COMMENTARY

THE EFFECT OF FREE SAMPLES ON IMMEDIATE CONSUMER PURCHASE

H. Bruce Lammers

Over a period of three days, a portion of customers who entered a well-established, ten-year old chocolate store in a major suburban shopping mall received a free sample of chocolate; other customers did not (N = *300). Sampling significantly increased the immediate sales of chocolates. However, this positive effect was restricted to* small purchases (up to $5) and to the purchase of chocolate varieties other than the variety sampled. *The implications of the findings for marketing management and consumer behavior theory are discussed.*

The practice of giving out free food samples (sampling in stores has become traditionally associated with new product and store introductions. For example, approximately ten years ago Ethel M Chocolates, Inc., introduced itself and its chocolates to its Southern California consumer market by offering a free sample to each customer who walked through its doors. Ethel M has continued with this 100 percent sampling schedule, now sampling about 5,000 pieces per day, or nearly 2 million pieces a year.

H. Bruce Lammers is Professor of Marketing at California State University, Northridge. He received his Ph.D in Social Psychology, with an emphasis in Consumer Psychology, from the University of Missouri and his research articles have appeared in the *Journal of Marketing Research, Journal of Business Research, Journal of Marketing Education, Journal of Social Psychology, Advances in Consumer Research,* among others.

He is a past president of the Southern California Chapter of the American Marketing Association and has done consumer research and consulting for Carnation, MCA, Johnston's Yogurt, and others.

The author thanks Arlan Landry, a Regional Sales and Operations Manager for Ethel M Chocolates, Inc. for his assistance and cooperation. The author is solely responsible for the contents of this paper and the statements herein do not necessarily reflect the opinions of Ethel M Chocolates, Inc.

This sampling policy was initially intended to enhance consumer familiarity with Ethel M. After about ten years of visibility, however, one wonders if this practice has worn out its usefulness. If the sampling no longer has an observable positive effect on sales, why not eliminate it and enjoy the cost savings? One of the major goals of this field experiment was to determine the effectiveness of sampling on sales within a store whose reputation has already been fairly well-established.

Theoretical Perspectives

Although the experiment cannot be considered a crucial test of any single theory of consumer behavior, at least three separate theoretical perspectives make rather specific predictions about the effectiveness of sampling:*operant conditioning theory, self-perception theory, and attribution theory.*

Operant Conditioning: Shaping Effects

Sampling is akin to what is known as "shaping" in learning theory. reinforcing behaviors that closely approximate the desired behavior, sampling tends to bring about conditioning of the desired response more effectively and efficiently. Animal trainers have long been aware of the power of shaping. In the present context, sampling is a form of shaping the actual purchase and consumption of the product. From an operant conditioning perspective, it should increase the probability of purchase.

Self-Perception Theory: The Foot-in-the-Door Effect

By accepting a free sample, the consumer presumably goes through a process of forming self-perceptions and attributions about her or his behavior. For example, consumers who accept the offered sample may label themselves as being willing to try products of the sampled sort and, consequently, may even perceive themselves as being willing to buy the product when the purchase opportunity presents itself. Of course, this scenario assumes that the sampling was not a negative experience. The self-perception and labeling process may also explain the "foot-in-the-door" phenomenon which a consumer who has yielded to an initial, smaller request (sample) is more likely to yield to a subsequent, larger request (purchase). In this case, a foot-in-the-door effect would occur if a consumer who has sampled a product is more likely to go on to purchase the product than a consumer who did not first sample the product.

Attribution Theory: Stimulus Saliency Effect

A free food sample may heighten or accentuate the cues associated with the consumption of the product, such as the odor and the taste.. To the extent that these sampling cues are positive, consumers should be more likely to purchase products.

Given the consensus of these three theoretical perspectives, it was hypothesized that free food samples would lead to increased immediate sales of the product. A major contribution of the study, however, is that this hypothesis was tested in the field rather than under artificial, albeit controlled, laboratory-like conditions. In addition, the experiment examined the differential effects of free samples on the size of the purchase and on the variety of purchase choice.

