Remember, not everyone has the same preferences, and that's especially true for ice cream. Research shows that ice cream preferences are very diverse and in an attempt to come up with new flavors, many ice cream shops are actually inventing flavors that some people like but, on average, most people don't like." This prime was designed to focus participants on building assortments that were accurate in the sense of including their most desired flavors. After reading the instructions and prime, participants then responded to the same strategy selection dependent

measure as in study 2. Finally, participants entered the year they were born, their gender, and any comments they had for the researcher.

Results

To analyze choice of consideration set construction strategy, we ran a 2(Assortment: Large vs. Small) x 2(Prime: Effort vs. Accuracy) between-subjects ANOVA with relative preference for inclusion as the dependent variable. Results revealed, consistent with our previous studies, a main effect of assortment size, such that participants were more likely to prefer to include (vs. exclude) when forming a consideration set from a large (M = 5.34, SE = .13) versus small assortment (M = 4.65, SE = .13, F(1,598) = 14.76, $p < .001$, $\eta^2_p = .024$, see Figure 2). There was no significant main effect of prime condition (F(1,598) = 2.22, $p = .137$, $\eta^2_p = .003$). Importantly, the effect of assortment on strategy preference was moderated by the effort/accuracy prime (F(1,598) = 5.61, $p = .018$, $\eta^2_p = .01$). Specifically, when effort was primed, participants were more likely to prefer to include in a large (M = 5.69, SE = .18) versus small assortment (M = 4.57, SE = .18, t(598) = 4.36, $p < .001$, $\eta^2_p = .03$); however, when accuracy was primed, participants were no more likely to include in a large assortment (M = 4.99, SE = .18) than a small assortment (M = 4.73, SE = .18, t(598) = 1.05, $p = .29$, $\eta^2_p = .002$).

FIGURE 2



Discussion

Study 3 provides evidence that the greater relative preference for inclusion over exclusion in a large assortment is primarily driven by the perception that exclusion requires more effort than inclusion to execute. Thus, this study builds on the process evidence offered via mediation in study 2 to provide additional process evidence via moderation (for a discussion of the process by moderation approach, see Spencer, Zanna, and Fong 2005). However, it is important to note that both this study and study 2 only elicited relative strategy preference and did not actually ask participants to execute the strategy nor offer an interface that would adapt with strategy selection. In fact, in all previous studies, although consumers were free to choose either consideration set construction strategy, the interface in which they indicated which options they would like in their consideration set did not adapt with this selection. Previous research on interactive decision aids has shown that interactive interfaces can substantially improve consumer decision making (Häubl and Trifts 2000; Murray and Häubl 2011). One of the goals of study 4 was therefore to provide consumers with an interactive interface that changed to match the strategy the consumer selected in order to test whether our proposed result is robust to providing this type of facilitating online tool. Given that many retailers also present assortments

that are categorized in some way (e.g., by attribute or benefit; Lamberton and Diehl 2013), we also wished to test whether our effect holds when alternatives are presented in meaningful categories.

STUDY 4: INTERACTIVE INTERFACE

The main goal of study 4 was to further test the effect of assortment on consideration set strategy selection using an adaptive interface. To do so, we contracted a professional web designer to develop an interactive travel website where participants could browse vacations and choose between using an include or an exclude strategy to form their consideration set. Another way to make the assortment more realistic is to sort the options, similar to how consumers often see assortments in a real retail space. Thus, we also manipulated whether participants viewed the vacations sorted into four categories. A secondary goal of study 4 was to change how our small assortment was configured. In study 4, the small assortment was created by randomly selecting a unique subset of options for each participant. Finally, we also measure the amount of time participants spent forming a consideration set to explore whether actual effort expended to execute a strategy as a function of assortment size (operationalized as time spent) matches consumers' perceptions of effort.

Method

Since we were unable to secure one large homogenous sample of participants in one location for this study, we chose to sample 344 undergraduates from two different universities: 225 participants from a large private university and 119 from a large public university[4].

The study was a 2(Assortment: Large vs. Small) x 2(Organization: Sorted vs. Unsorted) between-subjects design. Participants were asked to imagine that they were shopping for vacations and using a new vacation website. The website (see Appendix C) was designed from scratch by a professional programmer and included graphics designed by a professional graphic designer for a fictional travel website "Book Travel" with the tagline "Connecting You to the World." The website allowed participants to click on destinations to receive more information and view reviews for each destination.

On the first page of the study, participants viewed a display of either 40 (large assortment) or 8 (small assortment) Caribbean vacation destinations depending on condition. The vacations were presented in four columns. In the sorted condition each column was labeled based on the major benefit of the destination (Shopping & Nightlife, Aquatic Sports, Outdoors & Nature, and History & Culture), which were common categories and keywords from various existing travel websites, and each vacation was sorted into one of these four categories. In the non-sorted condition, all options were randomly placed into one of four columns with no labels. As an example, participants saw the following information for Kralendijk, Bonaire, a destination classified as focused on Aquatic Sports in the sorted condition (reviews could be viewed by clicking on the description). See Appendix D for example vacation destination descriptions and reviews from the other three categories.

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[4]All analyses reported include sample source as a factor. There were no main or interactive effects of sample source on our dependent variable (all p's > .42).

> *Recognized as one of the world's premier diving locations, Bonaire offers activities to just about everyone: kite-boarding, mountain-biking, hiking, sailing, charter fishing, boating, and bird-watching. The reliably sunny climate makes it an ideal destination for outdoor explorers.*
>
> **Review 1:** "We loved taking the water taxi from the capital to the small island called Klein. No people lived there so we saw tons of animals and relaxed on the gorgeous beach."
>
> **Review 2:** "Bonaire is not a family friendly vacation unless your whole family scuba dives. They catered exclusively to one type of vacationer. The snorkeling was nice, but we didn't want to snorkel every day so that didn't leave us with much to do."

Whereas in our previous studies we created the small assortment by selecting popular products that were specially curated to represent the breadth of the assortment (e.g., some dark chocolates, some white chocolates, etc.), in this study we randomly chose the small assortment (with some restrictions) because the quality of a large and small assortment can have implications on choice quality (Diehl et al. 2002). Thus, in the small assortment condition the computer randomly drew eight vacations for each participant, two from each category, from the large assortment of 40.

