A Variety of Explanations For Variety-Seeking Behaviors: Physiological Needs, Memory Processes, and Primed Rules

Rebecca Ratner, University of North Carolina at Chapel Hill
Don Lehmann, Columbia University

A Variety of Explanations for Variety-Seeking Behaviors: Physiological Needs, Memory Processes, and Primed Rules
High Satiety: The Effect of Sensory-Specific Satiety on Choice
J. Jeffrey Inman (University of Pittsburgh), Zata Vickers (University of Minnesota), and Andrea S. Maier (Institut National de la Recherche Agronomique)
The goal of our research is to explore the attributes of food products that drive switching. Specifically, we build upon Johnson and Vickers (1992) to examine crossover effects of sensory-specific satiety (a temporary reduction in liking of a food following consumption of that food) as a function of the similarity between the consumed flavor and the target flavor. We also extend Inman’s work (2001) by directly assessing the role of sensory-specific satiety and crossover effects on subsequent flavor choice. We test our hypotheses in two product categories in both experimental and field contexts.

Retrospective Preference for Variety: An Ease of Retrieval Perspective
Michelle Lee (Singapore Management University), Barbara Kahn (University of Pennsylvania), and Susheela Varghese (Singapore Management University)
This research demonstrates that preference for variety in memory as opposed to real-time evaluation extends to situations where variety comes about, not as a result of choosing a sequence of options (e.g., Ratner, Kahn & Kahneman 1999), as is typical of studies in variety-seeking behavior, but as a result of varied features contained within an option. We hypothesize that ease of retrieval is the underlying process that accounts for the advantage accruing to the high-variety option in memory. People use the ease of information retrieval as a cue for their preferences or attitudes. Three studies provide support for the predictions.

Variety vs. Consistency Seeking: A Matter of the Primed Rule
Rebecca K. Ratner (University of North Carolina), Ying Zhang (University of Chicago), and Ayelet Fishbach (University of Chicago)
When do people make subsequent consumption choices that are similar versus dissimilar to an initial choice? We argue that the amount of variety people incorporate depends on the mental rule that is accessible. This rule could associate either variety or repetitiveness with being a “good choice.” In three studies we find that priming these mental rules – “variety is good” (i.e., open-minded, interesting) or “consistency is good” (i.e., loyal, committed) – influences subsequent choice. These mental rules activate a specific choice criterion, either variety or consistency, which is then applied to actual choice with minimal deliberation or conscious awareness.


[url]: http://www.acrwebsite.org/volumes/13089/volumes/v33/NA-33
SESSION OVERVIEW

Why do individuals so often switch away from items that they liked in the past? Why is variety evaluated differently in real-time evaluations vs. retrospective evaluations? This session included three papers that reflect the quite different directions that research in this area has developed in recent years.

The first paper (by Inman, Vickers, and Maier) suggests that variety-seeking behaviors emerge when individuals have satiated on characteristics (e.g., flavors) of an initially-consumed product. This work extends the conventional view of variety-seeking as consumers’ seeking to maintain an optimal stimulation level to consider the sensory satiety process whereby the pleasantness of a just-eaten flavor declines. The second paper (by Lee, Kahn, and Varghese) extends previous work in the variety-seeking literature that views individuals’ preference for variety as reflecting a bias. Specifically, this work follows up on previous research indicating that when people make retrospective evaluations of options, there is a tendency to prefer options that contain greater variety, compared to when evaluations are made in real-time (Ratner, Kahn and Kahneman 1999). This paper shows that this effect generalizes to persuasive contexts and establishes ease of retrieval as the underlying process driving this preference for variety. The third paper (by Ratner, Zhang, and Fishbach) indicates that whether or not variety is viewed positively can be easily manipulated by the rule (“variety is good” or “consistency is good”) that is made accessible to consumers, suggesting that even very subtle aspects of the context in which the individuals make choices can impact the amount of variety they seek, and whether they perceive “consistency” negatively (e.g., as boringness) or positively (e.g., as loyalty).

Collectively, the three papers in this special session, along with the insightful comments by discussant Don Lehmann, focused on new insights about the psychological mechanisms underlying one’s preference for variety, and the extent to which variety-seeking behaviors reflect physical needs vs. primed conceptual constructs (e.g., “variety is good” or “consistency is good”).

