Variety as a Preference Strength Signal

Aner Sela
Michal Maimaran

Aner Sela is an assistant professor of marketing, University of Florida, 204 Bryan Hall, Gainesville, FL 32611 (aner.sela@warrington.ufl.edu). Michal Maimaran is a visiting assistant professor at the Marketing Department, Kellogg School of Management, Northwestern University, Evanston, IL, 60208 (m-maimaran@kellogg.northwestern.edu).
Contribution Statement

We show that people choose less variety when they want to signal stronger, more self-related preferences for options in the category and to more strongly associate themselves with those options. This work makes two important contributions. First, it demonstrates the hitherto unexplored role of variety – and lack thereof – as a means of conveying information about the strength and self-relevance of one’s preferences. Past work on preference signaling has shown that self-presentation cues lead people to choose options with socially desirable qualities in order to associate themselves with those qualities (Belk 1988). The present work is the first, to our best knowledge, to examine how people change their choices to present themselves in a positive light when all the available or relevant options share the same socially desirable qualities.

Second, whereas prior research on variety-seeking as a self-presentation instrument (Ariely and Levav 2000; Ratner and Kahn 2002) has shown that people unidirectionally choose more variety when self-presentation cues are present, in order to signal their uniqueness and interestingness, we demonstrate that self-presentation may lead people to use variety in the opposite direction (i.e., choose less variety) when they wish to signal that they have strong, self-related preferences for options in the category and to associate themselves with the qualities of those items.
Abstract

To portray themselves in a favorable light, people often choose options with socially-desirable symbolic qualities. But when all the options in the choice-set have similar socially-desirable attributes, how might people choose? We propose that people use the degree of variety in their selections to convey information about the strength of their preferences for options in the category, both to others and to themselves. Specifically, whereas prior research has shown that people unidirectionally choose more variety when self-presentation cues are present, a series of field and lab studies shows that people choose less variety when they want to signal strong preferences for options in the category and to associate themselves with the qualities of those options. These findings have important implications for theories of variety-seeking and self-presentation, as well as for marketing practice.
People’s choices are often driven by the desire to appear in a favorable light, both to others and to themselves. To achieve this goal, they often choose options with socially desirable qualities, in order to associate themselves with those qualities (Belk 1988; Berger and Heath 2007; Escalas and Bettman 2005). And yet, in many cases, people choose from sets that are quite homogeneous, such that all the available options have similar socially desirable qualities that could have implications for how the chooser is perceived. For example, people who buy a gourmet chocolate gift box or select several bottles of wine within a given price and quality range, often select among options that are about equally refined or sophisticated and hence reflect equally favorably on the decision maker. In such situations, when choosing multiple items from assortments in which all the relevant options are similarly socially desirable, how might consumers choose to present themselves in the most favorable light?

The present research suggests that one answer may lie in the degree of variety that people include in their selections. We propose and demonstrate that, when choosing multiple items from assortments in which all the options are equally socially desirable, self-presentation cues may lead people to choose less variety as a means of signaling that they have stronger preferences for options in the category and to more strongly associate themselves with the qualities of those options.

In addition to shedding light on how people might choose from homogeneous choice-sets, this research makes a number of important contributions. First, we demonstrate the hitherto unexplored role of variety as a means of conveying information about the strength and self-relevance of one’s preferences. Second, whereas prior research on variety-seeking as a self-presentation instrument (Ariely and Levav 2000; Ratner and Kahn 2002) has shown that people unidirectionally choose more variety in response to self-presentation cues, to signal their open-
mindedness and interestingness, we demonstrate that people may sometimes use variety in the opposite direction and choose less variety, to signal strong, self-relevant preferences for options in the domain.

VARIETY AS A PREFERENCE STRENGTH SIGNAL

People’s choices are often driven by a desire to present themselves in a favorable light and to convey information, both to themselves and to others, about their identity, traits, and dispositions (Belk 1981; Berger and Heath 2007; Escalas and Bettman 2005; Richins 1994; Shavitt and Nelson 1999). For example, when people expect their choices to be visible or evaluated by others, they often make product choices that they believe are desirable in that particular social context (Belk 1988; Hsee 1999; Simonson and Nowlis 2000). Similarly, when situational influences cast doubt on a desirable self-view, people may choose products with relevant symbolic attributes in order to bolster or restore confidence in the shaken self-view (Briñol and Petty 2003; DeMarree, Petty, and Briñol 2007; Gao, Wheeler, and Shiv 2009).

One aspect of choice that people use to convey favorable information about themselves is the degree of variety they incorporate in their selections. Prior research has shown that people unidirectionally choose more variety when their choices are subject to public scrutiny in order to present themselves as more interesting (Ratner and Kahn 2002), expressive (Kim and Drolet 2003) or non-rigid (Drolet 2002).

However, lack of variety may reflect not only rigidness and dullness as general personality traits but also a consistent preference for specific options. We next review research in
related areas, suggesting that choice consistency may be associated with strong, self-related preferences and tends to lead to corresponding trait attributions about the decision maker.

First, repeatedly choosing specific options among many alternatives may reasonably be attributed to the ability to discern among options in the category (Calder and Burnkrant 1977), and thus to prior experience and expertise in the category (Alba and Hutchinson 1987). Experience and expertise, in turn, imply keenness toward the product category and an internalized sense of the category in the consumer’s self-concept (Bargh 1984; Finkelstein and Fishbach 2012; Kettle and Häubl 2011).

Similarly, research on attitude strength (Krosnick et al. 1993; Krosnick and Petty 1994) suggests that stable and consistent preferences tend to be more self-relevant and related to core values and beliefs (Krosnick 1988), more intense and extreme (Osgood and Tannenbaum 1955), and reflect greater knowledge, interest, and direct prior experience with the attitude object (Krosnick et al. 1993). Choosing little variety, which by definition represents preference consistency, is thus likely to be associated with stronger, more self-related attitudes. Stronger attitudes are also associated with greater affective-cognitive consistency (Chaiken and Baldwin 1981; Norman 1975), or the notion that one’s overall feelings toward an option represent their attitudes toward the option’s attributes. For example, having a consistent preference for Malbec wine is likely to reflect not only one’s attitude toward Malbec but also toward attributes such as robustness more generally.

