

Wanting a Bit(e) of Everything: Extending the Valuation Effect to Variety Seeking

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Markman and Brendl have demonstrated that individuals tend to regard as more valuable those objects that are able to satisfy an active desire. Building on their framework, we predicted that desire would enlarge the consideration set and, hence, affect variety-seeking tendencies in a product category. Our first study shows that hunger and visual food cues enhance variety seeking in food items. Further, by means of mediation analyses and a suppression manipulation (exposing participants to stale foods), we are able to show that this increase in variety-seeking results from an increased attractiveness in the food items. Our second study, where we generalize these findings by applying them to nonphysiological goals, produces evidence that the effect—the increase in variety seeking—is domain specific.

When you are hungry, do you include more variety in your food choices than when you are not? And when you really long for a break, do you prefer a more varied holiday trip than when you do not? Or do you, in both cases, stick to the familiar options that you are sure to like? Previous studies suggest that a hungry person values any item that is instrumental to his/her eating goal more than someone who is already satiated, or not hungry. Similarly, a person eager to go on holiday is certainly willing to pay more for a holiday ticket than a person who has no interest in taking

a vacation. However, it is still unclear whether the active goal affects the set of choices under consideration, including the options that satisfy the goal. That is, does the active goal affect people's tendency to seek variety?

Active goals guide consumer decision making (Alderson 1957), and recent research has highlighted their role in the value perception of choice alternatives (see Markman and Brendl [2000] for an expanded discussion). Specifically, people value objects to the extent that they are perceived as instrumental to the satisfaction of an active goal: food, for example, is considered more valuable by people who are hungry than by people who are not. Furthermore, active goals have been demonstrated to influence the way in which people process information. When choosing between different choice options, people focus their attention on attributes that are relevant to the active goal and ignore attributes that are not relevant to it. Moreover, choice processing focuses on information relevant to one goal at a time.

The present research builds on these findings in order to refine our understanding of the relationship between active goals and choice making by focusing especially on variety-seeking behavior. We argue that a goal-induced increase in the perceived value of the desired object class also enhances variety seeking within that object class. After a brief discussion of the literature, which will help us to describe the motivational forces activated by active goals, we go on to specify the process by which increased valuation may affect the association between a goal and one's favorite means of satisfying it, thus leading to increased variety seeking.

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HYPOTHESIS DEVELOPMENT

Goal Systems Theory

Markman and Brendl's study (2000) is grounded in goal systems theory (e.g., Kruglanski et al. 2002). The basic premise of this theory is that goals are motivational structures: they influence the way in which individuals evaluate the world around them. We screen objects in light of how instrumental they are to the satisfaction of our active goals. A soda from the refrigerator, a freshly made fruit juice, or a beer from the local pub are all instrumental to quenching my thirst, but a bowl of peanuts is not. Within this framework, studies have shown that an active goal increases the value of any object that is instrumental for its satisfaction (Markman and Brendl 2000). That is, objects that meet an active desire are valued higher than those that do not. This squares with another study, which shows that, compared to participants with low smoking needs, participants with high smoking needs perceived a cigarette as longer, a clear proxy for perceived value (Brendl, Markman, and Messner 2003). In this vein, too, hunger has been shown to increase the immediate desire for food (Loewenstein and Agner 2003), which in turn translates into more positive attitudes toward food items (Lozano, Crites, and Aikman 1999). In sum, previous studies suggest that an active goal increases the attractiveness of any and every means able of satisfying it. This effect has been named "the valuation effect."

Goals, Means, and Choice Making

The implications of the valuation effect for explorative behavior have received little attention to date. Because an active goal values any item that may meet the desired end state, a larger number of items are thought to be satisfying, including those that one would avoid in the absence of a particular desire. Even if ice tea is not one's favorite soft drink, one may still find it acceptable if one is parched. Similarly, even if the desert is not one's dream holiday destination, it might still pass the threshold of selection when one really needs a break. This seems to imply that less desirable options may enter the consideration set when it happens to satisfy an active goal.

Fishbach, Shah, and Kruglanski (2004) found that simply adding alternatives that also serve as means for the satisfaction of a particular goal dilutes the degree of association between the goal and any given means to reach the goal. We expect that a desire-induced increase in the attractiveness of the desired object class will not only increase the number of satisfactory alternatives but also weaken the degree of association between a desire and one's favorite means of satisfying it. We further expect that this weakened association will lead desiring consumers to be less faithful to their absolute favorites and more willing to consider a larger number of alternatives. The expected increase in variety seeking is consistent with findings that food deprivation is partly responsible for more purchases of unplanned food items (Gilbert, Gill, and Wilson 2002).