Participants were told that their task was to reduce the display to "create a Shortlist of vacations that you would actually consider." They could choose to exclude, and "delete the vacations you would not consider. The remaining vacations will end up on your Shortlist." Or they could include and "add the vacations you would consider to a Shortlist." On the first page of the study where the entire assortment was displayed, participants were asked to indicate which strategy they would like to use. They were then taken to a second page that differed depending on which consideration set construction strategy they chose. This second page either had buttons that excluded options or included options, depending on their choice. When participants included an option it was automatically moved into their shortlist at the bottom of the screen (which could be undone, if desired); and when participants excluded an option it was automatically moved out

of their shortlist to the bottom of the screen (which could also be undone if desired). To ensure that participants understood the task, the website would provide further instructions via a popup window for participants who tried to proceed before forming a consideration set of between 1 and 15 options. The webpage also created a beginning and end time stamp to measure time spent on the consideration set construction task to measure actual effort.

On the third page, participants' consideration sets were displayed, and participants made their final choice from their consideration set. On the final page they indicated their confidence in their choice ("How likely are you to change your mind on this vacation and pick a different one instead?" 1 = Not likely at all to 7 = Very likely), age, gender, and provided any comments they had for the researcher.

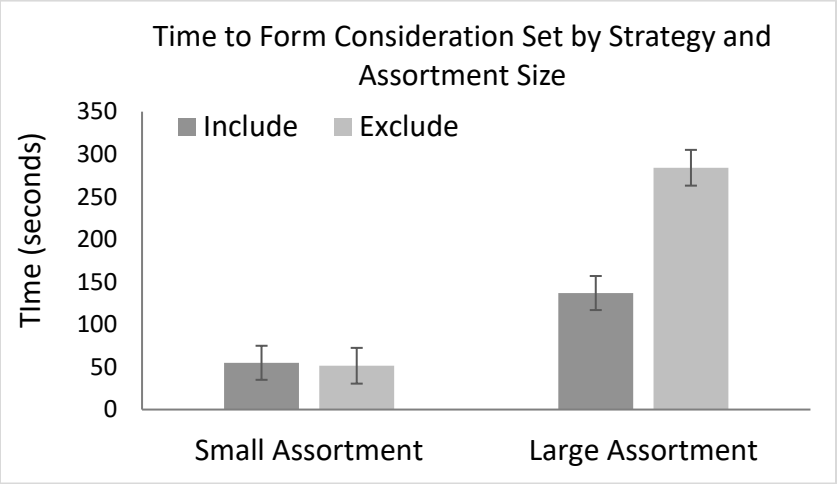
Results

We first conducted a logistic regression that regressed strategy choice on assortment, organization, sample, and their interactions (with all variables mean centered at zero). Consistent with our previous studies, participants were more likely to use an include strategy when faced with a large assortment (59%) compared to a small assortment (47%, Wald χ^2 (1, n = 336) = 3.68, p = .055). There were no main effect of organization (Wald χ^2 (1, n = 336) = .07, p = .80) or an interactive effect between organization and assortment (Wald χ^2 (1, n = 336) = 1.60, p = .21).

In terms of actual effort, we find results consistent with the perceived effort results in study 2. An ANOVA with strategy, assortment, organization, sample, and their interactions (with all variables mean centered at zero) found a significant assortment by strategy interaction on the time it took to construct a consideration set ($F(1,319) = 54.01$, $p < .001$, $\eta^2_p = .075$, see Figure 3).

Participants spent more time (in seconds) excluding (M = 284.08, SE = 11.45) than including from a large assortment (M = 136.89, SE = 9.39, t(319) = 10.01, $p < .001$); however, there was no difference in time spent excluding (M = 51.45, SE = 9.60) versus including from a small assortment (M = 54.92, SE 10.69, t(319) = .06, $p = .81$). We also logged time for robustness and found the same significant interaction (F(1,319) = 33.73, $p < .001$, $\eta^2_p = .05$).

FIGURE 3



Finally, in order to begin to explore the downstream consequences of strategy selection, we examined participants' reported confidence in their final choice and found no main effects (p's > .5) but instead a marginal assortment by strategy interaction (F(1,319) = 3.04, $p = .082$, $\eta^2_p = .009$). This interaction was driven by a significant decrease in confidence for participants in the large assortment condition who used an exclude strategy (M = 2.77) compared to those using an include strategy (M = 3.44, F(1, 319) = 4.54, $p < .05$). In the small assortment condition, there was no difference in confidence for those using an exclude (M = 3.17) or include strategy (M = 3.27, F(1,319) = .1, $p = .76$). However, we note that this finding is limited by self-selection. In other words, it could be, for example, that consumers who tend to prefer to exclude are less confident with large assortments (but not small assortments). The measure we used to

operationalize consumer confidence was also not a direct measure of confidence (although is likely highly correlated with it). We return to these issues in study 5 by measuring confidence directly in a study in which construction set construction strategy was assigned versus chosen by participants.

Discussion

The results of study 4 demonstrate that consumers have a greater relative preference for an inclusion strategy when faced with a large assortment even when the large assortment is presented in categories and when the interface they use to create a consideration set adapts with their choice of strategy. Although it may seem surprising that the presence of meaningful categories did not reduce participants' preference for inclusion, the use of categories to ease processing depends on expertise (Alba and Hutchinson 1987) and schema-match (Morales et al. 2005). Thus, while the categories may have been helpful for some, others may not have had the expertise to use them effectively. Although the categories presented in this study were meaningful, participants may have had difficulty verifying this (or were unwilling to exert the effort to do so) because doing so required reading a fair amount of text. Future research exploring categorization in different contexts could shed additional light on whether our effect obtains across a variety of different sorting methods.

Study 4 also provides evidence that consumers' perceptions, or lay understandings, of the effort required to execute inclusion versus exclusion in large versus small assortments may be, at least partially, correct. An exclude strategy took significantly more time to conduct than an include strategy when choosing from a large assortment, suggesting that exclude is, in fact, more effortful than include in large assortments. One alternative account is that participants that choose exclude strategies are simply more thorough, which is why they took more time;

however, since there was no difference between include and exclude in small assortments, this explanation is not supported. Additionally, there was no difference in actual effort in the categorized condition. Thus, as long as consumers do not perceive any increased ease in processing based on categorization, then categorization is unlikely to change strategy choice.