The Findings

After 300 customers were unobtrusively observed over a three-day period (see the Appendix for information on method and analysis), it was found that free samples did indeed have a positive impact on immediate sales of the product (see Figure 1). Of greater interest, however, are the findings that this effect was restricted to those consumers who subsequently made rather *small purchases* (see Figure 2) and to the purchase of *nonsampled* types/varieties of the product (see Figure 3). These two restrictions pose a bit of a challenge for the three theoretical perspectives described above.

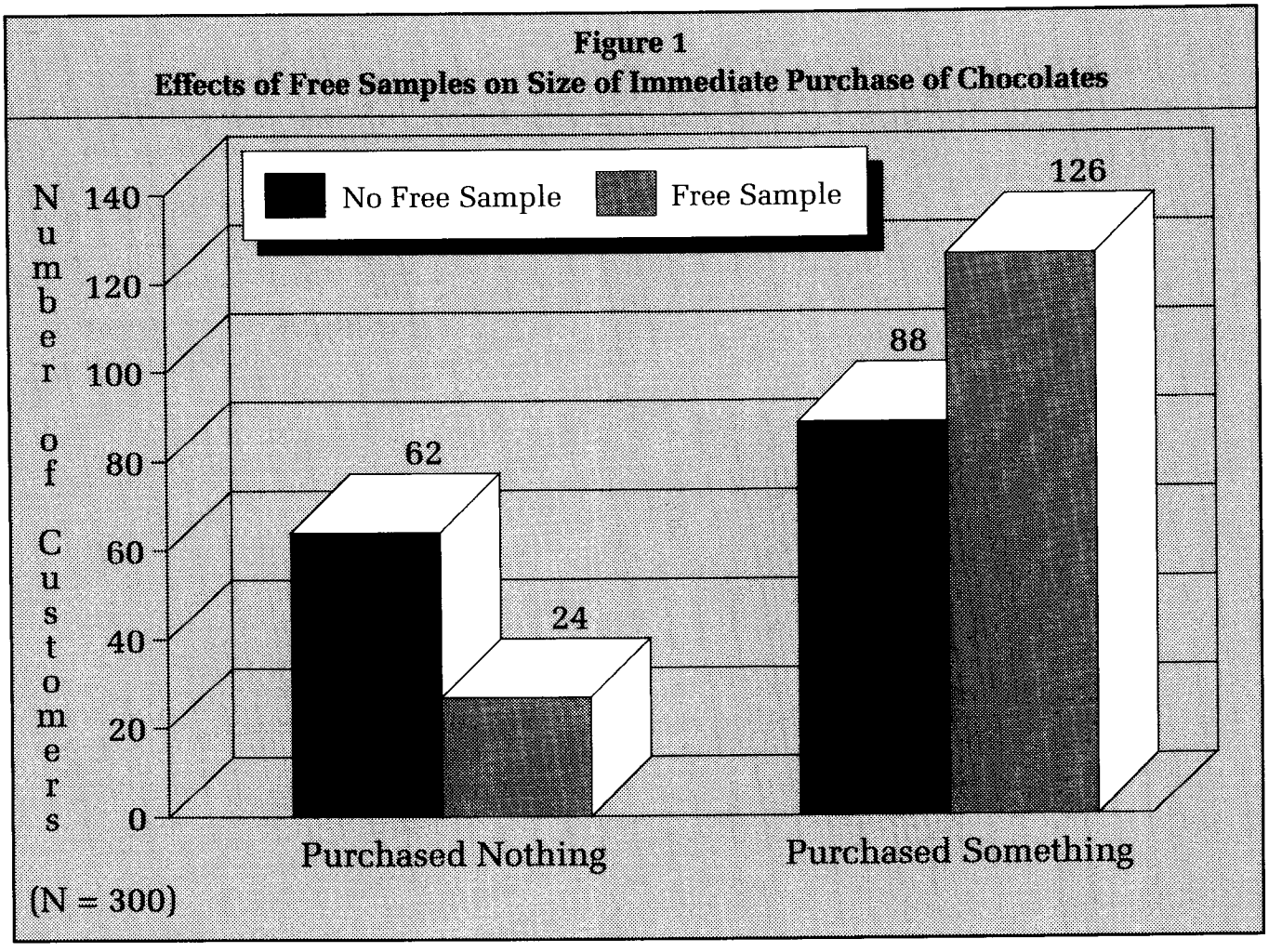
The second restriction, that sampling increased sales of the nonsampled product variety but not of the sampled product variety,