In line with the ideas just presented, this research examines how active goals influence variety seeking in the desired object class. In the effort to test the argument that desire renders a greater number of objects more attractive, thus weakening the relationship between the desire and one's favorite means of satisfying it, we conducted a pilot study and two experimental studies in which we tried to show that desire encourages consumers to seek variety in the products of the desired object class. In study 1, mediation analyses and a suppression manipulation (exposing participants to stale food) show that an increase in variety-seeking results from an increase in the attractiveness of items that meet the desire. In study 2, we generalize our findings and apply them to another physiological desire (thirst), as well as to a nonphysiological desire (the desire to go on holiday). Finally, we provide evidence for the domain specificity of the desire effect.

PILOT STUDY

In a pilot study, we explicitly tested our assumption that an active desire increases the number of items regarded as satisfying in the desired object class. Ninety-six hungry versus satiated participants were shown 28 pictures of snacks (for a more detailed description of the hunger manipulation, see study 1). After seeing each picture, the participants had to decide as quickly as possible whether they liked the represented snack or not by pushing a green button (liking) or a red button (not liking). The results indicate that, as expected, participants in the hungry condition liked more food items ($M_{\text{hun.}} = 19.3$) than did participants in the satiated condition ($M_{\text{sat.}} = 17.5$; $F(1, 93) = 3.96, p < .05$). That is, participants in the hungry condition rated a larger number of items satisfactory than did participants in the satiated condition. This bears out our assumption that in desiring conditions, more items capable of meeting the goal are considered as satisfying. Therefore, as outlined above, we expect an active desire to weaken the degree of association between a desire and one's favorite means of satisfying it. We tested this hypothesis in study 1.

STUDY 1

The primary objective of study 1 was to examine the effect of hunger on variety-seeking behavior in food items. To that end, we asked hungry versus satiated participants to choose five sandwiches from a set of eight for their lunch for the coming week. Variety seeking was measured through the number of different sandwiches participants ordered. Our second objective was to illustrate that a change in attractiveness plays a crucial role in the underlying process that links desire to variety seeking. As explained above, we expect variety seeking to increase only when there is an increase in the perceived value of the sandwiches. Therefore, we measured sandwich attractiveness and tested whether it mediated the effect of desire on variety seeking. To enable an additional test of the mediating effect of attractiveness, we also manipulated sandwich attractiveness by placing a plate of sandwiches in the laboratory. An earlier study (Lam-

bert and Neal 1992) has already shown that seeing a food stimulus has a positive effect on consumers' food attitudes. For our study, however, we chose to display sandwiches that were about 2 days old. In a pretest ($n = 63$), we found that a plate of stale sandwiches as a food cue increased the perceived value of sandwiches for low-disgust-sensitive people and decreased it for high-disgust-sensitive people. Thus, the stale sandwiches stimulus offers a suitable test problem for our research hypothesis on the crucial role of food attractiveness in the effect of hunger on variety seeking. When our hypothesis is correct, we would expect this stimulus to eliminate the hunger effect for disgust-sensitive participants. In the pilot study, conversely, we found that showing stale sandwiches did not affect the participants' feelings of hunger.

Participants

One hundred and twenty-four students (55 men, 69 women) at regional colleges participated in the 60-minute laboratory session in exchange for course credit.

Design

We used a $2 \times 2 \times 2$ between-subjects design (hunger \times presence \times disgust sensitivity). We manipulated the hunger state by asking all participants not to eat within 4 hours of the experiment and not to drink anything other than tea, coffee, or water. To facilitate compliance, we organized the sessions just before lunchtime (i.e., between 11:30 a.m. and 12:30 p.m.) and just before dinnertime (between 4:30 p.m. and 5:30 p.m.). During the experiment, all participants in the satiated condition were offered a big piece of cake, which they had to eat in its entirety. We also manipulated food attractiveness by placing a plate of stale sandwiches in the laboratory room. And finally, we measured disgust sensitivity, dichotomized it, and included it as an independent variable in the analyses. Since an earlier study (Haidt, McCauley, and Rozin 1993) had found a correlation between gender and disgust sensitivity, we included the participants' gender as a control variable in all the analyses.

