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Consumer and managerial goals in assortment choice and design

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Abstract In many domains, consumers must deal with an increasing number of choices—spanning where, when, what, and how many items to buy; how many and which options to consider; and how best to weigh the pros and cons of these options. This paper considers how consumer and managerial goals and the ensuing tradeoffs affect the optimal design of assortments in order to help enhance our understanding of assortment choice, identify issues that merit particular attention, review some of the recent research in pertinent areas, and suggest directions for future research.

Keywords Assortment · Choice overload · Variety · Goals

Interest in how consumers choose among and from assortments, as well as how managers can design optimal assortments, has increased dramatically (Broniarczyk 2008; Chernev 2012; Kahn et al. 2013). This renewed interest can be attributed to a number of factors. First, assortments have become larger and more complex. Indeed, for many retailers, the rapid growth of online retailing and the increased efficiency of

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procurement and distribution systems have lowered the costs of offering larger, more varied assortments. The attendant decrease in consumer search costs, stemming from easier access to information about the available assortments, has further contributed to the rising number of options that could potentially form the consumer's consideration set.

The expansion in the average number of items offered by retailers has been accompanied by the introduction of alternative retailing formats involving cross-channel assortments (Dholakia et al. 2006). In addition, recent public policy initiatives have presented many consumers with myriad new assortment decisions in domains that include healthcare, insurance, and financial investment (Botti and Iyengar 2006).

The changes in the type and number of choices facing consumers necessitate a fresh look into understanding how consumers make assortment choices and which factors managers take into account when designing these assortments. In this review, we focus on relating assortment design to consumer and managerial goals and on identifying the relevant strategic tradeoffs that should be considered.

From the consumer perspective, we identify four goals that affect the design of an assortment: (1) decision focus, whether the consumer is focused on choosing the assortment (e.g., choice of retailer) or choosing the final option; (2) purchase quantity, whether the consumer is considering a single option or multiple options; (3) self-regulation, whether the consumer is choosing an assortment to exercise self-control or allow for indulgence; and (4) learning, whether the consumer is minimizing decision effort or trying to learn about options.

From the manager or policy maker's perspective, we consider four goals that could lead to increased market share or better policy outcomes: (1) increasing traffic while minimizing choice overload, (2) managing competitive reaction by strategically defining the assortment variety, (3) nudging the consumer toward the optimal decision, and (4) promoting variety seeking to increase the overall consumption volume (Fig. 1).

1 Consumer goals in assortment choice

1.1 Decision focus

Before deciding which option to choose, consumers often have to select the assortment from which to make this choice. For example, consumers often choose a clothing retailer before choosing a particular shirt or a dating website before selecting a specific

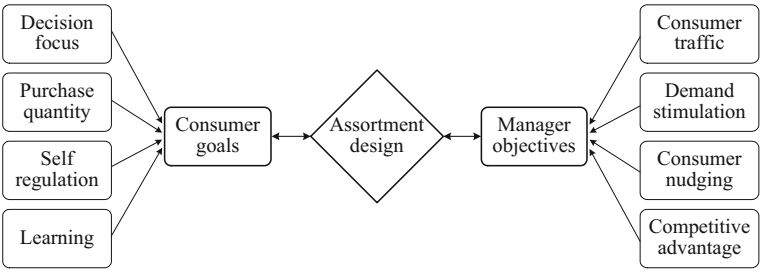

Fig. 1 Assortment design as a function of consumer goals and manager objectives

person to invite to dinner. An important consideration then is whether the consumer's goal is simply to choose an assortment or whether the assortment is being considered in conjunction with eventually choosing an option from that assortment.

Consumers have different, and often conflicting, goals at these different stages in the decision process (Chernev 2006). When choosing among assortments, consumers seek to maximize flexibility, freedom, and variety (Kahn and Lehmann 1991), thereby increasing the chances they will later find an option that is a good match for their preferences. While large assortments satisfy these goals, they can also set high expectations. Diehl and Poynor (2010) found that when assortments are large (and thus offer more flexibility), they also increase expectations that the perfect choice will be found. Heitmann et al. (2007) found that large assortments can increase anticipated regret and lower decision confidence. The mere knowledge that an option comes from a large assortment (as opposed to a small assortment) can result in decreased satisfaction. Thus, if the goal is to maximize flexibility, large assortments are better; if the goal is to maximize satisfaction with the choice, large assortments may not serve the consumer as well.

