

MARKETING IN THE 21ST CENTURY

COMMENTARY

Customer Reactions to Variety: Too Much of a Good Thing?

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The article by Kahn (1998 [this issue]) nicely raises many issues relating to product variety. Indeed, considerable effort has been focused both on studying variety seeking and on determining optimal strategies for offering variety to customers. Much of this effort rests on the assumptions that customers in fact both desire and benefit from variety. The purpose of this is to question those basic assumptions and hence to suggest some implications for research.

SOURCES OF VARIATION IN PURCHASE

Assume we observe a single customer purchasing different items in a given product category. Which is the appropriate interpretation?

1. Constrained choice, due to differences in distribution coverage
2. Multiple uses, for example, a soft drink as a thirst quencher versus a mixer
3. Multiple users being served by a single purchasing agent
4. Changes in preference over time due to
 - (a) changing attribute preference (e.g., attribute satiation; McAlister 1982)
 - (b) acculturation/learning, for example, developing skills that require different performance characteristics (e.g., stiffer tennis racquets)
5. A purposeful search to learn about one's preferences and/or which alternative optimizes them
6. A per se desire for variety

The optimal product strategy could differ depending on the basis for varied purchasing. How it differs and the

extent to which each of these reasons are relevant across product categories are thus fruitful areas for research.

CONSUMPTION VARIETY VERSUS PURCHASE VARIATION AND THE ROLE OF PRODUCT VERSATILITY

A fundamental issue is what defines variety. At one level, de jure variety exists if different items (e.g., stock-keeping units) are purchased or consumed. On the other hand, as an analogy to really new products, real variety requires meaningful change on key attributes or even change of product category.

Another issue is whether variety is defined by consumption or product. For example, a person driving cross-country may buy Coke one time and Pepsi the next and consume them exactly the same way for the same purpose (i.e., for caffeine). Alternatively, a person could buy Coke on three successive occasions but consume them (1) to quench thirst, (2) for stimulation (caffeine), and (3) as a mixer. In this case, the consumer is achieving variety/variation but using the same product. In essence, all combinations of using a variety of products and using products for a variety of needs exist.

This raises the issue of product versatility. In terms of production efficiency, it is often desirable to produce a single product that can suit several situations (e.g., a wrench that fits all sizes of nuts) rather than products for each need (e.g., a wrench set). When enough customers are interested in simplicity, a versatile product is viable. On the other hand, if all customers demand exact performance, a general tool will generally not be chosen. Put differently, versatile products are viable for low-involvement situations, novices, and those with constrained budgets (dollars or time) and storage capability (e.g., New York City

apartment dwellers). Optimal product strategy then depends on the distribution of customers on these characteristics.

REAL VARIETY VERSUS MARGINAL VARIATION

Variety implies difference from current behavior. Consider continuous attributes. When variants "interpolate" on an attribute, essentially they satisfy a convenience goal. For example, one could sell white and black paint and let customers mix shades of gray. Here variants provide convenience but do not expand the possible uses of a product. By contrast, a product variant that extrapolates can extend the use, in some sense creating "real" (technical) value. For example, adding a 45-inch color TV to a category of 13-, 19-, and 25-inch ones expands use options.

Even more of an increase in possibilities exists when a new attribute (capability) is added. Waterproof, shock-resistant watches and cameras opened new fields of use as did plain-paper copiers.

In a conceptual sense, the variety available in a market can be thought of as the area spanned by the relevant attributes, where the length of an attribute depends on both its variance across products and its importance. Seen in that light, variants within the existing area provide per se variety and convenience but not extensive variation. In fact, the newness of a product can be thought of as the increase in area spanned by product attributes after its introduction. An interesting research issue, therefore, is how much interpolation variants are socially beneficial (i.e., increase welfare), especially when demand for the category remains constant.

CUSTOMER-CONSTRUCTED VARIATION

Most discussions of variety suggest that variety is something marketers consciously offer and consumers select from. Yet, assuming consumers are passive is fallacious. Economic theory (Lancaster 1966; Ratchford 1975) envisions customers combining goods, and goods as combinations of attributes. Whether it is mixing cereals at breakfast or articles of clothing to form different outfits, customers actively create variety. Furthermore, a number of strategies followed by consumers create variety without variance in the items consumed. For example, by reordering items (i.e., using permutations), customers create variety. Examples include a drink before or after dinner, salad first versus after the entrée, and the popular "life's short, eat dessert first." Essentially these approaches use temporal variation in consumption (vs. purchase) to create variety.