Materials and Procedure

In the laboratory, we informed the participants that they were to take part in a taste test, and we asked them to hold a small "clinistick" in their mouth while they were filling out the introductory form, which included questions about the time of their last meal. In an attempt to encourage participants to complete the "last meal" question truthfully, we told them that the stick, in fact a glucose stick, was supposed to give an indication of the time passed since their last meal. After completing this introductory form, participants in the satiated condition were given a piece of cake, supposedly as part of a cake taste test. The cake was described as a healthy, newly concocted product from a well-known sandwich bar in the area. The taste test consisted of 20 questions with reference to the taste, color, structure, and healthiness of the cake. Since it takes about 20 minutes before the

sensation of abstinence fades (Guyton 1971), participants were subsequently given filler tasks to occupy them for that period of time. Participants in the hungry condition performed the same tasks, except for the taste test.

Once the filler tasks had been completed, the participants in the presence condition were asked to approach the experimenter table under the pretext of an unrelated task. Lying on the table there was a plate with sandwiches that not only looked stale but also smelled bad. The sandwiches were messily thrown together on the plate, alongside of which there were some dirty coffee cups and napkins to give the participant the impression that the experimenters had forgotten to clean up their lunch from a few days before. It was impossible for the participants not to notice the plate of sandwiches while the experimenter checked their task. Participants in the no presence condition were not asked to approach the table and hence were not exposed to the stale sandwiches. Afterward, the participants were asked to complete a "catering form," which they were led to believe had been distributed by the college catering service. The form measured personal liking for various food items (including sandwiches) and beverages on a five-point scale. After some filler tasks, participants completed the disgust scale. This scale measured individual differences in disgust sensitivity ($\alpha = 0.72$). It contained 20 relevant items from the disgust scale developed by Haidt et al. (1993). Finally, at the end of the experiment, we introduced an additional reward for participating: we told the participants that a well-known local sandwich bar had agreed to award free sandwiches to winning participants during the week following the experiment. To win, the participants had to indicate which sandwich (cheese, ham, crab, salmon, tuna, potato, bacon, or mozzarella) they would like on each day of the upcoming workweek. Each participant had to make five choices. In the presence condition the contest forms were placed on the table with the stale sandwiches, while in the no presence condition the table was empty.

Results

Variety Seeking. We measured variety seeking through the number of different sandwiches participants ordered on the contest form. One person failed to complete this form. Preliminary analyses showed that the presence of the sandwiches did not have an effect on disgust sensitivity ($F(1, 121) = 0.87$, NS). To facilitate the interpretation of our results, we performed a median split on the disgust sensitivity measure. After deleting three outliers (2.4%), an ANOVA revealed a significant hunger \times presence \times disgust sensitivity interaction ($F(1, 111) = 4.21$, $p < .05$).¹

¹Based on the attractiveness ratings of the sandwiches and the variety-seeking measure, a Mahalanobis distance (a generalized distance measure that takes into account the correlations between the different variables on which it is based) was calculated for each participant to determine the outlying participants. This Mahalanobis distance follows a chi-square distribution, in this case with one degree of freedom. All participants with a distance higher than the .990 fractile were considered outliers. This led to the identification of three participants as outliers.

To gain better insight into the three-way interaction, we looked at the effect of hunger and presence in the low- and high-disgust group separately (see fig. 1). In the low-disgust group, we found the two main effects we had expected: hungry participants ($M_{\text{hun.}} = 3.54$) chose more variety than satiated participants ($M_{\text{sat.}} = 3.22$, $F(1, 111) = 3.01$, $p = .08$), and the presence of the sandwiches increased variety seeking ($M_{\text{not pres.}} = 2.88$, $M_{\text{pres.}} = 3.91$; $F(1, 111) = 11.44$, $p < .001$). The interaction of hunger and presence was not significant ($F(1, 111) = 0.30$, NS). Conversely, in the high-disgust group, we obtained a two-way interaction between hunger and presence ($F(1, 111) = 5.35$, $p < .03$). In the no presence condition, the hunger effect was replicated ($F(1, 111) = 6.74$, $p < .02$): hungry participants ($M_{\text{hun.}} = 3.60$) chose more variety than satiated participants ($M_{\text{sat.}} = 2.33$). However, in the presence condition, no hunger effect was obtained ($M_{\text{hun.}} = 2.80$, $M_{\text{sat.}} = 3.03$; $F(1, 111) = 0.65$, NS), suggesting that the presence of the stale sandwiches eliminated the hunger effect in disgust-sensitive participants.