STUDY 5: DOWNSTEAM CONSEQUENCES OF INCLUDING VERSUS EXCLUDING IN LARGE ASSORTMENTS

In study 5 our aim was to test the downstream consequences of consideration set construction strategy on consideration set quality. To do so we orthogonally manipulate consideration set construction strategy (i.e., include vs. exclude) and assortment size. We then measure consideration set quality using a multi-attribute utility task and collect two measures of participants' confidence in their consideration set. Further, we rule out regret and social concerns as alternative explanations.

Method

Two hundred ninety-nine undergraduates (46% male) participated in an online study in exchange for course credit. Sample size was set by maximizing the number of participants available through the participant pool.

The study was a 2(Assortment: Large vs. Small) x 2(Strategy: Include vs. Exclude) between-subjects design consisting of three parts. In the first part, participants viewed a display of either 16 (large assortment) or 6 (small assortment) vacation resorts via computer. To form the small assortment, the computer program randomly drew six options from the 16 possible resorts

for each individual. We asked participants to imagine that they were planning a spring break trip with their friends and "to form a smaller set of hotels from this larger set that you would be interested in contacting to get more information about their deals." All vacations were described in terms of four attributes with two levels (view: pool vs. ocean, pool size: large vs. small, beach type: rocky vs. sandy, nightlife: lots of nightlife vs. very little nightlife). In the include condition, participants dragged and dropped resorts that they would like to consider further to create their consideration set. In the exclude condition, they dragged and dropped resorts that they would not like to consider further.

In the second part of the study, participants rated their confidence in their set on the following two measures: "How confident are you that you ended up with a high quality set to choose from?" and "How confident are you that your final set has the best final choice?" 1 = Not at all, 7 = Very much, $\alpha = .83$). To rule out alternative explanations, we also asked about regret about leaving out a good option ("How worried are you that you accidentally left out options you might have really liked from your smaller set?" 1 = Not at all, 7 = Very much) and social concerns ("How confident are you that your friends will like the smaller set you came up with?" 1 = Not at all, 7 = Very much). Participants then made a final choice from their consideration set.

In the third part of the study, participants completed a multi-attribute utility task. First, each participant indicated their preferred level of each attribute (i.e., pool vs. ocean view, large vs. small pool, rocky vs. sandy beach, lots of nightlife vs. very little nightlife). Second, they rated how important each attribute was to them (i.e., view, pool size, beach type, and nightlife) on a 1 to 7 scale (1 = Not at important to 7 = Extremely important). We used these two measures to calculate a weighted average utility for each individual for each option in their consideration set.

As a manipulation check, we asked participants whether they included, excluded, did a little of both, or could not remember. Finally, we measured gender, age, and asked participants if they had any final comments for the researchers.

Results

Consideration Set Quality. We measured consideration set quality by creating three indices: average utility (i.e., the average utility of all the options in a participant's consideration set, M = 7.98, SE = .34), minimum utility (i.e., the utility of the worst option that made it into a participant's consideration set, M = -.95, SE = .56), and maximum utility (i.e., the utility of the best option that made it into a participant's consideration set, M = 16.99, SE = .38). To create these indices, we first created a utility score for each resort for each individual, which was simply the sum of the four importance ratings (1 to 7 scale) multiplied by the attribute valence (+1 or -1) indicated by the participant (with a possible range of +28 to -28). Thus, utility was calculated at the individual level so that, for example, if a participant preferred a small pool, hotels with small pools would provide more utility for that individual than resorts with large pools. Thus, we operationalized higher quality sets as those containing alternatives that better matched participants' stated preferences. We were unable to calculate indices for four participants because they did not answer all of the questions, leaving us with a final sample of 295 observations.

Examining the average utility of participants' sets, we found a significant positive main effect for large assortments ($F(1,291) = 11.78$, $p < .001$, $\eta^2_p = .04$) and the use of an include strategy ($F(1,291) = 8.71$, $p < .01$, $\eta^2_p = .03$). However, these main effects were moderated by a significant assortment by strategy interaction ($F(1,291) = 17.40$, $p < .001$, $\eta^2_p = .06$, see Figure 4). When faced with a small assortment, strategy did not affect average utility of the

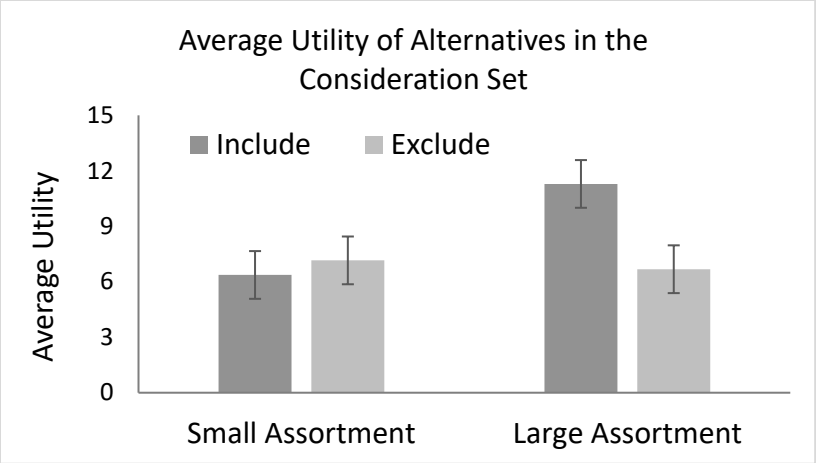
consideration set (M = 6.37, SE = .68 vs. M = 7.16, SE = .68, F(1,291) = .69, *p* = .41); however, when faced with a large assortment, participants formed sets with higher average utility when using an include strategy (M = 11.29, SE = .62) than using an exclude strategy (M = 6.68, SE = .62, F(1,291) = 27.88, *p* < .001). To uncover what is driving this difference, we next examined the maximum and minimum utility alternatives in participants' consideration sets. Although there was no difference in maximum utility by consideration set construction strategy and assortment size (F(1,291) = 1.90, *p* > .16, η^2_p = .01), there was a significant strategy by assortment size interaction on minimum utility (F(1,(291) = 17.28, *p* < .001, η^2_p = .06), and a positive main effect for include strategy (F(1,291) = 26.28, *p* < .001, η^2_p = .08). When choosing from a large assortment, the minimum utility of the set was lower for those excluding (M = -6.16, SE = 1.00) than those including (M = 3.56, SE = .99, F(1,291) = 27.88, *p* < .001). When choosing from a small assortment, strategy did not affect minimum utility (M = -1.06, SE = 1.09, vs. M = -.04, SE = 1.09, F(1,291) = .44, *p* = .51).