presents an especially difficult hurdle for the shaping and the foot-in-the-door approaches. Both approaches argue that sales of similar products ought to be increased by sampling, but neither would clearly argue that sales of the similar but different product variety should outdistance those of the sampled product variety. In this case, the stimulus saliency approach appears to fare better, for it would argue that sampling one variety of chocolate enhances the saliency of a broad range of cues associated with the sampling behavior, such as the pleasant taste and aroma of chocolates in general. In other words, the act of tasting and enjoying chocolate-related cues may be in and of itself the most salient aspect of sampling.

The first restriction, that sampling increased small but not larger purchases, would seem to be more easily handled by the shaping and the foot-in-the-door approaches, both of which would argue that the sampling effects should be maximized when the similarity of the size of the sample with the size of the purchase are maximized. (An interesting, albeit ironic, extended hypothesis from this argument is that large samples should stimulate sales of larger purchases.)

The stimulus saliency approach has to be a bit more convoluted in explaining this finding for it would seem that the saliency of the sampling cues would be at least as vivid for the potential large purchaser as it is for the potential small purchaser. The stimulus saliency approach would argue that the potential large purchaser may have come into the store with his/her mind preset on making a relatively large purchase. Thus, the saliency of the sam-

Figure 1
Effects of Free Samples on Size of Immediate Purchase of Chocolates



pling cues was overridden by the saliency of the "pre-meditated purchase" plan. Perhaps the best way to test this hypothesis is to have poor samples and see if the large purchasers remain unaffected.

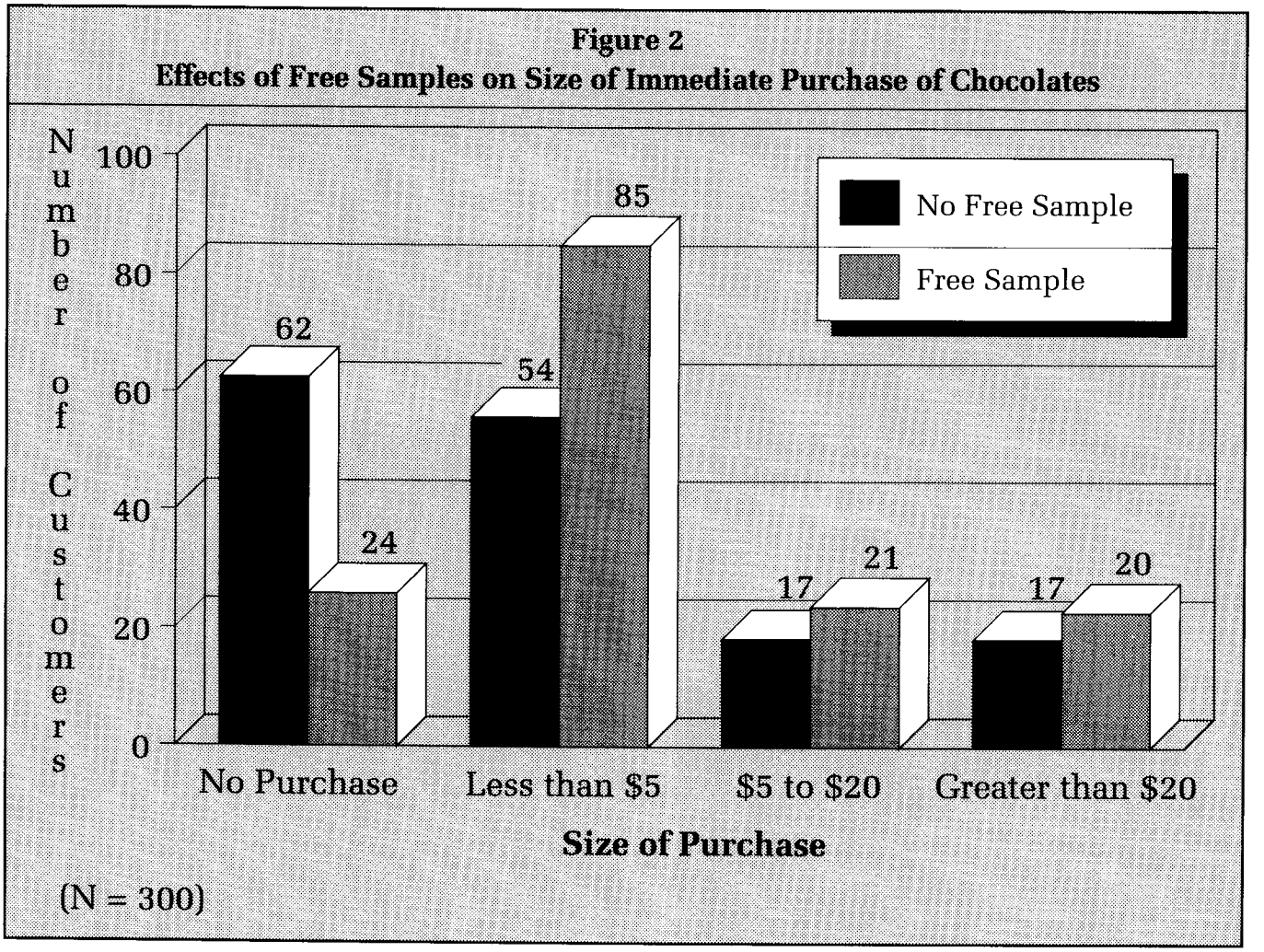
Management Implications and Recommendations