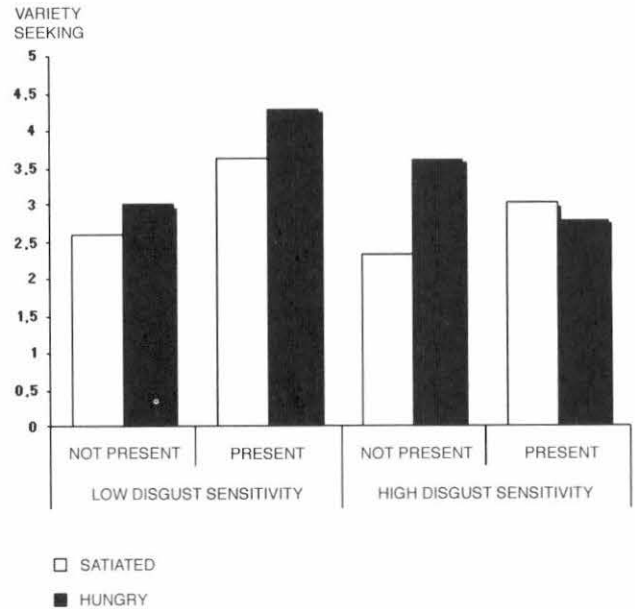
Food Attractiveness Ratings. To test our hypothesis about the crucial role of food attractiveness, we looked at the effect of the sandwich presence on the attractiveness ratings of the sandwiches. The same three-way (hunger \times presence \times disgust sensitivity) ANOVA was performed on the participants' mean attractiveness ratings of the sandwiches. We measured these using the catering form in which the participants were asked to rate eight types of sandwiches. The overall three-way interaction was significant ($F(1, 112) = 4.29$, $p < .05$). Moreover, the close relationship between attractiveness and variety seeking was suggested by the means, which display a similar pattern for the sandwich ratings and for the variety-seeking measures (see fig. 2).

In the low-disgust group, hunger ($M_{\text{hun.}} = 3.39$, $M_{\text{sat.}} = 2.82$; $F(1, 112) = 12.38$, $p < .001$) as well as presence ($M_{\text{pres.}} = 3.35$, $M_{\text{not pres.}} = 2.88$; $F(1, 112) = 10.73$, $p < .01$) increased the sandwich ratings. As expected, the interaction of hunger and presence was not significant ($F(1, 112) = 0.44$, NS). In contrast, in the high-disgust group we obtained a significant interaction between presence and hunger ($F(1, 109) = 5.33$, $p < .03$). Hunger, again, increased food attractiveness in the no presence condition ($F(1, 112) = 4.65$, $p < .04$; $M_{\text{hun.}} = 3.21$, $M_{\text{sat.}} = 2.61$) but not in the presence condition ($M_{\text{hun.}} = 2.42$, $M_{\text{sat.}} = 2.66$; $F(1, 112) = 0.65$, NS).

Mediation by Attractiveness. As a preliminary check of the mediating effect of attractiveness, we included the average sandwich attractiveness ratings as a covariate in the ANCOVA analysis of variety seeking. This weakened the hunger \times presence \times disgust sensitivity interaction ($F(1, 110) = 1.39$, NS), reducing the mean squares (MS) for this effect by 63%, while the effect of attractiveness on variety seeking was highly significant ($F(1, 110) = 51.87$,

FIGURE 1

HUNGER \times PRESENCE \times DISGUST SENSITIVITY INTERACTION ON VARIETY SEEKING (STUDY 1)



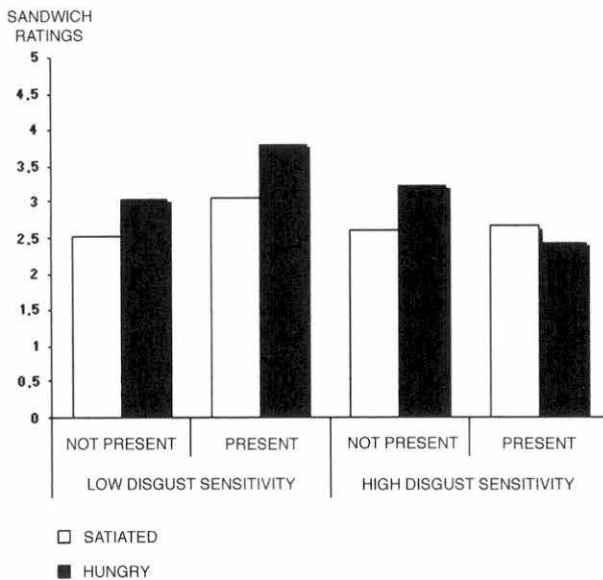
$p < .001$).² In the no presence condition, a Sobel test (cf. Baron and Kenny 1986) indicated that the effect of hunger on variety seeking was significantly mediated by its effect on sandwich attractiveness ($Z = 2.36$, $p < .02$). In the presence condition, we found this mediation to be moderated by disgust, such that the indirect effect was stronger in participants with low-disgust sensitivity than in high-disgust sensitivity participants (cf. Preacher, Rucker, and Hayes 2005).