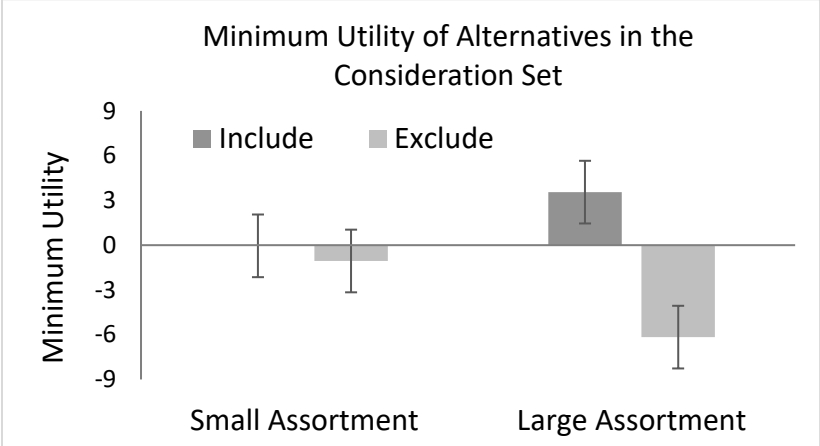
We also conducted another analysis that excluded any participants that incorrectly answered the manipulation check (e.g., participants that were assigned to include but then indicated they excluded, did both, or could not remember, n = 9). We again found the same assortment by strategy interaction (F(1,282) = 15.14, *p* < .001**,** η^2_p = .05). When choosing from a small assortment, strategy did not affect consideration set composition (F(1,282) = .14, *p* = .71); however, when choosing from a large assortment, participants formed sets with higher average utility when using an include strategy than when using an exclude strategy (F(1,282) = 29.16, *p* < .001). We again found the same pattern for maximum and minimum utility: There was no difference in maximum utility (F(1,282) = .83, *p* = .36), but there was a significant strategy by assortment size interaction on minimum utility (F(1,282) = 16.57, *p* < .001).

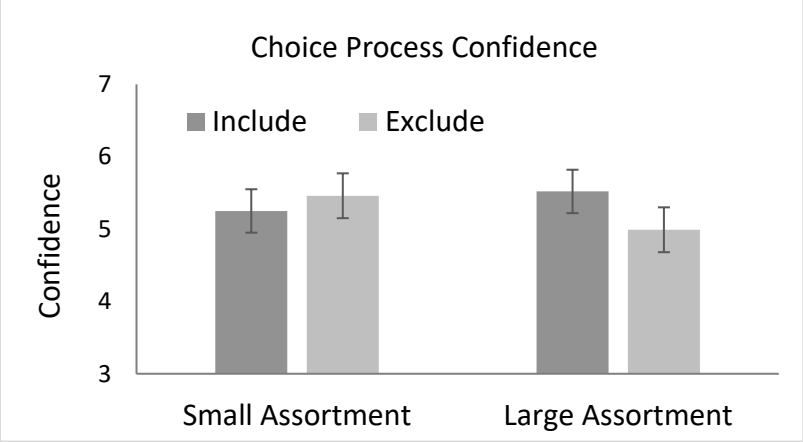
Confidence. Next, we examined the effect of assortment size and strategy on our confidence index. There was no significant main effect of assortment ($F(1,295) = .42$, $p = .52$) or strategy ($F(1,295) = 1.20$, $p = .27$, $\eta^2_p = .002$). More importantly, however, we found a significant assortment by strategy interaction ($F(1,295) = 5.83$, $p = .016$, $\eta^2_p = .02$) on confidence. This effect was driven by a significant decrease in confidence for participants who used an exclude strategy (M = 4.99, SE = .15) compared to those using an include strategy (M = 5.52, SE = .14, $F(1,295) = 6.76$, $p = .01$) in a large assortment. However, there were no deleterious effects on confidence for those using an exclude strategy (M = 5.46, SE = .16) relative to an include strategy (M = 5.25, SE = .15, $F(1,295) = .79$, $p = .37$) in a small assortment.

To rule out alternative explanations, we also measured regret and social concerns. We found no significant differences on either dimension based on consideration set construction strategy or its interaction with assortment (F's < 1), suggesting that the findings cannot be explained by heightened regret or social concerns. Though, as one might expect, we did find more regret when choosing from a large assortment (M = 3.41) compared to a small assortment (M = 3.01, $F(1,295) = 5.03$, $p < .05$), which is consistent with the choice overload literature (Iyengar and Lepper 2000; Chernev et al. 2015), suggesting our measure was effective in measuring decision regret.

FIGURE 4







Discussion

The results of study 5 show the downstream consequences of using an include (vs. exclude) strategy when forming a consideration set from a large assortment: Participants were more confident in their choice process and formed higher quality consideration sets in the sense

that the alternatives in their consideration set had a greater average utility. This difference was driven, at least in part, by the fact that the utility of the worst alternative in the set was higher when using an include than an exclude strategy when forming a set from a large assortment. Thus, just as study 4's timing data provides some evidence that consumers' lay understandings of the relative effort to execute inclusion versus exclusion in a large assortment is correct, study 5 offers some evidence that their intuitions about accuracy are also at least partially correct. Consumers' perceptions that inclusion will result in more accurate sets than exclusion, particularly in a large assortment, appear to be justified based on these results. One caveat to the results of this study is that it is possible that measuring utility after the consideration set construction task could have biased the utility task to be consistent with the task participants had just completed. The fact that we obtained a significant assortment size by strategy interaction on the confidence index makes us less concerned about this potential issue, but future research using a similar methodology could counter-balance when (before or after the consideration set construction task) utility measures are collected.