Attribution theory (Kelley 1973) offers a complementary perspective on the relationship between choice consistency, perceived preference strength, and self-diagnosticity. One principle of attribution theory is that “a person is known by the behavior he displays consistently” (Kelley and Michela 1980, p. 465). Behavioral consistency across different situations (e.g., always
choosing Malbec wine) is thus more likely than behavioral inconsistency (i.e., choosing a variety of different wines) to lead observers to attribute the behavior to inner preferences and to make dispositional attributions about the consumer in line with the qualities of the selected options (Hayden and Mischel 1976; Himmelfarb 1972; Karaz and Perlman 1975).

In sum, choice of little variety is likely to be attributed to the decision maker’s prior experience in and enthusiasm for the product category. It is also more likely to lead observers to attribute salient qualities of options in the category to the decision maker’s inner traits. In contrast, a varied selection entails greater ambiguity and makes it more difficult for observers to come to a single interpretation of the evidence (Kelley 1973). Decades of research on variety seeking suggest that people often incorporate variety in their selection due to reasons which do not indicate strong preferences for specific options in the choice set, including preference uncertainty (Kahn and Lehmann 1991; Read and Loewenstein 1995), a desire to simplify the decision (Simonson 1990), conformity to social norms (Ratner and Kahn 2002), anticipated satiation (Redden 2008), and a desire to learn about unfamiliar options (Clarkson, Janiszewski, and Cinelli 2013).

Through their experience as both decision makers and observers, people may learn that a varied selection is often non-diagnostic, compared to a less varied selection, regarding one’s inner preferences and dispositions. An unanswered question is whether people actually rely on the association between less variety and stronger, more self-related preferences when trying to convey information through their choices.
THE CURRENT RESEARCH

We hypothesize that, when consumers are motivated to signal strong preferences for options in the domain and to associate themselves with the qualities of those options, they often choose less variety than when they are not motivated to convey such a signal. We predict that when consumers choose from a set in which all the options share the same socially desirable qualities (e.g., healthful snacks), they would choose less variety when relevant self-presentation cues are present (e.g., when health-consciousness is seen as socially-desirable) than when such cues are absent or when options in the choice set are perceived as socially undesirable.

We further predict that the effect of social desirability and self-presentation cues on choice of variety would be mediated by a desire to signal a strong, identity-related preference for options in the category, thereby associating the consumer with the salient traits of those options. Moreover, we predict that after choosing less variety, consumers would expect others to perceive them as having stronger, more self-related preferences.

Prior research suggests that the tendency to modify one’s choices in response to social desirability cues is associated with individual differences in self-monitoring (Snyder 1987). In particular, high self-monitors tend to modify the extent of variety they incorporate in their selections in response to social desirability cues more than low self-monitors (Ratner and Kahn 2002). Consistent with our conceptualization, we expect that the tendency to select less variety to signal strong preferences and self-relatedness would be stronger among high self-monitors than among low self-monitors.

We examine these hypotheses in five studies. Study 1 uses data from the field to show that consumers buy a less varied assortment of fine chocolates the more they perceive the
recipient to be a fine chocolate connoisseur. Study 2 examines a similar scenario in the lab and tests the mediating role of the desire to signal strong preferences and self-relevance. Study 3 shows that consumers who are motivated to bolster their sophisticated self-view choose a less varied assortment from a highbrow choice set. Moreover, choosing less variety actually increases self-perceptions of sophistication.

Note that our proposition does not entail that choosing less variety, by itself, is a socially desirable signal. Rather, we argue that people choose less variety to signal strong, identity-related preferences when they believe that such a signal is likely to reflect well on them. Therefore, our theory predicts that a self-presentation motivation should lead consumers to choose less variety among socially desirable options but not among socially undesirable options.

Study 4 supports this theorizing by showing that the tendency to choose less variety as a self-presentation tool is moderated by whether options in the assortment are socially desirable versus undesirable. Specifically, consumers who expect to be evaluated by health professionals choose less variety among healthful snacks but not among unhealthful snacks. Choosing less variety, in turn, leads consumers to expect others to perceive them as having stronger, more self-related preferences for options in the category.

Study 5 further tests our proposed account by directly manipulating the perceived social desirability of highbrow vs. lowbrow options. It shows that the tendency to choose less variety from a highbrow vs. lowbrow assortment reverses when lowbrow options are perceived as more socially-desirable than highbrow options.
STUDY 1: EVIDENCE FROM THE FIELD

A field study was conducted over one week among patrons of a Midwestern fine Belgian chocolate store, who indicated they were buying a box of chocolate truffles as a gift. We chose this domain because buying a chocolate gift box, by nature, is typically intended to please the recipient while reflecting favorably on the buyer. We expected buyers to choose a less varied assortment the more they perceived the recipient to be a fine chocolate connoisseur, namely, when displaying a passion for options in the domain was socially desirable.

Method

Forty four customers (mean age = 51; range 20-70; 66% women) completed a short survey in exchange for a $5 store coupon toward their next purchase. After completing their purchase, customers who bought a box of chocolate truffles as a gift were asked to indicate on a form the total number of truffles and the number of different types (i.e., flavors) they selected. We used this information to calculate a variety index for each participant by dividing the number of different types by the total number of units. The smallest box contained four truffles and the largest seventy two (average = 19.8). Our variety index ranged from .03 to 1.00 (average = 0.59). There were no price or quality differences among the different truffle options. Probing store staff confirmed that buyers selected the truffles by themselves.

Participants then rated the extent to which the recipient was a “fine chocolate expert”, to the best of their knowledge (1 = not at all; 7 = very much). We expected this measure to be negatively correlated with variety.
Participants also responded to several control variables (all on seven-point scales). To control for the possibility that assessments of recipient expertise were correlated with knowledge of the recipient’s idiosyncratic preferences in chocolate, participants rated how personally close they were to the recipient. Participants also rated their own level of expertise in fine chocolate and how frequently they bought fine chocolate (a behavioral measure of expertise). To ensure that a self-presentation motive was indeed present, participants rated how much they wanted to make a good impression and how much they believed the recipient liked fine chocolate.