Discussion

The results of the first study show, in sum, that hunger enhances variety seeking in food items: hungry consumers opt for a more varied food set than satiated ones. Also, and consistent with goal systems theory, we found that an active desire increases the perceived value of food items. That is to say, hungry participants, not surprisingly, saw food as instrumental to their active goal. Moreover, we found two indications that an increase in food attractiveness plays a crucial role in how hunger affects variety seeking. First, when statistically controlling for the increase in food attractiveness by means of a mediation analysis, the effect of hunger on variety seeking in food disappears. Second, hunger does not increase variety seeking when the presence of stale food eliminates the increase in attitudes that typically accompanies hunger/hungry states. Therefore, the increase

²We report the percent reduction of the MSs of the mediated effect because, in ANCOVA, the changes in the magnitude of the experimental effect (ω^2) reflect also changes in the MS error, which are unrelated to the experimental factor of interest (Pham and Muthukrishnan 2002).

FIGURE 2
 HUNGER \times PRESENCE \times DISGUST SENSITIVITY
 INTERACTION ON SANDWICH RATINGS (STUDY 1)



in the perceived value of the desired object seems to be a necessary condition for hunger to have an effect on variety seeking.

These findings are consistent with our hypothesis: when the perceived value of the desired object increases, the number of alternatives considered satisfying for a certain desire increases also (cf. pilot study). We have also shown that this number is inversely related to the degree of association between a desire and one's favorite means of satisfying it (Fishbach et al. 2004). This implies that when the increase in perceived value of the object class is eliminated from the experiment, the number of alternatives that satisfy the goal remains unaffected, so that the likelihood that one will choose one's favorite also does not change. The pattern of results for the presence condition of the high-disgust group bears out this line of reasoning: we suggest that high-disgust participants did not perceive the stale sandwiches as instrumental to the satisfaction of their active goal, and this explains why there was no increase in the perceived value of the sandwiches. Consequently, there was no change in variety-seeking behavior. We can conclude, then, that an increase in the perceived value of objects (e.g., when these objects are considered as instrumental to the satisfaction of an active goal) is a crucial factor in the disruption of the relationship between an active goal and one's favorite choice options and is thus a crucial factor in increasing the likelihood of variety seeking.

In sum, these findings extend the valuation effect in an important way. That is, the results show that the goal-induced increase in the perceived value of items that are instrumental to an active desire—as discussed by Markman and Brendl (2000)—is able to increase the number of items

that are considered as satisfying, by which variety seeking in the desired object class is stimulated. Therefore, active goals influence not only the value perception of objects but also the set of choices under consideration.

STUDY 2

The objective of the second study was twofold. The first thing we wanted to do was to generalize the hunger effect to another physiological desire, namely, thirst, and also to a nonphysiological desire, namely, the desire to go on holiday. Since subjective reports indicate that the experience of desire is qualitatively similar across a range of targets (May et al. 2004), we expected the valuation effect on variety seeking to hold for different kinds of desires. The second goal was to test out a further implication of Markman and Brendl's (2000) model, namely, the domain specificity of the valuation effect. We proposed that an active desire enhances variety seeking because of an increase in the perceived value of the means instrumental to the satisfaction of the active goal, and this suggests that an active goal increases only the value of objects that are instrumental to achieving the desired state but not that of other objects in the environment. As a result, we expect desire to increase variety seeking only within the choice sets composed of items that are feasible means to satisfying the specific goal. In this study, we approached consumers who are thirsty (at the exit of a fitness center) and consumers eager to go on holiday (at a travel agency) to test whether they prefer, respectively, more variety in their drinks and in their holiday activities, as compared to consumers who are not particularly thirsty (at a travel agency) or not particularly eager to go on holiday (at a fitness center). We also measured the attractiveness of several drinks and holiday activities to validate the mediating role of attractiveness in these two other domains.