GENERAL DISCUSSION

In this research, we explore how size of the product assortment affects a consumer's choice of consideration set construction strategy. We find that consumers are relatively more likely to use an inclusion (vs. exclusion) strategy when faced with a large product assortment than a small assortment, and that this effect is driven by consumers' perception of the relatively greater effort needed to execute an inclusion (vs. exclusion) strategy. Study 1A, 1B, 2, 3, and 4 demonstrate this effect of assortment size on consideration set construction strategy using

multiple product categories (i.e., pens, chocolates, ice creams, and vacations), different procedures and measures, and both hypothetical and incentive compatible designs.

We test our mechanism through mediation in study 2 and moderation in study 3. The studies provide evidence that consumers' perceptions, or lay understandings, of the relative effort and accuracy of executing inclusion and exclusion vary as a function of assortment size. Participants perceive inclusion as relatively less effortful and more accurate than exclusion, particularly in large assortments, because exclusion requires them to examine more options in the assortment than inclusion (study 2). Study 3 demonstrates that it is only when effort (and not accuracy) is primed that the effect obtains, suggesting that effort perceptions are the primary driver of the relative preference for inclusion in large assortments.

In studies 4 and 5 we explore the downstream implications of choice of strategy on both choice confidence and the quality of the consideration set and explore the actual amount of effort expended to execute one's chosen strategy. We find evidence that consumers' perceptions are, at least in part, correct: Exclusion takes more time to execute in large assortments than inclusion and produces lower quality consideration sets about which consumers feel less confident.

Theoretical Contributions and Implications for Consumers

While previous literature has demonstrated the post-choice effects of assortment size (e.g., Chernev et al. 2015; Iyengar and Lepper 2000; Scheibehenne et al. 2010), our work is among the first to demonstrate how assortment can affect the decision process itself (see Levav et al. 2002 for a notable exception showing that small assortments cue a maximizing mindset). We show that assortment size not only affects the final decision and the post-choice process, but that it influences the general strategy consumers decide to use in forming a consideration set (i.e.,

using include vs. exclude for screening). Thus, we contribute not only to the literature on assortment but also to the literature examining consideration set construction as a separate but important phase in the choice process (Chakravarti et al. 2006; Desai and Hoyer 2000; Irwin and Naylor 2009; Kardes et al. 1993; Mitra 1995).

Our work also contributes more broadly to the literature on adaptive decision making (Bettman et al. 1998; Payne et al. 1988). While this past research has shown that decision makers are adaptive with respect to the rules used during choice, we show that the general strategy used in the screening phase of choice (i.e., include vs. exclude) is also adaptive based on perceptions of effort and accuracy. These context-dependent effort and accuracy perceptions appear to be driven by the different implied status quo in exclusion version inclusion (Heller et al. 2002; Levin et al. 2001; Yaniv and Schul 1997). Study 2 provides evidence for this notion with participants reporting a greater need to examine every option in the assortment in exclusion than in inclusion. As a result, exclusion is perceived to be less feasible as assortment size grows. Accuracy concerns seem to be a less direct driver of strategy choice in our studies, but we acknowledge that this may be a function of the contexts we study. The negative consequences of forming a less than ideal consideration set are relatively minimal in a typical retail assortment context. Accuracy may be a more significant driver of strategy choice in other decision contexts, such as hiring and firing decisions (Levin et al. 2001) or decisions about which potential recipients receive transplanted organs (Jasper and Ansted 2008).

Interestingly, our results also suggest that consumers' perceptions of the effort and accuracy needed to include or exclude are relatively correct. Participants in study 2 perceived inclusion as less effortful and more accurate than exclusion in both large and small assortments, and we find evidence that actual time (study 4) and accuracy (study 5) differed in large

assortments (though, there was no difference in small assortments). Thus, although consumers may not have a perfect lay understanding of differences in the execution of inclusion and exclusion, they do correctly intuit that they are different across different assortment sizes. Thus, we also contribute to the literature exploring how consumers' lay understandings of their own mental processes affect their choices (e.g. Galak et al. 2013; Huang et al. 2014; Mukhopadhyay and Johar 2005). Consistent with work exploring the accuracy of lay theories, we find evidence that consumer lay theories do not have to be perfectly accurate to affect decisions (Haws et al. 2017).

Our work may appear to contrast with past literature showing that exclusion-based decision rules are generally less effortful to execute (see, for example, Johnson and Payne 1985). We speculate that there are several reasons for this discrepancy. First, we explore significantly larger assortment sizes (i.e., 16-40) than the "large" set sizes typically explored in past work (e.g., eight or less; Payne et al. 1988) on execution of decision rules. Although we do not know at exactly what point an assortment becomes so large that our effect obtains, it appears to fall between eight and 16 (consistent with what is often considered as the minimum for a "large assortment," see Scheibehenne et al. 2010). Second, we are explicitly focused on the screening stage only, whereas prior work on decision rules has typically looked at final choice. Thus, we caution the reader not to make predictions about the actual effort and accuracy of using an include or exclude strategy in final choice.

We also note that we are not proposing that exclusion cannot be used to efficiently narrow down the universe of products available online (where one might be able to, with the click of a mouse, exclude thousands of options in which one is not interested). Our results instead apply most directly to how consumers form consideration sets from already

curated/formed assortments, like those found in a retail environment (e.g., on a menu, in a physical display, in a catalog, on a retailer's website, etc.) and hence have practical implications for retailers discussed in the section that follows.

Finally, although our work does not directly explore objective quality of the final decision, we show that consumers who use inclusion when faced with a large assortment do not seem to be sacrificing decision quality or confidence in order to make efficient decisions (in fact, we find the opposite – that exclusion can decrease quality in large assortments). Thus, our work has implications for consumer well-being, as it suggests that using a less effortful decision strategy may not always have negative consequences in terms of accuracy.

Practical Contributions and Avenues for Future Research

Our research also has important implications for marketing managers. Ending up in the consideration set is, after all, a necessary condition for being purchased (Desai and Hoyer 2000; Nedungadi 1990). Our research can help retailers decide both the types of products they should feature as part of their assortment as well as the type of information they should highlight as part of the shopping experience.

Based on our findings, retailers offering large assortments should expect that their customers are more likely to use an include strategy. Past research has suggested that an include strategy may lead to more weight on positive attributes (Meloy and Russo 2004; Levin et al. 2001), consistent with the results of our measures of perceived accuracy. Thus, our results suggest that retailers offering large assortments should highlight products and brands with positive attributes, even if these products also have negative attributes (i.e., enriched options). These retailers (and manufacturers whose products are likely to be featured in large assortments)

should perhaps avoid impoverished options (i.e., options with average performance across a variety of attributes with no extreme positive or negative attributes; Shafir 1993).