When the choice set offers a clearly dominant option, such as an option very close to the consumer's ideal offering, the choice is easy. In addition, for consumers with a well-articulated ideal point, larger assortments present much less of a problem (Chernev 2003). However, larger assortments increase the number of potential tradeoffs that need to be managed (Hamilton and Chernev 2010), complicating the decision process. Griffin and Broniarczyk (2005); Meyer (1997) find that the quest for the ideal option can lead consumers to continue searching even when there are diminishing returns on satisfaction. So, ironically, consumers who believe they can best meet their goal by selecting a large assortment in the first stage of the decision process may find it very difficult to meet their second-stage goal of selecting an option from that assortment. In a similar vein, marketers who are initially successful at attracting consumers with very large assortments may find that they have difficulty in actually closing those sales (Broniarczyk et al. 1998; Boatwright and Nunes 2001; Iyengar and Lepper 2000).

Prior research has shown that consumers can minimize the pernicious effects of these conflicting goals in several ways. For example, if consumers focus on the eventual choice of an option as they select an assortment, the documented preference for larger assortments in the first stage will be reduced, leading to an easier choice task in the second stage.

1.2 Purchase quantity

Many choices consumers make are discretionary with respect to the quantity purchased; thus, consumers must decide not only which item to purchase but also how many different items to buy. For example, consumers who purchase food products such as yogurt, snacks, and frozen dinners have to decide whether to buy a single item or whether to buy multiple options to be consumed over time.

Prior research has shown that when consumers have the option of making more than one choice, they tend to be motivated to seek variety in their choices (Simonson 1990). Thus, multi-choice settings tend to align the first- and second-stage decision goals. As

such, it is reasonable to expect that some of the negative effects of choosing from larger assortments will be reduced when consumers have the option of choosing more than one option from the assortment (Bonezzi et al. 2013).

One specific way that consumers use multiple choices as a way of coping with larger assortments is through the "quantity-matching heuristic" (Chernev 2008). When consumers are uncertain of their preferences, simply choosing one of each of the available options provides a ready strategy for avoiding the tradeoffs required in selecting a single, best option. This heuristic further leads consumers to prefer assortments whose size approximates the number of options they require (e.g., consumers will tend to prefer an assortment of 6 over an assortment of 12 when they are looking to buy six items).

1.3 Self-regulation

Research on temptation and self-control has shown that consumers who anticipate being tempted often prefer smaller choice sets that preclude or limit choices of tempting options (Ariely and Wertenbroch 2002; Rachlin and Green 1972; Schelling 1984). For example, Wertenbroch (1998) showed that consumers ration their consumption of vice goods (e.g., potato chips, alcohol, soft drinks) by buying them in smaller package sizes or smaller quantities than virtue goods, effectively limiting their own freedom of choice at the point of purchase to avoid temptation. Similarly, people may gravitate to smaller assortments to avoid temptation. Such self-imposed constraints on one's choice sets, even though they may seem quite adaptive or sophisticated (Schelling 1984), violate the presumed consumer preference for flexibility and have long puzzled economists (Kreps 1979). In an influential paper, Gul and Pesendorfer (2001) finally axiomatized such commitment preferences under temptation.

Ironically, self-control may not only generate preferences for smaller assortments, it may also create preferences for larger assortments if consumers derive utility from observing themselves successfully resisting temptation. Dhar and Wertenbroch (2012) proposed that consumers derive positive self-signals from resisting temptations found in choice sets that contain vice items. Whether or not consumers pre-commit to small assortments that exclude tempting vices is thus a function of whether they believe that they will be able to resist the vices that are included in a larger assortment.

In considering these higher order self-regulatory goals, most prior research has focused on the cognitive aspects of assortment choice, highlighting intertemporal tradeoffs without exploring affective aspects in depth. Specifically, affect can influence assortment choice in two basic ways: as an input into the decision process and as the ultimate goal of the decision process.