Participants

Participants ($n = 137$; 71 men, 66 women; age ranging from 16 to 69 years old) were recruited at various hours of the day and days of the week at a local travel agency and at the exit of a local fitness center. To make both groups comparable, we prescreened them based on two criteria: frequent visits to one or more sport centers and the use of a travel agency to organize their holidays. We presented the survey as a "general survey on consumer behavior," and we told participants that by participating they would have the chance to enter their names into a competition where they could allegedly win a free trip to Sri Lanka or a gift basket filled with exotic fruit and fruit juice.

Design

In this study we used a 2×2 between-subjects design. We interviewed approximately half of the participants as they were leaving a local fitness center (fitness condition, $n = 65$) and the other half at a travel agency (travel con-

dition, $n = 72$). We chose these locations because after working out people are generally thirstier than they are on average, and because customers at a travel agency feel a higher than average desire to go on a holiday. In each setting half of the participants were interviewed about their consumption of different types of fruit juice (drinks condition) while the other half were asked questions about their holiday activities (holiday activities condition).

Materials and Procedure

We approached the participants and asked them to complete a short survey on consumer behavior that contained demographic questions; depending on the version (drinks vs. holiday activities), we also asked them to rate their personal liking for several fruit juices (apple, orange, apple-cherry, lemon, passion fruit, mango, peach, and strawberry) or for holiday activity categories (beach, nature, sports, and culture) on a five-point scale. We also asked them, in both surveys, to indicate on a five-point scale how thirsty they felt and how eager they were to go on holiday at that exact moment. After completing the survey forms, the participants were rewarded for their participation with the chance to enter a contest. The alleged first prize depended on the version: in the drinks version, participants could win a gift basket filled with exotic fruit and six bottles of fruit juice. On the contest form, they had to indicate which types of juice they would like, choosing six out of eight flavors (apple, orange, apple-cherry, lemon, passion fruit, mango, peach, and strawberry). In the holiday activities version, participants were told that they could win a free trip to Sri Lanka, including plane tickets, accommodation, and four activities. They could indicate on the contest form which activities they preferred, choosing four out of 16 (four beach activities, four nature excursions, four sports activities, and four cultural activities). Three participants who had already been to Sri Lanka were discarded from further analysis.

Results

Manipulation Checks. As expected, participants in the fitness group rated themselves as thirstier ($M_{\text{fit.}} = 3.95$) than did participants in the travel group ($M_{\text{trav.}} = 3.13$; $F(1, 135) = 15.61$, $p < .01$). Also, participants in the travel group showed a greater desire to go on holiday ($M_{\text{trav.}} = 4.48$) than did participants in the fitness group ($M_{\text{fit.}} = 4.11$; $F(1, 135) = 4.28$, $p = .04$).

Variety Seeking. We measured variety seeking by counting the number of different options that participants checked on the contest form. In the drinks version, this was the number of different fruit juices chosen. The results supported the prediction that thirsty participants ($M_{\text{fit.}} = 4.82$) sought more variety in their drinks than nonthirsty participants ($M_{\text{trav.}} = 3.74$; $F(1, 63) = 13.45$, $p = .001$). In the holiday activities version, we measured variety seeking by the number of different activity categories chosen. The data revealed a main effect of holiday desire on variety seeking in

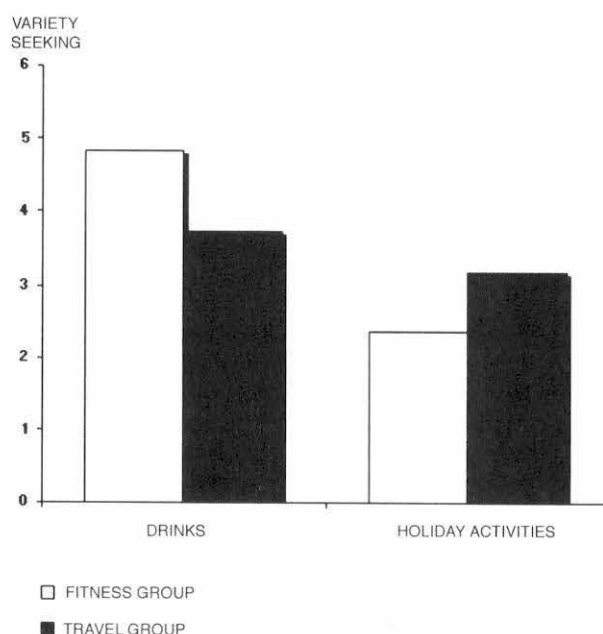
holiday activities ($M_{\text{trav.}} = 3.18$, $M_{\text{fit.}} = 2.37$; $F(1, 67) = 11.59$, $p = .001$). It may seem possible to explain this last result by appealing to the dissimilar preferences for sports activities in the members of the fitness group as compared with those in the travel group: possibly the former selected more sports activities, thereby suppressing the expression of any variety-seeking tendency. However, no such differences were obtained. Participants in the fitness group ($M_{\text{fit.}} = 1.27$) did not reliably opt more for sports activities than did participants in the travel group ($M_{\text{trav.}} = 1.03$; $F(1, 67) = 1.25$, NS). We can, then, conclude that desire increases variety seeking in the desired object class (see fig. 3).