Our results also suggest that consumers using inclusion from large assortments may be more confident and may make choices that better match their preferences. According to our findings, suboptimal alternatives are less likely to end up in their consideration set compared to consumers who are excluding in large assortments, which can affect final choice. These results suggest that using inclusion in a typical hyperchoice retail environment may result in higher customer satisfaction and increased repurchase intentions than using exclusion, a prediction consistent with regulatory fit theory (Avnet and Higgins 2003). As such, managers may want to encourage consumers to use inclusion, making it the default option in online shopping contexts (like the one we used in study 4). Future research should explore satisfaction and repurchase intentions, as exploring the downstream consequences of the interaction between consideration set construction strategy and assortment size will likely have other implications.

Finally, future research should explore whether other factors on which assortments vary may moderate the effects we observe. We explored multiple types of assortments in our studies (e.g., small assortments with high variance that were purposefully created to capture the full range of options vs. randomly selected from the large assortment, high involvement categories like vacation destinations vs. low involvement categories like chocolates, pens, and ice cream), but others remain. Future research could test whether assortments containing options that are, for example, highly similar or perceived as non-comparable might reduce or eliminate consumers' preference for inclusion in large assortments. More broadly, with the continual expansion of consumer choice, the role of consideration set construction will only continue to rise in

importance; thus, we encourage future research to continue to explore the important role of consideration sets in the decision-making process.

APPENDIX A

Study 1A Instructions and Stimuli

On the next page you will see a display of chocolates. We would like to know which of these chocolates you would consider buying. That is, we would like you to narrow down the display to a smaller group of chocolates that you would actually consider buying.

To thank you for participating, we will actually give you one of the chocolates that you choose later in the experiment, so keep that in mind when making your choices!

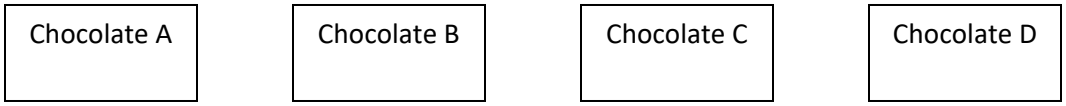
Now, there are two ways you may narrow down the display. You can use either method—it doesn't matter to us. You can use:

Option (1): Exclusion Decide which chocolates you WOULD NOT consider and then CROSS-OUT these choices, or

Option (2): Inclusion Decide which chocolates you WOULD consider and then CIRCLE these choices.

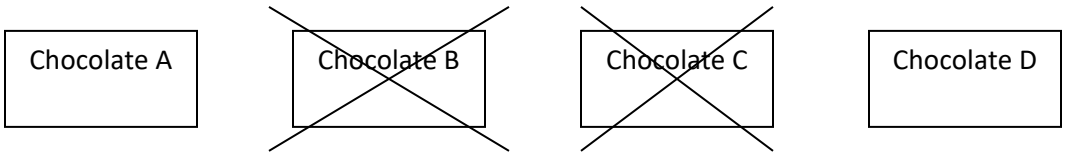
After you look at the chocolates, you may then decide which way you will narrow down the display into a smaller group. You may CROSS-OUT the ones you do NOT like OR CIRCLE the ones you DO like — it's up to you!

Example
Let's say there are 4 chocolates to choose from:

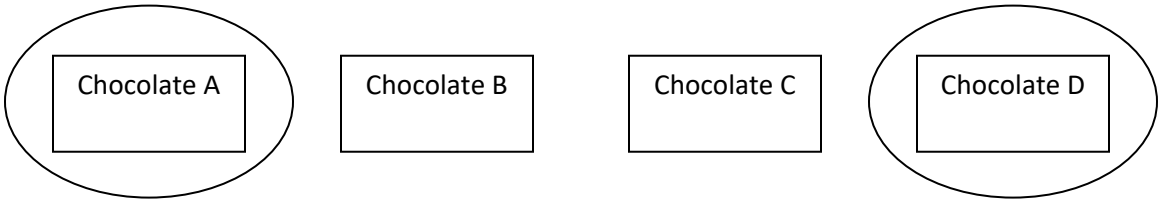


Of these 4 chocolates, let's say you would consider buying only 2 of them (chocolates A and D). You would narrow the 4 chocolates down to 2 chocolates in ONE OF TWO METHODS:

I. If you chose Option (1) Exclusion you would CROSS OUT the chocolates that you DID NOT like:



II. If you chose Option (2) Inclusion you would CIRCLE the chocolates that you DID like:



You may now go to the real display of chocolates and decide which method you would use.

Planograms: Small Assortment

Either CROSS-OUT the names of the chocolates you will NOT consider OR CIRCLE the names of the chocolates you will consider choosing
DO NOT DO BOTH: Either CROSS-OUT or CIRCLE. It is your choice.