With regard to input into the decision process, a number of studies have shown that choice overload may be caused by meta-cognitive experiences that accompany the choice process (Schwarz 2004). For example, options that are presented in a hard-to-read font may trigger experiences of difficulty that, in turn, may increase choice deferral (Novemsky et al. 2007).

The effects of experiential and affective reactions are not restricted to the display of choice options. As part of the comparison process in a choice task from a large assortment, decision makers may discover new information. This process of discovery may be experienced as intrinsically rewarding and pleasurable (e.g., choosing among

exotic places to go on vacation), but it may also be experienced as overwhelming and confusing (e.g., choosing among hotels that offer the least number of hidden "resort fees"). In the former case, becoming aware of a knowledge gap may be perceived as exciting, which may trigger more curiosity and more exploration—even to the extent that the same options are reviewed multiple times (Böckenholt and Kroeger 1993). In the latter case, however, the process of overcoming knowledge gaps may be perceived as aversive, which may reduce interest in the choice domain and cut short exploration of the choice options. Individual differences in these two experiential and affective reactions to a choice process can be of a momentary (e.g., the emotion of interest) or a more enduring (e.g., involvement with a choice domain) nature. Clearly, a better understanding of the psychological mechanisms that drive these different experiential reactions to choice options is critical. These differing reactions also highlight the importance of designing and customizing assortments that aid consumers in both forming a preference (e.g., by easy-to-process displays that facilitate information processing and choice) and in exploring choice options that may excite their curiosity and generate positive feelings.

1.4 Learning

In some cases, consumers seek variety as a strategic means to learn their tastes in a novel category. As an example, a consumer who wishes to develop knowledge about wines would be advised to sample a wide variety across such dimensions as type of grape, country of origin, vintage, and winery. In the course of this sampling, the consumer would try to balance the short-term goal of choosing the option that offers the best chance of immediate pleasure with the long-term goal of choosing the option that is most informative of his or her more educated preferences in the future.

To what degree do consumers follow normative principles of information economics when seeking variety in an attempt to learn? Experimental evidence from a number of domains suggests that consumers are relatively poor strategic variety seekers, with choices far more driven by a short-term desire to maximize expected utility than a long-term desire to learn. A study by Meyer and Shi (1995) gave laboratory subjects the task of learning which of two airlines offered the better on-time departure rate by making repeated choices between the airlines, with each on-time departure rewarded by a cash prize. Whereas normative theory prescribed that subjects should at first forgo more certain short-term earnings by investing in a series of test flights on the more uncertain airline, actual rates of experimentation were far less than predicted by the optimal policy. Rather, decisions were made via a short-term reinforcement learning process in which a single delayed flight on one airline was sufficient to induce a switch, even if this strategy slowed the pace at which subjects could learn the true departure rate.

Ironically, this tendency to make decisions by reinforcement processes has in other contexts been found to induce *too much* variety seeking in settings where none at all is optimal. A classic example from experimental psychology is that when subjects are asked to make repeated choices from probabilistic urns that have different—but known—payoff rates, subjects do not always choose the one with the highest expected payoff; rather, they vary their choices in a manner that in some cases resembles probability matching (Koehler and James 2009).Whereas normative theory prescribes that a rational decision maker should first actively seek variety and then refrain from it once

the knowledge has been gained, people often do the opposite: They seek too little variety early on, which greatly slows the pace of learning; then, when the knowledge has been gained, they seek too much variety.

2 Managerial goals in assortment design

Like consumers, managers and policy makers have various goals or objectives that need to be balanced when they design assortments. Below, we discuss four key tradeoffs that managers face when making assortment decisions.

2.1 Managing traffic

When designing an assortment, a manager needs to consider the two stages in the consumer decision-making process: first, the choice of an assortment, and, second, the choice of item(s) within the assortment. The challenge for managers is that despite consumers' overwhelming preference for more variety when choosing among assortments, larger selections can be associated with lower purchase probability due to choice overload (Iyengar and Lepper 2000). As a result, high assortment variety tends to appeal to consumers and increase store traffic but can also cause subsequent indecision in option choice. Recent research suggests several strategies managers can use to mitigate the negative effects of choice overload while offering assortment variety.