Results and Discussion

All but three participants indicated that they believed the recipient liked fine chocolate ($M = 6.52, S.E. = .13$) and that they wanted to make a good impression ($M = 5.70, S.E. = .24$). The responses of three participants suggested that their purchasing decisions were not driven by a self-presentation motive and were consequently omitted from the analysis, leaving a valid sample of 41 participants. Including these three participants in the analysis does not significantly change the results.

Regressing variety on perceived recipient expertise revealed the predicted negative relationship: consumers selected less variety the more they perceived the recipient to be a fine chocolate expert ($\beta = -0.36, t = -2.4, p < .05$). This effect remained significant ($\beta = -0.41, t = -2.55, p < .01$) when we controlled for the closeness between the buyer and the recipient, as a proxy for preference familiarity, and for the buyer’s own level of expertise.

Using evidence from the field, Study 1 supports our key proposition and suggests that the effect of perceived social desirability and self-presentation motives on the tendency to select less
variety arises spontaneously, in naturally-occurring contexts. Consumers selected a less varied assortment when trying to impress a chocolate connoisseur than when the recipient was not perceived as a connoisseur. This effect does not appear to be driven by familiarity with the recipient’s preferences nor by own expertise.

Study 1 establishes the external validity of our prediction using correlational data. We designed the next studies to experimentally manipulate perceived social desirability and self-presentation motivation to examine the mechanism underlying this effect.

**STUDY 2: PROCESS MEASURES IN THE LAB**

Study 2 was designed to achieve three goals. First, we wanted to extend the findings of our field study to a lab setting using an experimental design. We predicted that participants would choose less variety among fine chocolate truffles when the recipient was framed as a fine chocolate connoisseur.

Second, we included process measures to directly demonstrate the mechanism underlying the effect. We predicted that the tendency to choose less variety would be mediated by a desire to be perceived as having strong, self-relevant preferences and prior experience in the category. In Study 2, we operationalize this as a desire to be perceived as a fine chocolate connoisseur, which implies passion for the product category and an internalized sense of the category in the consumer’s self-concept (Bargh 1984; Kettle and Häubl 2011). Third, we examined whether self-monitoring moderated our effect.
Method

Participants (N = 197; mean age = 25, range 18-59; 54% women) were university students who completed a study titled “choosing fine chocolate” for extra course credit. They were randomly assigned to one of two between-subject conditions (Recipient Framing: connoisseur vs. non-connoisseur). Participants were asked to take a few moments to think about a friend whose opinion was important to them. In the connoisseur condition, we told participants that their friend was a “serious fine chocolate connoisseur”. In the non-connoisseur condition we did not provide these additional instructions. To increase participants’ engagement in the task, we then asked them to list what they thought were three characteristic traits of their friend.

Next, we asked participants to imagine going to a Tuescher store (a prestigious brand of premium Swiss chocolate) to buy a box of gourmet chocolate truffles as a gift for their friend. We presented participants with a list of twenty two different truffle options (e.g., Champagne, Milk Buttercrunch, Irish Whiskey) and asked them to indicate the number of units they wanted to buy of each option. The total number of units was not limited. As in study 1, we calculated a variety index for each participant by dividing the number of different types by the total number of units. The average assortment contained 23.3 units and the average variety score was .45.

After making their selection, participants rated on seven-point scales the extent to which it was important to them to show that they were fine chocolate connoisseurs and that they had much prior experience in the fine chocolate category (combined to form an index, r = .62). We used these measures to test our hypothesis that the extent of variety participants selected was driven by the desire to signal a strong and identity-related preference for fine chocolate. Participants also rated the extent to which, based on the assortment they selected, the recipient
was likely to perceive them as fine chocolate connoisseurs. We used this additional measure to examine whether participants felt that their choice of variety would influence how the recipient perceived them.

Finally, after completing an unrelated filler task, participants responded to the 18-item self-monitoring scale (Snyder 1987) by responding “true” or “false to each item (e.g., “I guess I put on a show to impress or entertain others”). As recommended by Snyder (1987) and consistent with prior research on variety-seeking (Ratner and Kahn 2002), participants who endorsed more than ten items in the high self-monitoring direction were classified as high self-monitors (n = 113), whereas participants who endorsed ten items or less were classified as low self-monitors (n = 84). These proportions are consistent with those found in prior research.

Results and Discussion

A 2 (Recipient Framing: connoisseur vs. non-connoisseur) x 2 (Self-Monitoring: high vs. low) ANOVA on variety revealed the predicted main effect of recipient framing ($F(1, 193) = 6.39, p < .01$), such that participants selected less variety when buying for a fine chocolate connoisseur than for a non-connoisseur (.40 vs. .49). Moreover, this main effect of recipient framing was qualified by the predicted recipient framing x self-monitoring interaction ($F(1, 193) = 7.53, p < .01$). Specifically, it was pronounced among high self-monitors (.39 vs. .56; $F(1, 193) = 16.26, p < .001$) but not among low self-monitors (.42 vs. .41; $F(1, 193) < 1, ns$).

We next examined our mediated moderation hypothesis, according to which recipient framing influences variety through the desire to present oneself as a fine chocolate connoisseur, but only for high self-monitors. Our mediation analyses, here and in the following studies, relied
on the bootstrapping approach and SPSS macro that Hayes (2012) developed. Bootstrapping results with 5000 samples and a 95% confidence interval (in brackets) suggested that the indirect effect of recipient framing on variety, through the desire to be seen as a connoisseur, was significant among high self-monitors ($B = -.027, [-.069, -.004]$), but not among low self-monitors ($B = -.014, [-.017, .041]$). This confirms our moderated mediation hypothesis.

Finally, we examined whether participants felt that they have successfully portrayed themselves as fine chocolate connoisseurs to the recipient through their choice of variety. Specifically, we tested a mediated moderation hypothesis where recipient framing leads high self-monitors (but not low self-monitors) to select less variety, which in turn leads participants to expect the recipient to perceive them as chocolate connoisseurs. Bootstrapping results suggested that the indirect effect of recipient framing on participants’ belief regarding the recipient’s perception, through variety, was significant and positive among high self-monitors ($B = .22, [.041, .50]$), but not among low self-monitors ($B = -.009, [-.016, .11]$). This result suggests that high self-monitors felt they successfully signaled being chocolate connoisseurs through choice of less variety.