The sampling effects found in the study also have several important implications for marketing management. First, sampling should not be restricted to the introductory stage of a retailer's life cycle. The study used a well-established store which had been in the shopping mall for over ten years. The results of this study clearly showed that sampling remains a significant sales generator for this store.

Second, sampling effects may be limited to relatively small purchases. Although this limitation may not seem very attractive at first glance, there is no way of knowing from this study just how loyal or "large" these small purchasers may become in the near future. That is, just as sampling can shape small purchases, small purchases may someday lead to larger purchases.

Third, sampling effects can lead to generalization and cannibalization effects. In other words, other product varieties similar to the sampled product may be purchased over even the specifically sampled products. In this experiment, sales of the sampled varieties of chocolates were not preferred over other varieties. Instead, sampling enhanced the sales of other varieties of chocolates within the store. This generalization or "category expansion effect"[1] has been report-

Figure 2
Effects of Free Samples on Size of Immediate Purchase of Chocolates



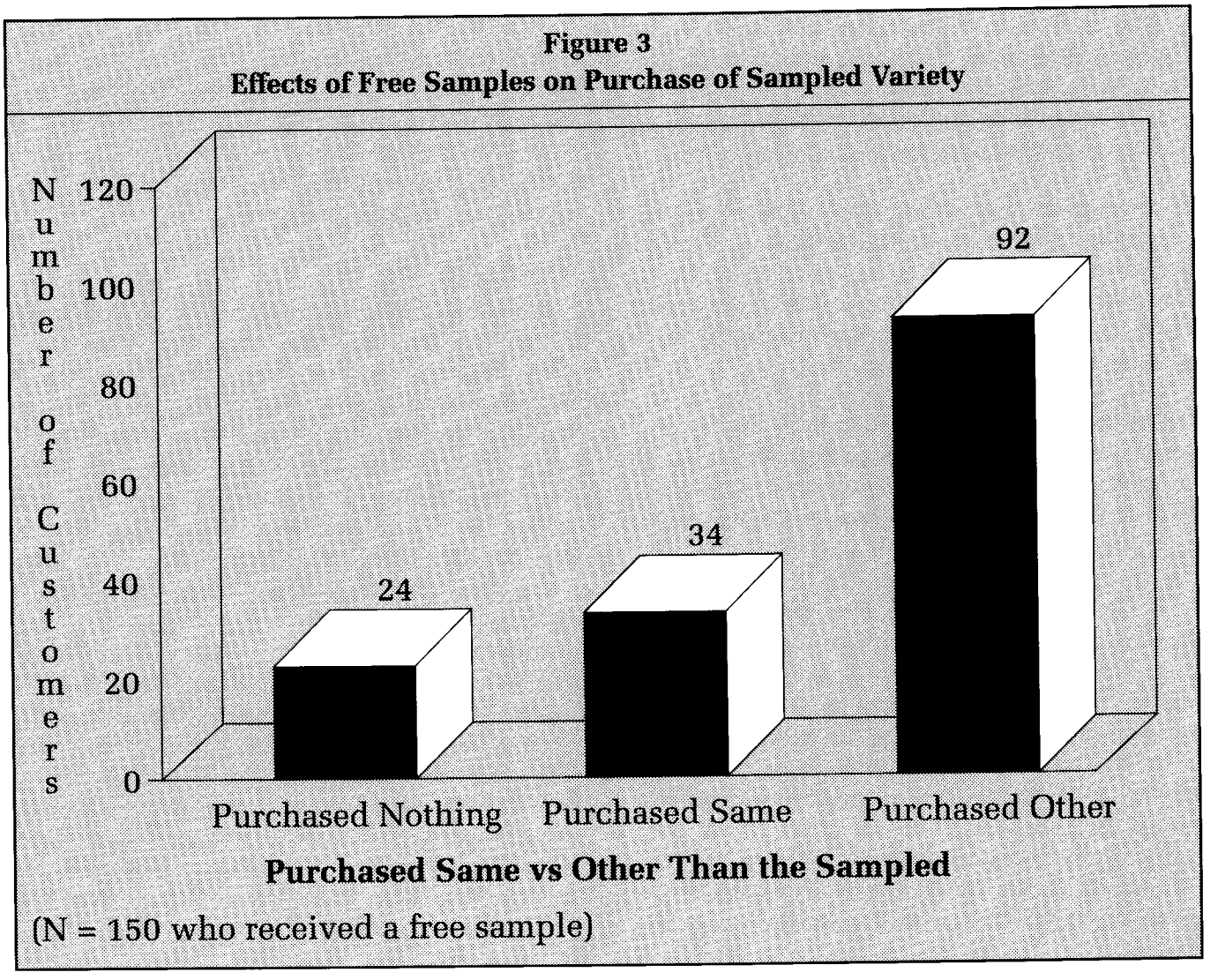
ed in a previous study within a supermarket context.[6] The authors of that study noted that "...the effects of a free food sample, ostensibly offered to increase the sales of one particular bakery item, apparently affected the sales of other items in the store" (p. 245).