Mediation by Attractiveness. In the drinks version, participants leaving the fitness center found the different fruit juices significantly more attractive than participants in the travel agency ($M_{\text{fit.}} = 3.51$, $M_{\text{trav.}} = 3.08$; $F(1, 63) = 4.23$, $p = .04$). Moreover, we found that including each participant's mean attractiveness ratings in the analysis reduced the main effect of the version on variety seeking in drinks ($F(1, 62) = 8.55$, $p = .005$), reducing the *MS* for this effect by 50.5%, while the effect of the mean attractiveness was significant ($F(1, 62) = 20.80$, $p < .01$). Although the Sobel test was only marginally significant ($Z = 1.84$, $p = .066$), the bootstrapped estimate of the indirect effect was quite significant, with 95% confidence (Preacher and Hayes 2004). The increased attractiveness of the drinks, in other words, appears partially responsible for the increase in variety seeking.

In the holiday activities version, participants in the travel

FIGURE 3

EFFECT OF THIRST AND HOLIDAY DESIRE ON VARIETY SEEKING (STUDY 2)



group ($M_{\text{trav.}} = 3.76$) rated the four activity categories as more attractive than did participants in the fitness group ($M_{\text{fit.}} = 3.12$; $F(1,67) = 11.34$, $p < .01$). Including each participant's mean activity category attractiveness rating in the analysis reduced the main effect of holiday desire on variety seeking in holiday activity categories ($F(1,66) = 3.56$, $p > .05$), reducing the *MS* for this effect by 75.8%, while the effect of the mean attractiveness was significant ($F(1,66) = 19.05$, $p < .01$). The Sobel test confirmed the mediating role of attractiveness ($Z = 2.62$, $p < .01$). Thus, we again found that the increase in the attractiveness of the desired object was largely responsible for the increase in variety seeking.

Discussion

The design of the second study enabled us to evaluate the generality of the effect as well as its domain specificity. We found that desire does seem to increase variety seeking in domains other than food, but only when the objects to choose from are relevant to the specific desire. The participants in the fitness group opted for a more varied set of drinks than did the participants in the travel group; the latter, however, chose a more varied activities package than did the participants in the fitness group. These findings bear out our hypothesis: drinks are instrumental to the active desire of the fitness group but not to the active desire of the travel group, for whom, conversely, travel activities are much more valuable because they are instrumental to their desire for a nice vacation. This increase in attractiveness translates into an increase in variety seeking. For example, someone longing for a break may find the idea of horseback riding on the beach very attractive, even though he/she normally does not like doing sports while on holiday. Thus, because of an increase in the value of any and all means of reaching the desired goal, the chronic relationship between a goal and one's favorite means is diluted. Consequently, objects that would normally not be seriously considered might still make it into the set of potential choices. In other words, this study shows, again, that desire is able to increase variety seeking because it increases the value of the items that can satisfy the desire.

Equally important, however, the second experiment shows that the hunger effect found in the first experiment can be generalized to other types of physiological desire, like thirst, and even to nonphysiological desires, like the desire for a holiday.