Taken together, these results bolster our prior findings in a controlled lab setting and provide important insights into the mechanism underlying the effect. Consistent with our hypotheses, participants selected a less varied assortment of gourmet truffles for a fine chocolate connoisseur than for a non-connoisseur. Consistent with our proposition that this effect reflects perceived social desirability, it was driven by the behavior of high self-monitors.

The results also show that the effect of recipient framing (connoisseur vs. non-connoisseur) on choice of variety was mediated by high self-monitors’ desire to portray
themselves as experienced chocolate connoisseurs. Moreover, choosing less variety actually led high self-monitors to believe that the recipient would perceive them as such.

**STUDY 3: (LESS) VARIETY AS A MEANS FOR BOLSTERING THE SELF-VIEW**

Study 3 has four goals. First, it extends our findings to another domain, namely, choice among highbrow movie options.

Second, study 3 was designed to bolster the mechanism underlying our effect by directly manipulating the internal motivation to convey favorable information about the self.

Third, it extends our prior findings by showing that variety is used not only as a signal to others but also to oneself. Prior research has shown that situational influences that cast doubt on a desirable self-view can lead people to attempt to restore confidence in the shaken self-view by choosing products with relevant symbolic attributes, such as choosing brands associated with intelligence to restore the intelligent self-view (Gao et al. 2009). Such symbolic consumption can sometimes help restore confidence in the self-view by providing direct evidence regarding one’s traits (Bem 1972; Campbell 1990; Pelham 1991).

But whereas prior research found that shaking the self-view impacts preference for different types of options (e.g., intelligent vs. unintelligent brands), we focus on whether shaking a self-view can lead people to select less vs. more variety among the same type of options. Specifically, we predict that casting doubt on people’s sophisticated self-view would lead them to incorporate less variety when choosing from a highbrow assortment, as a means of conveying strong and self-relevant preferences for such options and thereby providing evidence to
themselves regarding their sophistication. By directly manipulating the internal motivation to convey favorable information about the self, study 3 further bolsters our theory.

The fourth goal of study 3 is to examine the effectiveness of this behavior as a means of bolstering the self-view. We test whether choosing a small variety from a highbrow assortment actually bolsters the sophisticated self-view of people whose sophistication was doubted.

Method

Fifty Seven Mechanical Turk participants (mean age: 29, range 18 – 66; 37% females) were randomly assigned to one of two conditions (Sophistication Confidence Prime: confidence vs. doubt). We manipulated sophistication confidence versus doubt using a priming procedure validated in prior research (Gao et al. 2009; Petty, Briñol, and Tormala 2002). Participants were told that they were helping out with a research project on human experiences. They performed two short writing tasks which, together, primed them with either sophistication confidence or sophistication doubt. The first task was designed to create confidence (vs. doubt) at a general level. Participants were asked to describe two experiences in which they felt a great deal of confidence or certainty (vs. doubt or uncertainty). In the second task, all participants were asked to describe two experiences in which they felt sophisticated or classy. Based on prior research, we expected that participants would attribute the general confidence (or doubt) induced by the first task to their specific thoughts about being a sophisticated person in the second task (Gao et al. 2009; Petty et al. 2002). Thus, the first two tasks combined were used to prime people with either sophistication confidence or sophistication doubt.
After the priming task, participants rated how confident they were in being a sophisticated person and how confident they were in their thoughts about sophistication (1 = not at all confident; 7 = extremely confident; $r = .74$).

Next, participants completed a supposedly unrelated series of choice tasks. These included several filler choices unrelated to sophistication or variety (e.g., choosing a portable BBQ grill and selecting a flight), as well as the focal choice task in which they selected three items from a highbrow six-option set. In this focal choice task, participants were told that the researchers were interested in learning about their preferences in movies and read the following instructions: “Imagine you are browsing movies on Netflix (a DVD rental service). You want to order 3 movies to watch in the coming three weeks and you plan to watch one movie each week. You decided to search by “leading actor” and got the following list of actors (there are multiple different movies starring each actor). Please look at the list and indicate the number of movies you would order with each specified actor as the leading actor. You can order more than one movie with the same leading actor, in which case you will simply get different movies with that actor.” We focused on choice of actors rather than movies because people are unlikely to choose the same movie more than once.

Participants saw a list of the six highbrow actors described and pretested in the appendix. Consistent with prior research on variety-seeking (e.g., Simonson 1990), all the participants selected three items and we used the number of different options chosen (one, two or three) as a measure of variety.

After participants completed the choice task, we measured their sophisticated self-view again in order to examine whether the extent of variety selected was associated with a change in the sophisticated self-view. In what was described as an unrelated self-assessment task,
participants rated whether various personality traits (e.g., friendly, responsible, and polite) were characteristic of them (1 = not at all like me; 5 = just like me). Embedded in these traits was our target trait, “sophisticated”. Both the question phrasing and response scale were intentionally different from those used in the manipulation check, to minimize demand effects and mechanical replication of the previous responses. Debriefing revealed that none of the participants was aware of the relationship between the different tasks and that none of them thought the priming task influenced the choice task.

Results and Discussion

*Manipulation check.* Confirming our sophistication confidence manipulation, a one-way ANOVA showed that participants who wrote about uncertain or doubtful experiences were less confident that they were a sophisticated person and less confident in their thoughts about sophistication than those who wrote about certain or confident experiences (\(M_{\text{doubt}} = 4.32\) vs. \(M_{\text{confidence}} = 5.31\); \(F(1, 55) = 4.43, p < .05\) and \(M_{\text{doubt}} = 4.60\) vs. \(M_{\text{confidence}} = 5.50\); \(F(1, 55) = 4.70, p < .05\), respectively).