The upshot of this generalization or category expansion effect is that sampling should not be expected to affect only the sales of the specifically sampled product. Consequently, alternative forms or varieties of the product may need to be stocked for full appreciation or realization of a sampling effect. The bad news, then, is that sampling could ultimately lead to cannibalization. The good news is that sampling may well increase store traffic or the time spent in the store if the supply and variety are adequate. Controlled research on the effects of sampling on store traffic is scarce.

Sampling tends to bring about conditioning.

The results of this modest experiment offer some food for thought to both the consumer behavior theorist and the marketing manager. Sampling produces positive effects, but those effects appear to be more complex than they seem at first glance. Future consumer research may determine whether the degree of complexity discovered in this study is just the tip of an iceberg.

Figure 3
Effects of Free Samples on Purchase of Sampled Variety



Appendix

Method

The experiment was conducted in the Ethel M open-counter shop at the Northridge Fashion Center (NFC), a "super-regional shopping center" in the San Fernando Valley of Los Angeles. This mall has over 150 stores and is anchored by several major retailers, including Sears, Nordstroms, Bullocks, Broadway, J. C. Penney, and May Co. The NFC Ethel M shop has one of the highest customer count and gross sales of the eleven Southern California Ethel M's. The experiment took place on November 25 (Saturday), November 27 (Monday), and November 28 (Wednesday), 1989. On each of these three days, the first 50 customers received free chocolate samples and the next 50 did not. Thus, the total sample size was 300 across the three days. The sampling variety was changed after every fifth sample. In all, ten varieties of chocolate were sampled.