MILK CHOCOLATE TRUFFLE

RASPBERRY CORDIAL

PECAN CARAMEL TRUFFLE

SCALLOP SHELL

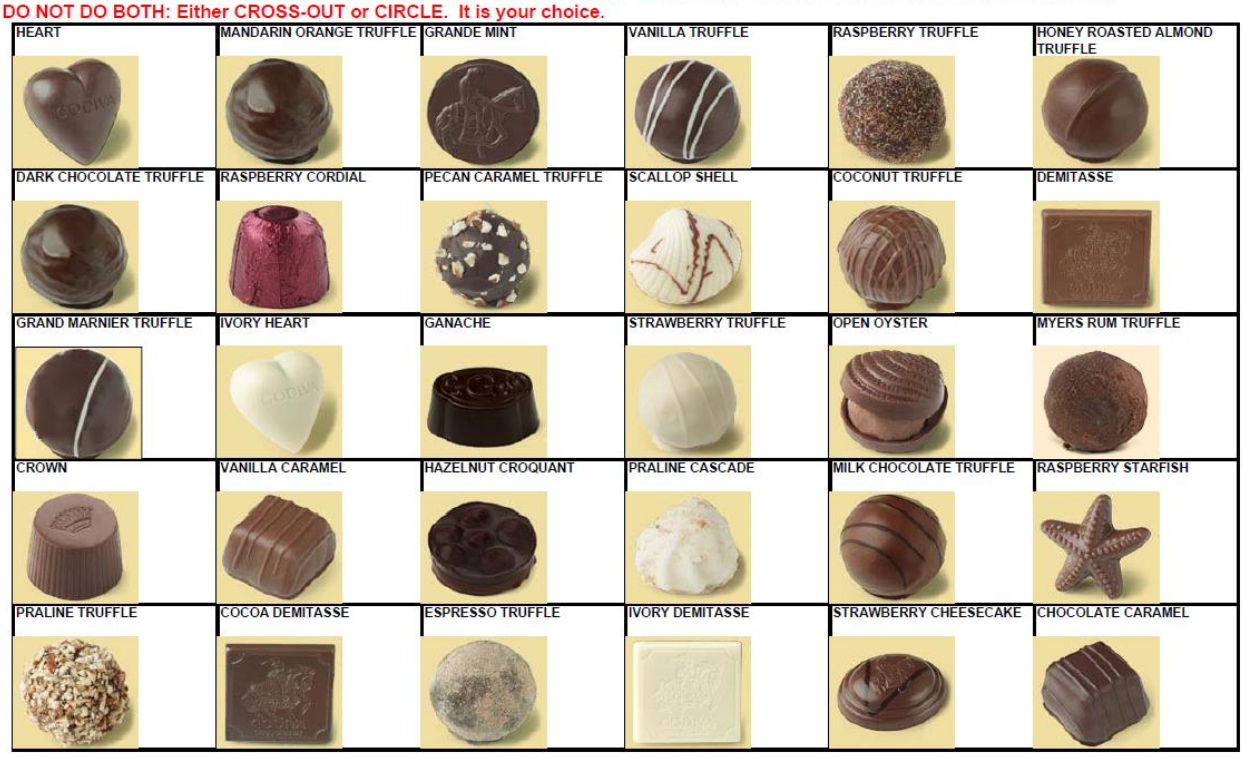
DEMITASSE

MANDARIN ORANGE TRUFFLE

Planograms: Large Assortment

Either CROSS-OUT the names of the chocolates you will NOT consider OR CIRCLE the names of the chocolates you will consider choosing
DO NOT DO BOTH: Either CROSS-OUT or CIRCLE. It is your choice.

HEART	MANDARIN ORANGE TRUFFLE	GRANDE MINT	VANILLA TRUFFLE	RASPBERRY TRUFFLE	HONEY ROASTED ALMOND TRUFFLE
DARK CHOCOLATE TRUFFLE	RASPBERRY CORDIAL	PECAN CARAMEL TRUFFLE	SCALLOP SHELL	COCONUT TRUFFLE	DEMITASSE
GRAND MARNIER TRUFFLE	IVORY HEART	GANACHE	STRAWBERRY TRUFFLE	OPEN OYSTER	MYERS RUM TRUFFLE
CROWN	VANILLA CARAMEL	HAZELNUT CROQUANT	PRALINE CASCADE	MILK CHOCOLATE TRUFFLE	RASPBERRY STARFISH
PRALINE TRUFFLE	COCOA DEMITASSE	ESPRESSO TRUFFLE	IVORY DEMITASSE	STRAWBERRY CHEESECAKE	CHOCOLATE CARAMEL



Appendix B

Study 2 and 3: Stimuli

Small Assortment

Large Assortment

Appendix C

Study 4: Stimuli and Website

Initial Screen in Sorted Condition

BookTravel
CONNECTING YOU TO THE WORLD

In this study, we would like you to imagine that you and some friends are trying to decide on where to go on vacation. You have a list of locations with reviews from each location. Please create a Shortlist of vacations that you would actually consider. Now, there are two ways you may create a Shortlist. You can use either strategy - it doesn't matter to us, but you must only use one (otherwise it's confusing). You can use:

- Option 1: Exclusion and delete the vacations you WOULD NOT consider. The remaining vacations will end up on your Shortlist.
- Option 2: Inclusion and add the vacations you WOULD consider to a Shortlist.

Please look at the 8 vacations below and at the bottom of the page, decide if you would like to use Option 1 (Exclude) or Option 2 (Include).

Shopping & Nightlife

Oranjestad, Aruba
Oranjestad is the capital city of Aruba, best known for its Shopping, dining, and nightlife. The nearby Butterfly Farm offers a unique on-land experience for travelers, while Oranjestad is one of the top scuba destinations for those more aquatically inclined.

Cancun, Mexico
Located on the Yucatan Peninsula, Cancun is known for its vibrant comfortable beaches, extensive resorts, and vibrant night life. Visit either El Centro or Zona Hotelera, a long, beachfront strip of high-rise hotels, nightclubs, shops and restaurants, for an exciting evening out.

Aquatic Sports

Trinidad
Trinidad is the one of the largest coral reef in the world for great diving spots. There are also many archaeological sites that are a great attraction.

Playa del Carmen, Mexico
Experience one of the world's top diving locations at Playa Del Carmen. Full of underwater caverns and exotic fish, you will have plenty to see and explore. If you aren't a diver, Playa is now a hip and modern version of the fishing town it used to be. Explore The Jungle Place sanctuary or shop down 5th avenue.

Outdoors & Nature

Saint Barthélemy (St. Barths)
St. Barths is known for for its powder white beaches, luxury villas and hotels, and incredible shopping. Known as the chic Caribbean island, St. Barths offers plenty to do including relaxing on one of the may beaches, boat tours, or even a trip to the Wall House Museum for some history.

Tobago
Tobago is the smaller of the Trinidad and Tobago islands, but no less exotic. Known as one of the premier eco-tourism locations in the world, visitors have the opportunity to kayak through mangrove swamps, explore the Rainforest Reserve, or drift dive with aquatic creatures. For those more nightlife inclined, Carnival showcases the island it a totally different light.

History & Culture

Merida, Mexico
Filled with colonial and Mayan history to uncover, Merida is a cultural epicenter for the Yucatan Peninsula. Visit the ruins at Uxmal to imagine what Mayan life was like, or try to visit during one of the many festivals to actually experience history for yourself.

Havana, Cuba
Cuba is one of the top dive destinations in the world, thanks to vibrant sea life and dazzling underwater caverns. Spend some time exploring the mansions-turned-museums or just kick back and relax one of the many golf courses.