*Effect on variety selection.* We predicted that participants would choose less variety from a highbrow set following a sophistication doubt prime, because shaking the sophisticated self-view should motivate people to signal strong, self-relevant preferences for sophisticated options. Because the variety in participants’ choices was coded as 1, 2, or 3, we used ordinal logistic regression to analyze the results (Simonson 1990). The results were virtually unchanged when using ANOVA. As predicted, an ordinal regression analysis on variety revealed that participants chose less variety following the sophistication doubt prime than in the sophistication
confidence condition ($M_{doubt} = 2.03$ vs. $M_{confidence} = 2.50$; $\chi^2(1) = 5.18, p < .05$). These results support our suggestion that consumers incorporate less variety in their selections, in part, to express stronger and more self-relevant preferences. By casting doubt on their sophisticated self-view, we directly manipulated people’s motivation to express strong and self-related preferences for sophisticated options. Consequently, consumers chose less variety from an assortment of highbrow options when their sophisticated self-view had been cast in doubt.

Effect on Self-View Affirmation. The research by Gao et al. (2009) indicates that choice of symbolic products (e.g. sophisticated movies) can help restore a momentarily shaken self-view by providing direct evidence about one’s preferences. While our participants behaved as if they believed that choosing a less varied highbrow assortment would help them restore their shaken sophisticated self-view, an open question is whether this behavior actually helped them achieve this goal.

To assess changes in people’s self-view before and after the choice task, we first confirmed that none of the filler traits used in our after-choice self-assessment questionnaire was affected by confidence priming or assortment type (all $F < 1.5$, NS). Then, we standardized the before-choice measure of sophistication confidence and the post-choice measure of self-perceived sophistication. We regressed the difference between the standardized before-choice and after-choice self-perceived sophistication measures on confidence prime and variety selected. The analysis revealed a main effect of prime ($B = -3.28$, $t(53) = 3.85, p < .001$) and a main effect of variety selected ($B = -1.06$, $t(53) = 4.80, p < .001$), which were qualified by the predicted prime x variety interaction ($B = 1.16$, $t(53) = 3.31, p < .005$). See figure 1.

As predicted, choosing less variety among sophisticated options led to a positive boost in sophisticated self-view in the sophistication doubt prime condition ($B = -1.06$, $t(29) = 4.48, p <
In the sophistication confidence condition, choice of variety had no effect on self-view change ($B = .10, t(24) < 1, NS$). This finding is consistent with the notion that participants in this condition already felt confident in their sophistication and therefore had little to gain on this dimension from their choices.

Finally, we tested whether the effect of sophistication doubt on self-view change was mediated by variety. Bootstrapping results suggested that the indirect effect of sophistication doubt on self-view change through variety was significant ($B = .18, [.021, .484]$). Thus, not only did shaking participants’ sophisticated self-view led them to choose less variety among highbrow options, selecting less variety in turn actually boosted their sophisticated self-view.

STUDY 4: MODERATORS AND BOUNDARY CONDITIONS

Study 4 has three goals. First, it extends our findings to yet another domain (i.e., choice from healthful and unhealthful assortments). Second, our theory would predict that consumers should choose less variety when options in the assortment are seen as socially desirable (e.g., healthful options, in a social context in which health-consciousness is socially desirable), but not when options are seen as socially undesirable (e.g., unhealthful options in the same context) or when the options’ social desirability is not cued at all. Study 4 was designed to provide support for our theory by testing this prediction. We presented consumers with a choice set consisting of either healthful or unhealthful options, and made the social desirability of healthful consumption either salient or non-salient. Third, we included measures to examine whether choosing less
variety indeed leads consumers to expect others to perceive them as having stronger, more self-related preferences.

Method

Participants (N = 190; mean age = 25, range 18-45; 57% females) were college students who completed the experiment in exchange for course credit. They were randomly assigned to a condition in a 2 (Assortment Type: healthful vs. unhealthful) x 3 (Anticipated Evaluation: by nutritionists vs. by academics vs. control) between-subject design. Participants were told that the researchers were interested in learning about their preferences among different snacks.

We manipulated the perceived social desirability of healthful consumption using a method adapted from prior research, which showed that when people expect to be evaluated, they tend to choose options that present them in a positive light and are likely to be approved by the evaluators (Ratner and Khan 2002; Simonson and Nowlis 2000). To bolster our theory as discussed above and distinguish between social desirability of specific options and anticipated evaluation more generally, we manipulated the extent to which the alleged evaluators specifically endorsed healthful consumption. A separate pretest (reported in the appendix) indicated that participants believed nutritionists strongly endorsed healthful consumption whereas academics neither endorsed nor disapproved of healthful consumption. Based on this pretest, we told participants in the main experiment that their choice will later be evaluated either by nutritionists or by academics. In the control condition, evaluation was not mentioned. Based on the pretest, we expected the social desirability of healthful consumption to be salient in the nutritionists condition but not in the academics or control conditions.
Following the evaluation manipulation, participants received the following instructions: “Imagine you are grocery shopping and would like to buy snacks. The options listed below are all equally nutritious and are all priced between $0.50 - $2.50, which is well within your budget. Please enter the number of units you'd like to buy next to each option. You can pick more than one unit of the same type of snack, if you wish, and you can select any number of snacks”. We deliberately specified the same affordable price range in all conditions, to avoid a potential confound between healthfulness and cost, thereby ruling out any alternative explanation based on cost differences between healthful and unhealthful snacks.

Depending on assortment condition, participants selected items from either the healthful or the unhealthful snack assortment described and pretested in the appendix. Each assortment contained nine different options and participants could select any number of units. As in studies 1 and 2, we calculated a variety index for each participant by dividing the number of different types by the total number of units selected. The average selection contained 12.4 units and the average variety score was .51.

After making their selection, participants rated on seven-point scales the extent to which, based on their selection, someone would think they really liked options in the assortment, bought those options often, and had a lot of experience with those options (combined to form an index, $\alpha = .70$). We used this index to examine whether participants felt they successfully communicated what they intended through their choice of variety.
Results

A 2 (Assortment Type: healthful vs. unhealthful) x 3 (Anticipated Evaluation: nutritionists vs. academics vs. control) ANOVA on variety revealed the predicted assortment x evaluation interaction ($F(2, 184) = 13.94, p < .001$). See figure 2.