One approach to minimizing the negative effects of choice overload involves managing perceived rather than actual variety. Kahn and Wansink (2004); Townsend and Kahn (2014) show that even if the *actual* variety is held constant, consumers will find assortments with higher *perceived* variety more attractive. Thus, the goal of a manager is to maximize perceived variety (rather than actual variety), which also includes managing the perceived complexity of the assortment (Kahn et al. 2013).

Perceived variety can be accomplished by managing various structural aspects of the assortment. For example, research has shown that when consumers can parse the complexity of the assortment, then making a choice in the second stage is easier. If the external structure of an assortment matches the internal structure that a consumer has for the category, the perceived complexity of the assortment also decreases (Morales et al. 2005), and consumers are better able to make a satisfactory choice. Mogilner et al. (2008) showed that the mere presence of categories can increase satisfaction with an assortment for consumers who are unfamiliar with the products, leading to increased overall satisfaction with the final choice from the assortment. Finally, Townsend and Kahn (2014) showed that for large assortments, if consumers can be motivated to spend more time processing and to process the options within the assortment in a more systematic manner (which can be accomplished by depicting options within the assortments with textual components instead of merely visual descriptions), perceived complexity and likelihood of delaying choice can be mitigated, resulting in greater consumer satisfaction with the final choice and increased sales for management.

An alternative approach to simplifying consumer choice lies in streamlining consumer decision processes. One common strategy involves curation services—services designed to winnow large assortments down to small, customized choice sets. Curation

services seek to provide customers with a narrowly tailored selection of goods chosen by a personal shopper to appeal to a particular customer. By offering expert guidance through the overwhelming maze of choices offered in the marketplace, these services grant consumers the benefits of larger assortments without the costs—provided the curator is able to deliver options that actually match consumer preferences (Chernev and Hamilton 2009).

Another strategy for streamlining consumer choice involves providing recommendation signage such as "consumer choice," "best seller," and "award winner" (Goodman et al. 2013). It has been shown that the effectiveness of such signage is a function of the degree to which consumers have articulated preferences: Thus, offering recommendations or indicating "best sellers" tends to be an effective strategy for consumers without articulated preferences but hinders choice for consumers who have developed preferences. These findings are consistent with the research showing that choice overload is likely to be inversely related to the degree to which consumers have articulated preferences, such that it is more pronounced for novices than for experts (Chernev 2003).

2.2 Demand stimulation

Even though consumers' preference uncertainty is often viewed as the key impediment to assortment choice, on many occasions, the problem is not preference uncertainty but just the opposite—the fact that consumers have well-defined preferences. Such well-defined preferences can be a problem for companies offering horizontally differentiated product lines (e.g., canned soup). The challenge for these companies is that the routine of consistently choosing one's favorite (e.g., chicken soup) mitigates the likelihood that consumers will consider and appreciate the other options in the company's product line. This is a concern because even though variety seeking might decrease the consumption of the flagship product, it could increase the total consumption from the company's product line.

It is somewhat paradoxical that in this case, the problem faced by managers is not caused by choice difficulty because consumers lack an established preference, but rather that consumers have strong, well-defined preferences that preclude variety seeking. The manager's dilemma is to make certain that consumers can easily locate their favorite brands while encouraging them to keep an open mind about exploring the other options in the company's product line (Mantrala et al. 2009).

Companies have addressed this dilemma in different ways. Some have focused on driving store traffic by locating consumers' most preferred items in remote locations, thus forcing them to explore the available assortment (e.g., putting milk at the back of the store). Others have organized assortments in a way that forcefully exposes consumers to different assortment options (e.g., Ikea channels store traffic in a way that forces consumers to walk through the entire store). Finding the optimal balance between streamlining consumer preferences to ensure repeated purchase of a particular product while simultaneously promoting variety seeking in order to increase overall consumption is an ongoing challenge for managers and a fruitful venue for further research.