“High Satiety: The Effect of Sensory-Specific Satiety on Choice”

J. Jeffrey Inman, Zata Vickers, and Andrea S. Maier

Retailers and manufacturers continue to struggle to manage the assortment of product offerings within a given product category. For example, should the available popcorn flavors include plain, cheese, caramel, white cheese, and orange cheese, or is some subset acceptable? In the absence of established methodologies to address this issue, they largely rely on ad hoc approaches with little consideration of which attributes are more important to consumers in terms of assortment. Improved understanding of the dynamic factors that contribute to switching within a product category will better enable food retailers to set their category assortment.

We propose that sensory-specific satiety is an attribute of foods that can drive consumers to switch among products within a food category. Sensory-specific satiety is a temporary drop in the pleasantness of a food produced by eating that food. This drop in pleasantness is relative to changes in pleasantness of other foods that have not been recently eaten (e.g., Lyman 1989; Rolls et al. 1981a). For example, if one eats a bowl of strawberry yogurt, liking for strawberry yogurt drops but liking for other foods (e.g., chocolate, bananas, bread, chicken, etc.) remains relatively unchanged. Importantly, when two foods have similar sensory attributes the liking for one can be diminished by consuming the other (e.g., eating a bowl of strawberry yogurt might also diminish the liking for a strawberry jelly bean). Sensory-specific satiety differs across foods (Johnson and Vickers 1992), and it may partly explain why consumers seek variety on some attributes more intensively than others. For example, Inman’s (2001) report that consumers switched more intensively among flavors than among brands in 14 of the 15 product categories examined. However, while these findings are consistent with a sensory-specific satiety explanation, this has never been directly tested.

Our objectives are twofold. Specifically, we build upon Johnson and Vickers (1992) to examine crossover effects of sensory-specific satiety as a function of the similarity between the consumed flavor and the target flavor. We also extend Inman’s work (2001) by directly assessing the role of sensory-specific satiety and crossover effects on subsequent flavor choice. We draw upon the sensory-specific satiety literature to generate three hypotheses. First, we hypothesize that greater levels of sensory-specific satiety will correspond to increased switching away from a flavor in a subsequent choice. Second, we hypothesize that both sensory-specific satiety and switching among flavors are inversely related to the flavors’ similarity to the consumed flavor. That is, we expect the influence of flavor consumed and similarity thereto to be mediated by sensory-specific satiety and crossover-sensory-specific satiety. Finally, we hypothesize that sensory-specific satiety and switching among flavors will be moderated by liking-the effects should be stronger for less liked flavors.

We test our hypotheses in two product categories (popcorn and potato chips) across three studies, all of which are complete. The first study uses a consumption diary panel and the second and third studies employ experiments. In the first dataset, 850 participants completed a diary of their consumption occasions of several snack categories over a six-week period (see Inman 2001). The database includes measures of flavor consumed and we supplement this data with inter-flavor similarity data collected in the Food Science laboratory at the University of Minnesota. A multinomial logit analysis shows that, controlling for flavor liking and prior flavor consumed, the degree of similarity to the previously consumed flavor has a deleterious effect on the flavor’s choice likelihood.

The two experiments were conducted at the Food Science laboratories at the University of Minnesota and enable us to (a) test the hypotheses in a controlled setting and (b) perform a mediation analysis. Subjects first performed a taste test in which they tasted and rated the similarity between each pair of popcorn/potato chip flavors. Subjects then participated in separate test sessions—one for each popcorn/potato chip flavor, with order randomized across subjects. During each session, subjects rated their hunger, fullness, and liking for each flavor, along with a set of five control products (bread, granola bar, carrot, orange juice, and M&Ms). We then gave each subject an 80g serving of the test popcorn and instructed them to eat the entire amount. When they finished, they repeated their hunger ratings and re-tasted and re-rated a second tray of the 10 rating set foods. Immediately after re-tasting and re-rating the
A Variety of Explanations for Variety-Seeking Behaviors: Physiological Needs, Memory Processes, and Primed Rules

foods, we presented the subjects with a tray containing five bowls of popcorn/potato chips (one of each of the five flavors) and told them they could take more of whatever they wanted. We then recorded the choice and measured the amount consumed.