Variety also often comes from other products consumed simultaneously. A person on a low-fat diet often consumes a lot of pasta. Although some variety comes from product form (spaghetti, penne, ziti, angel hair), more comes from the sauces and other "additives" used with it. In general, the whole area of "combinatorial variety" seems worth further study.

AN EXTREME CASE: DURABLE ACQUISITION

An interesting example of variety involves noncomparable alternatives (Johnson 1984). Specifically, a number of studies examine durable purchasing. Here the focus is on order of acquisition (Clarke and Soutar 1982; Dickson, Lusch, and Wilkie 1983; Hauser and Urban 1985; Kasulis, Lusch, and Stafford 1979), indicating that variation is expected. (Of course an item is not always eliminated once a single unit is obtained. Many families have multiple phones, TV sets, and cars before their first PC or trash compactor.) Here brand extension (into different categories) rather than line extension becomes a key strategy.

This raises the basic research question of whether to focus on extending the boundaries (e.g., cross-selling) or interpolating in terms of product attributes. Correctly choosing the type of variety offered may dominate the issue of how many variants to offer in terms of impact on both company and customers.

BUNDLES

Bundles are basically variety packs. Much of the literature in this area has focused on price sensitivity and the impact of complements versus substitutes or unrelated products (Harlam, Krishna, Lehmann, and Mela 1995). By contrast, very little attention has been focused on the role of variety packs in a mixed-bundle market in terms of marketing strategy. By building on models of how customers react to bundles (e.g., Kahn and Lehmann 1991), normative work in this area has substantial potential.

DO THE CUSTOMERS KNOW (BEST) WHAT THEY WANT?

Much of the impetus for variety, especially fine-grain variety, makes several key assumptions, including

1. Customers can detect small differences
2. Customers have a preferred (ideal) level
3. Customers have a fixed preferred level

Abundant evidence demonstrates that, at least in the new product area, none of these assumptions is true (Carpenter, Glazer, and Nakamoto 1994; Carpenter and Nakamoto 1989; Simonson and Tversky 1992). If preferences are constructed and evolve, then the order in which product variety is introduced is a major strategic consideration.

Of course, some forms of variety can affect brand equity. When the attribute on which variety is offered is a taste attribute (e.g., flavor), there are generally not very serious consequences of offering a nonpreferred variant. On the other hand, if the attribute is quality, then offering low levels can damage overall equity. Therefore, two attributes with exactly the same preferences distributions may not lead to the same optimal variety strategy.

TABLE 1
Optimal Variety Versus Consumer Welfare

Number of Available Options	Brand Positions	Average Distance	Incremental Value
1	.5	.25	
2	.25, .75	.125	.125
3	.167, .5, .833	.083	.042
4	.125, .375, .625, .875	.0625	.0205
5	.1, .3, .5, .7, .9	.050	.0125
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10	.05, .15,025	
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.			
100	.005, .015,0025	

VARIETY AND SOCIAL WELFARE

The usual assumption is that more variety is better for consumers. A key issue is to what extent or even whether this is true. Consider a simple example where taste (represented by customers' ideal points) is uniformly distributed on a line between 0 and 1 and disutility is measured by the absolute distance between a customer and the closest product. Assuming products are offered optimally from the customer's point of view within this range, the benefits of adding another option drops rapidly (Table 1).

Furthermore, for this pattern to exist, two other conditions must obtain. First, competitors must offer products optimally for customers. Yet under many assumptions, game theory suggests different solutions (e.g., for two brands either to both locate at the center of this line or at the two extremes). In short, it is not clear that what is optimal for companies is optimal for customers. One view of variety in mature categories is as another form of competition (similar to advertising and promotion). Hence, it expands à la the prisoner's dilemma to the point that it benefits neither company nor customer.

Second, even assuming optimal variety from the customer's viewpoint, costs must remain constant. Clearly, even with efficient production, the cost of variety is not zero, so at some point the cost of producing variety and hence price exceeds the benefit. Even if cost were constant, the mental cost of considering options rises with the number of options (Shugan 1980). In fact, faced with information overload, customers tend to resort to simple heuristics, which are not generally optimal. Put differently, more options can lead to worse decisions. As a consequence, research on how much customers value variety, the way manufacturers select which varieties to offer, the impact of variety on cost, and the reactions of customers to large sets of options are all important areas for research.

SUMMARY

Studying product variety is an interesting and relevant area for research. Work in this area should build on careful understanding of both customers' reactions to it and managers' decision making with respect to it. This requires an interdisciplinary focus, drawing on work in information processing, channels, operations management, game theory, and managerial decision making. In fact, the major advances may come more from combining knowledge from the different areas rather than boring more deeply into a single one.

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