2.3 Consumer nudging

Prior research has argued that when consumers do not have articulated preferences, public policy agencies, while respecting the freedom of choice, should attempt to steer (or "nudge") people's choices in a way that promotes social welfare (Thaler and Sunstein 2008). This implies that simply providing consumers with more alternatives without offering a mechanism for structuring the decision process can be counterproductive for both consumers and society and suggests that policy makers, including state and federal governments, should play an important role in designing choice sets for consumers.

To illustrate, two of the largest expansions of medical coverage in the USA—the Medicare Part D Prescription Drug Program implemented in 2006 and the Affordable Care Act implemented in 2013—were explicitly designed to provide consumers with many alternative health insurance options. This raises the questions of whether consumers make optimal decisions when provided with a plethora of choices and whether and how policy makers can facilitate decision making through assortment design. In the case of Medicare Part D, studies document that consumers often do not choose the lowest cost plan for their needs (Abaluck and Gruber 2011) and that simple information interventions can facilitate the choice of lower cost plans (Kling et al. 2012). Ketcham et al. (2012) further document that this "overspending" declines over time, presumably as a result of individuals becoming more experienced at choosing among plans.

Relatively little evidence exists on how assortment design influences decision outcomes in these contexts. Because Medicare Part D is administered federally, little variation exists in the design of the assortments facing consumers. Under the Affordable Care Act, in contrast, states have greater control over many important aspects of assortment design, such as the number and types of plans offered and how information on alternative choices is presented. In this context, the introduction of the Affordable Care Act provides greater opportunities for policy makers to design assortments that are tailored to the needs of the public in a way that facilitates choice, nudging them toward making the optimal choice.

2.4 Competitive advantage

An important dimension on which firms compete is the variety they offer, especially given retailers' growing reliance on multichannel strategies as retailer and manufacturer roles begin to blur. To determine the optimal assortment size and composition in a competitive setting, managers need to gain deep understanding of what drives the demand associated with larger assortment sizes.

A key aspect of the variety offered is the degree to which assortment options are similar to one another and to competitive products. In this context, one strategy involves developing a relatively narrow assortment of similar options positioned to appeal to the majority of consumers. The downside of this strategy, however, is that as all sellers tend to behave in this fashion, the space becomes saturated, driving everyone's profits down. The alternative strategy involves diversifying the assortment in a way to hedge against competitive entry—a strategy that presents consumers with a greater variety of options. The downside of this strategy is that the potential of the off-center options, even in the best-case scenario, is limited to becoming niche products.

The pros and cons of these strategies underscore the tradeoff between optimizing the assortment to meet consumer demand and optimizing the assortment with respect to the competitive environment.

Recent research shows that capturing this tradeoff is critical for evaluating the profitability of different assortments and for policy analyses of mergers (Draganska et al. 2009). For example, a reduction in the number of competitors due to a merger may be profitable for the merging firm and at the same time benefit consumers in the form of higher product variety. A failure to consider the ability of firms to make strategic assortment choices and a focus on price competition alone would have led policy makers to conclude that the merger would be detrimental for consumers because of decreased competition and higher prices, which further underscores the impact of assortment variety.

Furthermore, Draganska and Jain (2005) show that even after the heterogeneity of preferences across consumers is taken into account, offering more options is associated with higher individual utility. Moreover, Berger et al. (2007) provide evidence that the variety a brand offers (i.e., the size of the assortment provided by a particular seller) can act as an important quality cue, affecting the inferences consumers make about the brand and thus influencing which brand consumers choose. Specifically, a large number of similar options (e.g., differently flavored chocolate truffles) suggests greater expertise and is likely to facilitate choice, whereas a large number of disparate options (e.g., a restaurant offering Italian, Chinese, and Mexican food) suggests low expertise and is likely to hinder choice.

3 Conclusion

We have provided a selective overview of recent research on how consumer and managerial goals affect assortment design and choice. Recent improvements in data collection tools such as eye-tracking and access to online data pertaining to consumer search and buying patterns can offer greater insight into consumer decision processes and should allow marketers to respond to the effects identified in this paper more easily. The changing retail channel dynamics show that considering these goals and effects is becoming ever more relevant. Analytically, significant changes in the empirical modeling of assortment variety allow researchers to simultaneously examine its impact from the perspective of both the retailer and consumer, rather than consider these perspectives in isolation from each other. Taking advantage of these new methods to address growing challenges faced by both consumers and managers should shed more light on the decision process and perhaps raise new questions concerning designing and choosing from assortments in commercial as well as in policy settings.