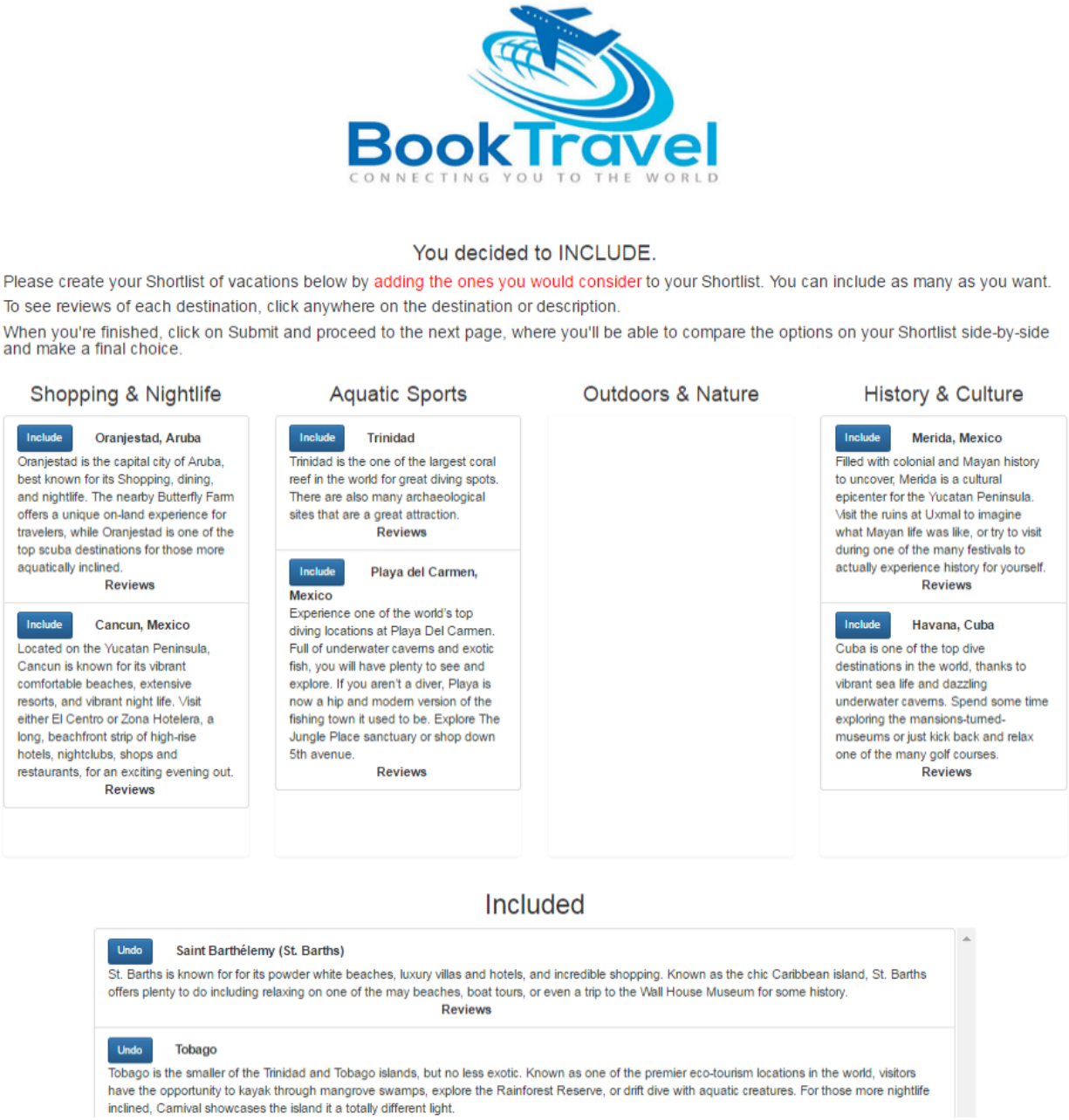
How do you want to create your Shortlist?

- Exclusion: Delete the vacations you WOULD NOT consider. The remaining vacations will end up on your Shortlist.
- Inclusion: Add the vacations you WOULD consider and they will go into your Shortlist.

Exclude | Include

Submit

Second Screen in Sorted Condition if Participant Selects Inclusion



Appendix D

Study 4: Stimuli Examples

Cancun, Mexico (Nightlife)
Located on the Yucatan Peninsula, Cancun is known for its vibrant comfortable beaches, extensive resorts, and vibrant night life. Visit either El Centro or Zona Hotelera, a long, beachfront strip of high-rise hotels, nightclubs, shops and restaurants, for an exciting evening out.
Review 1: "Went here in the middle of March and it was a huge mistake. The place was crawling with drunk college kids. We could hardly sleep because the room next to us was up all night. Only visit Cancun when it is NOT spring break.
Review 2: "I've never had so much fun in my entire life. The bars and clubs on Zona Hotelera were crazy. And, it was super easy to get there because there was a shuttle that stopped at all the resorts and brought you to the most popular bars."

Tulum, Mexico (History)
If you've ever wanted to travel back in time, a visit to Tulum may be the next best thing. The last city build by the Mayans, Tulum has been preserved so well that the sites almost transport you back. Make a trip to the Temple of the Descending God or explore an underground river in the sacred caverns of LabnaHa Eco Park.
Review 1: "If you are in Tulum - you must go see the ruins. The grounds are beautiful and learning about the history is really interesting. Next time, I will take a guided tour. We took a back pack and spent some extended time down on the beach - not so many people make the trek down the stairs so it is very nice down there."
Review 2: "Everything we went to was packed. The ruins were really cool but there is no point in going to look at a bunch of stones if you don't have a guide to explain what they actually were."

Guadeloupe (Outdoors)
Guadeloupe is the perfect destination for travelers with a desire to experience nature. Visit Parc National de la Guadeloupe to explore scenic hiking trails, see the 3-tiered Carbet Falls, and even tour the active volcano La Grand Soufrière.
Review 1: "We took a walking tour up the volcano and it was incredible. We saw beautiful vegetation, walked through tunnels, and got to see views from the top. It was even a bit challenging!"
Review 2: "St. Anne Beach was conveniently located but way too crowded. Instead of being able to enjoy the sun and ocean, we had people kicking sand up onto our towels all day."

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