Planned contrasts show that, in the healthful assortment condition, expecting to be evaluated by nutritionists led participants to incorporate less variety in their selection ($M = .32$) than in either the control ($M = .50; t = 3.48, p < .005$) or the academics condition ($M = .45; t = 2.58, p < .05$). This finding bolsters our previous results and is consistent with the notion that consumers select less variety when options in the assortment are perceived as socially desirable. The academics condition was not different from the control ($t < 1$, ns).

Consistent with our theory, we did not observe the same pattern in the unhealthful assortment condition. Specifically, participants who expected to be evaluated by nutritionists selected more, rather than less, variety ($M = .71$) than those in either the control ($M = .52; t = -3.39, p < .005$) or the academics condition ($M = .54; t = -3.87, p < .001$). As we discuss below, this significant reversal in the unhealthful snacks condition is consistent with our theory, as well as with previous accounts of variety seeking such as diversification.

Finally, we examined whether participants felt that they have successfully conveyed information about their preference for (un)healthful options through their choice of variety. Specifically, we tested a moderated mediation hypothesis where anticipated evaluation by nutritionists and health professionals led participants to choose less variety in the healthful

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**Insert figure 2 about here**
condition, which in turn led them to expect others to perceive them as having stronger preferences for the healthful snacks, and more variety in the unhealthy condition, which in turn led participants to expect others to perceive them as having weaker preferences for the unhealthy snacks.

Bootstrapping results with 5000 samples confirmed this hypothesis. We coded the anticipated evaluation variable as 0 = control, 1 = academics, and 2 = nutritionists. Results held regardless of whether we included all three levels, 0 and 2 only, or 1 and 2 only. Specifically, in the healthful snacks condition, there was a significant positive indirect effect of anticipated evaluation on others’ expected perceptions, through variety ($B = .10, [0.022, 0.221]$). That is, anticipated evaluation had a negative effect on variety, and variety in turn had a negative effect on participants’ expectation that others would perceive them as having strong preferences. In the unhealthy snacks condition, there was a significant negative indirect effect of social desirability on others’ expected perceptions, through variety ($B = -.115, [-0.248, -0.031]$). That is, anticipated evaluation had a positive effect on variety, and variety in turn had a negative effect on participants’ expectation that others would perceive them as having strong preferences.

Discussion

The results of study 4 indicate that when the social desirability of healthful nutrition was salient (i.e., when participants expected their choices to be evaluated by nutritionists), participants chose less variety among healthful options, but not among unhealthy options. Namely, participants selectively chose less variety when signaling strong preferences for options in the assortment was socially desirable but not when it was socially undesirable. These findings
bolster our proposition that consumers use variety to signal preference strength and identity-relevance for socially desirable options. Moreover, our moderated mediation analysis shows that choosing less variety led consumers to expect others to infer they have stronger preferences.

When options in the assortment were socially undesirable (i.e., unhealthful), participants who expected to be evaluated by nutritionists chose more variety compared to the control and academics conditions. This finding is consistent with our theory, which would predict that when options in the assortment are socially undesirable, people should avoid signaling strong and self-relevant preferences by refraining from choosing less variety. Our mediation analysis supports this interpretation by showing that participants expected the increased variety to signal weaker preferences for unhealthful options. That said, increased choice of variety in the unhealthful assortment condition could also be due to an increased tendency to diversify (Read and Loewenstein 1995) when socially-desirable options are unavailable.

**STUDY 5: REVERSING PERCEIVED SOCIAL DESIRABILITY**

Study 5 had two goals. First, it further bolsters the process underlying our effect by manipulating the perceived social desirability of options in the assortment without changing the options themselves. We argue that our effect is driven by the perceived social desirability of options in the assortment. But because social desirability is context-dependent, the specific direction of the effect of a self-presentation motivation should depend on the extent to which options in the assortment are perceived as socially desirable in a particular context. For example, when buying an assortment of beers for a party, one may reasonably expect sophisticated craft beers – but not simple domestic beers – to be appreciated by a crowd of connoisseurs, whereas
the reverse may be expected for an audience with less presumptuous and more lowbrow preferences.

As in study 4, we used an anticipated evaluation paradigm, but this time we manipulated which assortment was seen as socially desirable versus undesirable by manipulating evaluator’s identity. We predicted that when consumers expect to be evaluated by others who prefer highbrow options, they would choose less variety among highbrow options but not among lowbrow options. However, when they expect to be evaluated by others who prefer lowbrow options, they would choose less variety among lowbrow options but not among highbrow options.

In addition to bolstering the mechanism, showing that the effect reverses depending on which type of options is perceived as socially desirable rules out a potential alternative explanation. One could argue that people have stronger underlying preferences for socially desirable options, which are simply amplified under anticipated evaluation. However, if the effect reverses as a function of reversing perceived social desirability then it cannot reflect underlying preferences.

Method

Three hundred undergraduate students (mean age = 21, range 18-29; 59% females) completed the experiment in exchange for course credit. They were randomly assigned to a condition in a 2 (Assortment Type: highbrow vs. lowbrow) x 3 (Evaluator Identity: faculty vs. students vs. none) between-subject design.
We first primed all the participants with the notion that faculty members preferred highbrow options whereas students preferred lowbrow options. Participants were asked to help the researchers evaluate an article, supposedly for use in future studies. The article discussed alleged findings regarding “differences in cultural preferences between undergraduate students and faculty members”. According to the article, undergraduate students’ favorites were the movies “The Hangover II” and “Zookeeper,” easy, entertaining books such as “The Twilight Series” by Stephenie Meyer and “The Blind Side” by Michael Lewis, and light magazines such as Cosmo, Sports Illustrated, and GQ. Faculty members’ favorites, on the other hand, included Roman Polanski’s “The Pianist” and Ingmar Bergman’s “Scenes from a Marriage,” historical and biographical books such as “The Immortal Life of Henrietta Lacks” by Rebecca Skloot and “The Original Argument: The Federalists’ Case for the Constitution” by Glenn Beck, and intellectual magazines such as The Economist, The New Yorker, and The New Republic. The article ended with the explicit conclusion that “undergraduate students seek undemanding fun experiences that offset their grueling academic life, while their professors appreciate more cultured or intellectual experiences.” A separate pretest confirmed that students from the same population who read the article believed that undergraduate students preferred light entertainment whereas faculty preferred intellectual works (5.38 on a 7-point scale where 1 = not at all agree, 4 = undecided, 7 = very much agree; significantly higher than the mid-point 4, $t(57) = 7.94, p < .001$), and agreed with the article’s conclusions regarding the differences between students and faculty (5.12; $t(57) = 5.93, p < .001$).