References

Abaluck, J., & Gruber, J. (2011). Choice inconsistencies among the elderly: evidence from plan choice in the Medicare Part D program. *American Economic Review, 101*(4), 1180–1210.

Ariely, D., & Wertenbroch, K. (2002). Procrastination, deadlines, and performance: self-control by precommitment. *Psychological Science, 13*(3), 219–224.

Berger, J., Draganska, M., & Simonson, I. (2007). The influence of product variety on brand perception and choice. *Marketing Science, 26*(4), 460–472.

Boatwright, P., & Nunes, J. C. (2001). Reducing assortment: an attribute-based approach. *Journal of Marketing, 65*(3), 50–63.

Böckenholt, U., & Kroeger, K. (1993). The effect of time pressure in multiattribute binary choice tasks. In J. Maule & O. Svenson (Eds.), *Time pressure and stress in human judgment and decision making* (pp. 195–214). New York: Springer.

Bonezzi, A., Chernev, A., Brough, A.R. (2013). When two is better than one: polarization and compromise in unrestricted choice, *Working paper*, Kellogg School of Management, Northwestern University.

Botti, S., & Iyengar, S. S. (2006). The dark side of choice: when choice impairs social welfare. *Journal of Public Policy & Marketing, 25*(1), 24–38.

Broniarczyk, S. (2008). *Product assortment, Handbook of Consumer Psychology* (pp. 755–779). New York: Lawrence Erlbaum Associates.

Broniarczyk, S. M., Hoyer, W. D., & McAlister, L. (1998). Consumers' perceptions of the assortment offered in a grocery category: the impact of item reduction. *Journal of Marketing Research, 35*(May), 166–176.

Chernev, A. (2003). When more is less and less is more: the role of ideal point availability and assortment in consumer choice. *Journal of Consumer Research, 30*(2), 170–183.

Chernev, A. (2006). Decision focus and consumer choice among assortments. *Journal of Consumer Research, 33*(1), 50–59.

Chernev, A. (2008). The role of purchase quantity in assortment choice: the quantity-matching heuristic. *Journal of Marketing Research, 45*(2), 171–181.

Chernev, A. (2012). Product assortment and consumer choice: an interdisciplinary review. *Foundations and Trends in Marketing, 6*(1), 1–61.

Chernev, A., & Hamilton, R. (2009) Assortment size and option attractiveness in consumer choice among retailers. *Journal of Marketing Research*, *46*(June), 410–20.

Dhar, R., & Wertenbroch, K. (2012). Self-signaling and the costs and benefits of temptation in consumer choice. *Journal of Marketing Research, 49*(February), 15–25.

Dholakia, U. A., Gopinath, M., Bagozzi, R. P., & Nataraajan, R. (2006). The role of regulatory focus in the experience and self-control of desire for temptations. *Journal of Consumer Psychology, 16*(2), 163–175.

Diehl, K., & Poynor, C. (2010). Great expectations?! Assortment size, expectations, and satisfaction. *Journal of Marketing Research, 47*(April), 312–322.

Draganska, M., & Jain, D. C. (2005). Product-line length as a competitive tool. *Journal of Economics & Management Strategy, 14*(1), 1–28.

Draganska, M., Mazzeo, M., & Seim, K. (2009). Beyond plain vanilla: modeling joint product assortment and pricing decisions. *Qme-Quantitative Marketing and Economics, 7*(2), 105–146.

Goodman, J. K., Broniarczyk, S. M., Griffin, J. G., & McAlister, L. (2013). Help or hinder? When recommendation signage expands consideration sets and heightens decision difficulty. *Journal of Consumer Psychology, 23*(2), 165–174.

Griffin, J. G., & Broniarczyk, S. M. (2005). *Search paradox: the role of feature alignability in the rise and fall of satisfaction, working paper*. Austin: McCombs School of Business, The University of Texas.

Gul, F., & Pesendorfer, W. (2001). Temptation and self-control. *Econometrica, 69*(6), 1403–1435.