The analysis revealed strong sensory-specific satiety effects for all flavors. Further, crossover sensory-specific satiety effects were correlated with similarity to the test flavor, as predicted. Importantly, a mediation analysis supports our thesis that flavor choice is influenced by sensory-specific satiety and crossover sensory-specific satiety, which are in turn driven by prior consumption and similarity to the consumed flavor, respectively. Implications for research and category management were discussed.

References

“Retrospective Preference for Variety: An Ease of Retrieval Perspective”
Michelle Lee, Barbara E. Kahn, and Susheela Varghese

Previous research (Ratner, Kahn and Kahneman 1999) has shown that when preferences are made retrospectively, there is a tendency to favor the more varied sequences than when preferences are made in real-time. That there is a preference for variety in memory has important implications for why consumers seemingly make choices that are sub-optimal in the sense of not providing them with the greatest utility. The reason for why it occurs, however, has not been systematically explored and provides the impetus for the current research. In addition, we explore whether this “diversification bias” extends to situations where variety is not instantiated between choices but within choices.

To date, variety-seeking behavior has been studied in contexts where variety in choices is extended in time or across consumption occasions. We examine if variety in the features of an option gives it an advantage over an option with less variety. A context that lends itself particularly well to this objective is that of persuasive appeals in the form of consumer reviews. One of the growing uses of the Internet is to provide consumer-to-consumer reviews of products and services. The website www.epinions.com, for instance, is a platform that allows consumers to share their experiences about various products. These reviews often contain variety on a number of dimensions, such as when reviewers discuss positive and/or negative aspects of the product (i.e., one-sided vs. two-sided appeals), or use different argument types (e.g., utilitarian vs. emotional arguments) to justify one’s stand. The increasing prevalence of consumer reviews and the greater reliance on them as a source of information suggests the need to devote research attention to how they influence purchasing behavior.

Three experiments provide support for our hypotheses. We first demonstrate that retrospective preference for variety extends to situations where variety comes about, not as a result of choosing a sequence of different options, as is typical of studies in variety-seeking behavior, but as a result of varied features contained within an option. This is shown in the context of consumer reviews.

Similar to past research, we show that high variety reviews (that are created by adding in a mixture of positive and negative claims) are rated more highly as compared to lower variety reviews (that contain more positive claims) in memory than in real time. We then extend this finding to reviews in which the variety is created through the mixed valence of arguments, but through a mix of types of appeals, e.g., utilitarian and emotional arguments (high-variety) or arguments of a single type (low-variety). We again show a greater preference for the product featured in the high-variety review than in the low-variety review, when preference is expressed retrospectively but not when it is solicited in real-time. Finally, we demonstrate ease of retrieval as the underlying process that accounts for the advantage accruing to the high-variety option. This explanation argues that people use the ease with which they are able to retrieve information as an informative cue for what they know or their attitudes.

Reference

“Variety vs. Consistency Seeking: A Matter of the Primed Rule”
Rebecca K. Ratner, Ying Zhang and Ayelet Fishbach

In repeated choice situations, what factors compel individuals to make similar (vs. dissimilar) consecutive choices? Researchers have often assumed that behavioral consistency is desirable and rewarded by society (e.g., Aronson, 1997, Bem, 1972), thus people should prefer to make choices that mostly resemble their previous ones. On the other hand, there is also research attesting to the value of diversity or variety seeking, which demonstrates that people are less likely to choose something on a given occasion if they have just chosen something similar (McAlister, 1982). Indeed, people sometimes make varied choices even in situations where one choice alternative clearly dominates others (Ratner, Kahn, & Kahneman, 1999; Read & Loewenstein, 1995). For instance, there is research showing that people choose more variety in public than in private to convey the impression that they are interesting and open-minded (Ratner & Kahn, 2002) and the expression of variety is often meant to indicate one’s uniqueness (Kim & Drolet, 2003). Taken together, these seemingly contradictory findings suggest that individuals sometimes wish to express loyalty or consistency by making repetitive choices of a single option and sometimes wish to express open-mindedness by making varied choices.