In the next stage of the study, participants were told that the researchers were interested in learning about their preferences in movies. Depending on experimental condition, one third of participants were told that faculty members would evaluate their choices; another third were told
that undergraduate students would evaluate their choices; and the last third served as a control condition and did not expect to be evaluated. Another pretest \((N = 30)\) indicated that undergraduate students perceived evaluation and approval of one’s choices by other students as equally important, in general, as evaluations by faculty members (both \(t(29) < 1.1, NS\)).

In the next screen, participants chose three movie DVDs among six options starring either highbrow or lowbrow actors. They received the same instructions as in study 3. Using DVDs enabled us to avoid confounding price and sophistication, because the DVD rental price is independent of its content. Depending on assortment type condition, participants saw a list of the six highbrow or six lowbrow actors described and pretested in the appendix. We used the number of different options chosen (one, two or three) as a measure of variety (all participants selected three items overall). Debriefing revealed that none of the participants was aware of the relationship between the different tasks and that none of them thought reading the article influenced variety in the choice task.

Results and Discussion

A 2 (Assortment Type: highbrow vs. lowbrow) x 3 (Evaluator Identity: faculty vs. students vs. none) ordinal regression analysis on variety revealed the predicted assortment x evaluation interaction \(\chi^2(1) = 35.90, p < .001\), with no main effects. See figure 3.

Consistent with our prediction, planned contrasts revealed that participants chose less variety among highbrow options when anticipating evaluation by faculty members, who allegedly endorsed highbrow options (2.18), than in the control condition (2.52; \(\chi^2(1) = 5.47, p < .05\)) or when anticipating evaluation by students (2.78; \(\chi^2(1) = 20.00, p < .001\)). Further, when
anticipating evaluation by faculty, participants chose less variety among highbrow options than among lowbrow options (2.18 vs. 2.79; $\chi^2(1) = 20.34, p < .001$).

In contrast, participants chose less variety among lowbrow options when anticipating evaluation by students, who allegedly endorsed lowbrow options (2.27), than in the control condition (2.58; $\chi^2(1) = 6.02, p < .05$) or when anticipating evaluation by faculty (2.79; $\chi^2(1) = 16.57, p < .001$). When anticipating evaluation by students, participants also chose less variety among lowbrow options than among highbrow options (2.27 vs. 2.78; $\chi^2(1) = 16.17, p < .001$).

Study 5 supports our hypothesis that people incorporate less variety in their choices to convey stronger, more self-related preferences for socially-desirable options. Further, the results support our mechanism by showing that the effect is driven by the social desirability of specific options and rule out an account based on underlying preferences. Participants chose less variety when options in the assortment were framed as socially-desirable, but not when the same options were framed as socially-undesirable. In fact, the tendency to select less variety reversed depending on the perceived social desirability of highbrow versus lowbrow options in different social contexts.

**GENERAL DISCUSSION**

The current research demonstrates that people may use the degree of variety in their choices as a means of conveying information about the strength of their preferences. Five studies show that people choose less variety when they are motivated to signal strong, self-relevant
preferences for options in the assortment and to associate themselves with the salient qualities of those options.

The studies underscore the generalizability of our findings by relying on both field (study 1) and lab studies (studies 2-5). They examine multiple product domains, such as gourmet chocolate (studies 1-2), movies (studies 3 and 5) and snacks (study 4), and utilize different social desirability and self-presentation cues, including recipient expertise (studies 1-2), shaken-self (study 3), and anticipated evaluation (studies 4-5). The studies examine both choice for others (studies 1-2) and oneself (studies 3-5), as well as different measures of variety.

Consistent with our theory, our participants chose less variety when our manipulations implied that expressing strong, identity-related preferences for options in the assortment was socially desirable, but not when it was socially undesirable (studies 4-5). The fact that the tendency to choose less variety reversed (study 5), depending on which options were presented as socially desirable versus undesirable, underscores the importance of context-dependent social desirability perceptions.

Study 2 provided direct mediation evidence by showing that people modify the degree of variety in their selections as a means of displaying enthusiasm for and expertise in the product domain, which implies a strong connection between the self-concept and the product domain (Bargh 1984; Finkelstein and Fishbach 2012; Kettle and Häubl 2011). Moreover, choosing less variety actually led participants to expect others to view them as connoisseurs in the category (studies 2 and 4) and to more strongly associate themselves with the salient qualities of options in the category (study 3). The fact that these effects were pronounced among high self-monitors but not among low self-monitors bolsters our proposition that they are driven by self-presentation motives.
Relation to Prior Research and Boundary Conditions

Our findings show that self-presentation cues, including anticipated evaluation, can lead people to choose less variety. However, prior research about effects of private vs. public consumption on variety seeking (Ratner and Kahn 2002) has shown that people sometimes choose more variety when expecting to be evaluated, in order to be seen as more open-minded, interesting, or less rigid (Drolet 2002). Consequently, one may wonder if our new findings contradict prior results.

We believe that our findings are not contradictory and, in fact, resonate with those prior accounts. A less-varied selection implies preference consistency, which may connote dullness and rigidity as a general personality trait as well as strongly held preferences for specific options. Indeed, being a “fanatic” devotee of a certain type of product (e.g., fine chocolate or Western films) may simultaneously implicate both monotonousness, which may be undesirable in certain circumstances, and strong, identity-related preferences. The two are not mutually exclusive.