Hamilton, R., & Chernev, A. (2010). Managing product assortments: Insights from consumer psychology. In A. Tybout (Ed.), *Kellogg on Marketing* (pp. 348–360). Hoboken: John Wiley & Sons, Inc.

Heitmann, M., Herrmann, A., & Kaiser, C. (2007). The effect of product variety on purchase probability. *Review of Managerial Science, 1*(2), 111–131.

Iyengar, S. S., & Lepper, M. R. (2000). When choice is demotivating: can one desire too much of a good thing? *Journal of Personality & Social Psychology, 79*(6), 995–1006.

Kahn, B. E., & Lehmann, D. R. (1991). Modeling choice among assortments. *Journal of Retailing, 67*(3), 274–299.

Kahn, B. E., & Wansink, B. (2004). The influence of assortment structure on perceived variety and consumption quantities. *Journal of Consumer Research, 30*(3), 519–533.

Kahn, B. E., Weingarten, E., & Townsend, C. (2013). Assortment variety: too much of a good thing? *Review of Marketing Research, 10*, 1–23.

Ketcham, J. D., Lucarelli, C., Miravete, E. J., & Roebuck, M. C. (2012). Sinking, swimming, or learning to swim in Medicare Part D. *American Economic Review, 102*(6), 2639–2673.

Kling, J. R., Mullainathan, S., et al. (2012). Comparison friction: experimental evidence from Medicare Drug Plans. *Quarterly Journal of Economics, 127*(1), 199–235.

Koehler, D., & James, G. (2009). Probability matching in choice under uncertainty: intuition versus deliberation. *Cognition, 113*(1), 123–127.

Kreps, D. M. (1979). A representation theorem for preference for flexibility. *Econometrica, 47*(3), 565–577.
Mantrala, M., Levy, M., Kahn, B., Fox, E., Gaidarev, P., Dankworth, B., et al. (2009). Why is assortment planning so difficult for retailers? A framework and research agenda. *Journal of Retailing, 85*(1), 71–83.
Meyer, R.J. (1997). The effect of set composition on stopping behavior in a finite search among assortments, *Marketing Letters* Special Issue on Time Course of Preferences, 8 (1).
Meyer, R. J., & Shi, Y. (1995). Sequential choice under ambiguity: intuitive solutions to the armed-bandit problem. *Management Science, 41*(5), 817–834.
Mogilner, C., Rudnick, T., & Iyengar, S. S. (2008). The mere categorization effect: how the mere presence of categories increases consumers' perceptions of assortment variety and outcome satisfaction. *Journal of Consumer Research, 35*(August), 202–215.
Morales, A., Kahn, B. E., McAlister, L., & Broniarczyk, S. M. (2005). Perception of assortment variety: the effects of congruency between consumers' internal and retailers' external organization. *Journal of Retailing, 81*(2), 159–169.
Novemsky, N., Dhar, R., Schwarz, N., & Simonson, I. (2007). Preference fluency in choice. *Journal of Marketing Research, 44*(3), 347–356.
Rachlin, H., & Green, L. (1972). Commitment, choice, and self-control. *Journal of the Experimental Analysis of Behavior, 17*(1), 15–22.
Schelling, T. (1984). Self-command in practice, in policy, and in a theory of rational choice. *The American Economic Review, 74*(2), 1–11.
Schwarz, N. (2004). Meta-cognitive experiences in consumer judgment and decision making. *Journal of Consumer Psychology, 14*(4), 332–348.
Simonson, I. (1990). The effect of purchase quantity and timing on variety-seeking behavior. *Journal of Marketing Research, 27*(2), 150–162.
Thaler, R., & Sunstein, C. (2008). *Nudge: improving decisions about health, wealth, and happiness*. New Haven: Yale University Press.
Townsend, C., & Barbara, K. (2014). The "visual preference heuristic:" the influence of visual versus verbal depiction on assortment processing, perceived variety, and choice overload, *Journal of Consumer Research*.
Wertenbroch, K. (1998). Consumption self-control by rationing purchase quantities of virtue and vice. *Marketing Science, 17*(4), 317–333.