The present research explores the possibility that these opposing choice criteria co-exist, and therefore by increasing the accessibility of either one of them we can influence choice. Specifically, framing a choice sequence in terms of loyalty would encourage repetitive choices whereas framing it in terms of open-mindedness would encourage variety seeking. Moreover, merely associating variety (vs. repetitiveness) with positivity vs. negativity should have similar effects on choice. In several studies, these mental rules were primed before participants had to make choices that could either reflect a preference for high or low variety.

In one study, we presented participants with an ambiguous target person who was said to behave in a rather repetitive fashion (e.g., it was said that this person wears similar clothing, dines in the same place each day, etc.). We manipulated the primed construal of this behavior by asking participants to rate the extent to which the target person is loyal, dedicated, and reliable (i.e., repetition is good), versus the extent to which the person is repetitive, boring, and dull (i.e., repetition is bad). We then measured their liking for
the target person in addition to indicating whether they would choose two of the same type of chocolate across two choice occasions or two different types (for all participants, on the first occasion they either were randomly assigned to consume their favorite type or a less-favored type).

Participants in the repetition-is-good (*positive*) construal condition evaluated the target person as more likable (*M*=5.15) than those in the repetition-is-bad (*negative*) construal condition (*M*=4.00). Further, more participants in the positive construal condition indicated that they would choose the same chocolate on the second occasion as had been assigned for the first occasion than did those in the negative construal condition. Thus, their own willingness to make a repetitive choice was influenced by whether repetition had been primed to be interpreted positively or negatively in the initial phase of the experiment. However, this priming effect only emerged when the chocolate type assigned on the first occasion was the participant’s favorite type. Therefore, the rule to “be loyal” encouraged repetitive behaviors only when individuals had a reason (i.e., underlying preference) to be loyal to the initially-consumed item.

In another experiment, we activated these choice criteria in a different manner. Participants were asked to answer various questions (e.g. “to what extent are cassette tapes and compact discs the same or different?,” “how good do you think soy milk tastes in general?”) by recording their responses on one of two pairs of scale labels that were placed above or below a single 7-point scale. One pair of scale labels contained the endpoints “bad” and “good” (appropriate for the question about soy milk), the other contained the endpoints “same” and “different” (appropriate for the question about cassettes and compact discs). In one condition, the scale labels “same” and “good” were placed as anchors at the same end of the scale and “different” and “bad” on the other end of the scale, thus creating an association between the terms and presumptively activating the “same is good” and “different is bad” rules. In another condition, these terms’ concordance was reversed, hence presumptively activating the “same is bad” and “different is good” rules. This more subtle manipulation was shown to influence participants’ subsequent choices across a variety of domains, such that those who saw “good” paired with “different” chose significantly more variety than those who saw “good” paired with “same” (and both were significantly different from a no-prime control condition in the expected directions). For example, participants in the “different is good” condition preferred different brands of cereals, to stay in different hotels, etc., more than those in the no-prime control condition, who preferred more variety than those in the “same is good” condition. As predicted, none of the participants suspected the connection between the two parts of the study (the priming task and the choices task). An additional study demonstrated that these effects emerge using a subliminal priming task, suggesting that these rules for consistency vs. variety can be activated completely outside of awareness.

A final study demonstrated that people’s perceptions of their own levels of commitment vs. satiation mediate the effect of the primes. When primed with “repetition is good,” people construe their initial choice as reflecting their underlying preference for and commitment to the item. When primed with “repetition is bad,” people construe their initial consumption occasion as having fulfilled their desire for the item (i.e., satiation).

Whereas a large number of studies in consumer behavior focus on reasons why people seek variety, the present studies indicate that variety seeking can be attenuated if the salient rule is that “repetition is good” rather than “variety is good.” Thus, priming these rules can influence whether individuals construe repetition as indicating loyalty rather than closed-mindedness. These results suggest that one way to attenuate the amount of variety sought in simultaneous or sequential choice (Ratner, Kahn, & Kahneman, 1999; Read & Loewenstein, 1995; Simonson, 1990) to activate the rule that it is appropriate or even desirable to be loyal to one’s favorite items.

References