The question, therefore, is not whether self-presentation cues lead to more or less variety as a main effect, but what specific social cues trigger a desire to signal open-mindedness (which would result in more variety) versus strong preferences (which would result in less variety). For example, Fishbach and Dhar (2008) have suggested that framing behavioral consistency in goal pursuit as “loyal” versus “boring” may decrease versus increase consistent behavior, respectively. Accordingly, our studies show that the tendency to choose more or less variety is not a generalizable main effect of anticipated evaluation but depends on the specific goal being cued (see also Ratner and Kahn 2002, Hypotheses 3 and 5). Thus, the current paper makes
another important contribution by demonstrating when and how self-presentation motives lead consumers to seek less versus more variety.

Marketing Implications

Consumers often find themselves choosing from choice sets in which all the options share the same socially-desirable or undesirable qualities. When buying drinks for a party, consumers may find themselves choosing among equally highbrow craft beers at a high-end liquor store or among equally lowbrow domestic beers at a convenience store. Depending on whether they expect the party to include snobbish connoisseurs or a crowd with more down-to-earth preferences, each of these assortments can be either socially-desirable or socially-undesirable.

Even when choice is not technically constrained, however, consumers may voluntarily focus on a relatively homogenous subset of options that matches their current goals, such as a particular quality or price tier (e.g., “chardonnay in the $25-$30 range”) or product type (e.g., a parent buying candies for a child’s birthday party). Depending on the social context, being associated with such options may be desirable (e.g., being perceived as a quality chardonnay enthusiast) or undesirable (e.g., being seen by other parents attending the child’s birthday party as a candy freak). Our findings suggest that in such cases, consumers may choose less variety to convey strong, self-related preferences (e.g., for wine). By the same token, the desire to avoid conveying strong preferences for socially-undesirable options (e.g., candy) may lead consumers to prefer a more varied selection.
Varied assortments may thus be less popular in categories with socially-desirable associations, such as wine, and more popular in domains with socially-undesirable traits, such as candies or soft drinks. Retailers may want to offer more variety-packs and smaller packages, which enable variety, in product categories with socially-undesirable associations than in categories with socially-desirable associations, especially when product selection or consumption is conspicuousness and the product is seen as identity-signaling (Berger and Heath 2007).

While we demonstrated the role of variety as a signaling tool using refined, un/healthful, and low/highbrow options, our propositions should apply to other product traits associated with social desirability. Our theory would predict that relevant social desirability cues should drive people to choose less variety among prestigious, environmentally-friendly, competent, efficient, or otherwise socially desirable options, than among options that are non-prestigious, environmentally-irresponsible, incompetent, wasteful, or otherwise socially undesirable.
APPENDIX

A PRETEST OF THE ASSORTMENTS USED IN STUDIES 3 – 5

<table>
<thead>
<tr>
<th>Snacks</th>
<th>Movies (Starring Actors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthful/ Highbrow</td>
<td></td>
</tr>
<tr>
<td>1. Fresh vegetable mix</td>
<td>1. Emma Thompson</td>
</tr>
<tr>
<td>2. Plain steamed corn on the cob</td>
<td>2. Geoffrey Rush</td>
</tr>
<tr>
<td>3. Fresh fruit salad</td>
<td>3. Meryl Streep</td>
</tr>
<tr>
<td>5. Banana</td>
<td>5. Kevin Spacey</td>
</tr>
<tr>
<td>7. Steamed soy beans</td>
<td></td>
</tr>
<tr>
<td>8. Low-fat yogurt</td>
<td></td>
</tr>
<tr>
<td>9. Tofu bites</td>
<td></td>
</tr>
<tr>
<td>Unhealthful/ Lowbrow</td>
<td></td>
</tr>
<tr>
<td>1. Pizza pie</td>
<td>1. Courteney Cox</td>
</tr>
<tr>
<td>2. Cheesecake</td>
<td>2. Cameron Diaz</td>
</tr>
<tr>
<td>3. Potato chips</td>
<td>3. Sacha Baron Cohen</td>
</tr>
<tr>
<td>4. Doughnut</td>
<td>4. Adam Sandler</td>
</tr>
<tr>
<td>5. Snickers bar</td>
<td>5. Jennifer Aniston</td>
</tr>
<tr>
<td>7. Marshmallow cupcake</td>
<td></td>
</tr>
<tr>
<td>8. Ice cream</td>
<td></td>
</tr>
<tr>
<td>9. Chocolate croissant</td>
<td></td>
</tr>
</tbody>
</table>

Fifty three participants rated each snack option on healthfulness (-3 = Extremely unhealthful; 0 = Neither healthful nor unhealthful; 3 = Extremely healthful) and each movie actor option on sophistication (-3 = Extremely lowbrow; 0 = Neither lowbrow nor highbrow; 3 = Extremely highbrow). The results indicated that every healthful and highbrow option was rated as significantly higher than 0 (all $M > 1.31$; all $t(52) > 6.84, p < 001$), whereas every unhealthful and lowbrow option was rated below 0 (all $M < -1.02; t(52) > 5.12, p < 001$). The options within each group were not significantly different from one another (all $F$’s < 1.7, NS).
One hundred one participants rated the extent to which nutritionists, health professionals, academics, and students were likely to endorse consumption of healthful snacks (1 = not at all likely, 4 = neither likely nor unlikely, 7 = highly likely). Nutritionists and health professional were rated as strongly endorsing healthful consumption (5.91 and 6.02, respectively, both highly significantly different from the neutral midpoint 4, both \( t(100) > 14.23, p < .001 \)), whereas academics and students were seen as neither likely nor unlikely to endorse healthful consumption (4.12 and 3.86, neither significantly different from 4, both \( t(100) < 1.1, \text{NS} \)).
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FIGURE 1
EFFECT OF HIGHBROW VARIETY SELECTED ON SELF-VIEW AFFIRMATION (STUDY 3)

* Self-view change defined as the difference between standardized pre-choice sophistication confidence and post-choice sophistication self-perception.

FIGURE 2
EFFECT OF ASSORTMENT TYPE AND ANTICIPATED EVALUATION ON VARIETY-SEEKING (STUDY 4)

Note: error bars represent one standard error above and below cell mean.
FIGURE 3
EFFECT OF ASSORTMENT TYPE AND SOCIAL DESIRABILITY ON VARIETY-SEEKING (STUDY 5)

Note: error bars represent one standard error above and below cell mean.