Dependent variables. The store employees recorded (1) whether or not the customer made a purchase, (2) if a purchase was made, whether it included the sampled variety, and (3) if the purchase amount was under $5, $5 to $20, or over $20.

Limitations. Any generalization and interpretation of the findings of this experiment should be accompanied by a caveat specifying at least the following boundaries: the test product (chocolates); the test retailer (Ethel M); the test location (Northridge, CA); and the test time period (three days in November 1989). In light of these boundaries, one of the experiment's stronger suits is that it used "real" consumers in a real marketplace environment over several days. Consequently, the external validity of the present experiment was probably higher than that of many published experiments on sampling. On the other hand, this higher level of generalizability came at the cost of some loss of experimental control. For example, the assignment to the cells was pseudo-random. To be random, each individual customer would have been randomly assigned to the sample versus no sample groups. However, doing this would have raised more than a few eyebrows among the customers. Imagine walking into a store where the person in front of you was assigned to receive a free sample and you happen to fall in the nonsample group. The potential for demand effects, not to mention consumer ire, was too high a risk to take. To attenuate demand effects, group assignments were in clusters of 50 rather than on an individual basis.

In addition, the relative simplicity of the research design thwarts attempts to examine the impact of individual differences on sampling effects. Future research, for example, should examine the influence of consumer involvement levels and consumer personality traits (e.g., susceptibility to compulsive buying) on sampling effectiveness.

Results

Effects of Sampling on Immediate Purchase. Figure 1 shows that free samples had a significant, positive effect on the immediate purchase of chocolates. Eighty-four percent of the free sample group purchased some chocolates, while only 59% of the nonsampling group did so. Another way of looking at this is to note that 41% of the nonsampling group did not purchase anything, while only 16% of the sampling group failed to make a subsequent purchase, χ^2, $\underline{df} = 1$, $\underline{p} < .01$.

Effects of Sampling on Size of Purchase. While Figure 1 showed that sampling significantly increased the purchase of chocolates, Figure 2 shows that this effect was virtually limited to the small purchaser group (up to five dollars), of whom 61% had received a free sample and 39% had not. Free samples had no significant impact on purchases greater than five dollars. A 2 x 4 Chi Square analysis of the Figure 2 data yielded a significant χ^2 of 24.87, $\underline{df} = 3$, $\underline{p} < .01$.

Sampling Effects on Purchase of Sampled Product. Although sampling significantly increased the immediate purchase of chocolates, it did not trigger the purchase of the specific variety of chocolate sampled. More precisely, 23% of those who received a free sample purchased the same variety of chocolate as that sampled, 61% purchased some other variety of chocolate, and 16% purchased nothing, χ^2, $\underline{df} = 2$, $\underline{p} < .01$ (see Figure 3).

End Notes

1. Blattberg, Robert C., and Scott A. Neslin, "Sales Promotion: The Long and Short of It," *Marketing Letters*, 1 (December 1989), 81-97..

2. DeJong, W., "An Examination of Self-Perception Mediation of the Foot-in-the-Door Effect," *Journal of Personality and Social Psychology*, 37 (1979), 2221-2239.

3. *The 1989 Directory of Shopping Centers in the U.S., Western Volume*, 29th ed. Chicago: Automated Marketing Systems, 1989.

4. Peter, J. Paul, and Walter R. Nord, "A Clarification and Extension of Operant Conditioning Principles in Marketing," *Journal of Marketing*, 46 (Summer 1982), 102-107.

5. Scott, Carol A., "The Effects of Trial and Incentives on Repeat Purchase Behavior," *Journal of Marketing Research*, 13 (August 1976), 263-269.

6. Steinberg, Sandon A., and Richard F. Yalch, "When Eating Begets Buying: The Effects of Food Samples on Obese and Non-obese Shoppers," *Journal of Consumer Research*, 4 (March 1978), 243-246.

7. Tybout, Alice M., and Richard F. Yalch, "The Effect of Experience: A Matter of Salience?" *Journal of Consumer Research*, 6 (1980), 406-413.