GENERAL DISCUSSION

Although desire is the motivating force behind much of contemporary consumption, it is rarely mentioned in the literature on consumer behavior (Belk, Ger, and Askegaard 2003). The focus of prior studies, like that of Markman and Brendl (2000), has been primarily on how active goals can influence the perceived value of objects in our environment. Using their findings as our starting point, we went on to show how this increase in value can enhance variety-seeking

tendencies. Our hypothesis joins two different ideas. The first is the idea that an active desire increases the perceived value of the desired object class—this follows directly from Markman and Brendl's research about active goals. The two studies we used to test this assertion showed that hungry participants rated food options higher than did satiated participants, that thirsty participants valued drinks higher than did nonthirsty participants; and that participants eager to go on holiday rated travel activities as more attractive than did indifferent participants. The second is the idea that this increase in perceived value can influence variety-seeking tendencies. Our results support the notion that an active desire increases the value of any item that may satisfy the desire: because of a particular desire, a larger number of items may be considered satisfactory than they would in the absence of that particular desire. Consistent with Fishbach et al. (2004), we argue that this increase in the number of satisfactory items dilutes the strong relationship between a desire and one's favorite means of satisfying it. In two of our studies, we found evidence that hungry participants opted for more variety in their food choices, that thirsty participants liked a more varied set of drinks, and that participants eager to go on holiday preferred a more varied list of travel activities. Moreover, we found that the increased interest shown toward items that are instrumental to the active desire plays a mediating role in this process and, more important, is a necessary condition for the effect to occur. When the increase in the perceived value of the desired object class is suppressed (study 1), the existing relationship between the desire and one's favorite means of reaching it remains stable and the variety-seeking behavior unaltered.

In the second study, we were able to replicate these findings, but in other domains. That is to say, we tested, in a real-life setting, the domain specificity of the effect of desire on variety seeking. What we found in this study is that an active desire only increases variety seeking when consumers choose between items that are instrumental to achieving the desired state. That is, while participants in the fitness group opted for a more varied set of drinks, participants in the travel group chose a more varied activities package. Furthermore, our second study also indicates that the effect of desire on variety seeking is not limited to physiological desires like hunger and thirst but extends also to nonphysiological desires, such as the desire to go on holiday.

LIMITATIONS AND FUTURE RESEARCH

Research on desire has important implications for theory and for consumers, but it is inherently difficult to study. People do not seem able, mentally, to simulate motivational states, primarily because goal activation is simultaneously, and subtly, influenced by situational cues (e.g., seeing food, dinner time) and by changes in internal states (e.g., increased heartbeat) that are hard for people to simulate (Markman and Brendl 2000). And that is why, in order to examine the effects of active goals in a context that is realistic, we opted for a quasi-experimental design in study 2. We are aware, however, that using this externally valid methodology comes

at a price. Although we prescreened the two groups based on the frequency of their visits to sport centers and their use of travel agencies, we were not able to control for other possible factors (other than experimental factors) that might be different between these conditions. We acknowledge that factors such as income, adventurousness, ability to travel, and so forth may have varied among participants.

With a little reflection, we see that there is a possible alternative explanation to the role of affective correlates (e.g., general excitement) in the effect of desire on variety-seeking: hungry participants with low-disgust sensitivity may perhaps get excited by seeing the old sandwiches and, as a result, choose more variety. Similarly, it cannot be ruled out that participants in the travel group are excited after choosing a holiday destination, and this may cause them to choose more variety in their travel activities. Plausible as this sounds, there are two factors that cast doubt on this explanation. First of all, it is not consistent with the results of the second study, in which we showed the domain specificity of the effect: although people in the travel agency chose more variety in their travel activities, they opted for a less varied drinks set than did participants in the fitness group. We suggest that this pattern of data supports the view that the effect of desire on variety seeking is more a consequence of specific motivational forces than of affective correlates such as general excitement. Second, and this is consistent with previous research (Ferguson and Bargh 2004), the pilot study ($n = 96$), in which we showed hungry versus satiated participants pictures of snacks, did not show a significant effect of desire on excitement or affect.

There are several questions still open and in need of future research. One may wonder whether our findings would hold in situations of extreme excitement or in pleasurable/aversive experiences. Excitement has been shown to decrease variety seeking (Menon and Kahn 1995, 2002), so that if the desire is too strong, it may have a generalized negative effect on variety seeking through increased levels of excitement. Likewise, when desire becomes aversive (e.g., when a hungry person is motivated not to eat because of a diet), negative affect may reduce variety seeking (Kahn and Isen 1993).

Another interesting problem still in need of exploration is whether desire also makes consumers deviate from their favorite choice when they can only make one choice, or whether it makes consumers more responsive to less-well-known or newly introduced brands. Our prediction is that, because of the diluted relationship between the desire and one's favorite means of satisfying it, dominated options might enter the choice set and even be chosen from time to time.

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