

Brand Experience as a Moderator of the Negative Impact of Promotions

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Abstract

While price promotions are generally believed to have a positive impact on immediate sales, their effects on attitude towards repurchase, quality perceptions, and repurchase are far less clear. We present a study that tests the effect of brand experience in moderating the negative impact of promotions. The results of the laboratory study indicate that the negative impact of a discount on perceptions of quality and subsequent intent to purchase at full price is eliminated among those who had tried the brand. The moderation of the negative impact of promotions has not been previously shown to occur despite its prediction by a variety of behavioral theories.

Sales promotions are becoming increasingly common among branded consumer goods today (Bowman 1988, Tenowitz 1988). Despite the large body of evidence showing that sales promotions have a large positive impact on sales over the duration of the promotion, the repeat purchase effects of buying on promotion have yielded inconclusive results. Some studies have shown a distinctly negative impact of a promotional purchase on subsequent repurchase, while others have shown both negative and positive effects (Blattberg and Neslin 1989).

This paper proposes an intervening variable, brand experience, that may account for this conflicting evidence. Specifically, we argue that a promotional purchase's negative effect on repurchase should be restricted to consumers who have rarely, if ever tried the promoted brand. Preliminary evidence for this effect was found by Ortmeier, Lattin, and Montgomery (forthcoming), who incorporated an interactive relationship between past purchase behavior and a lagged promotional purchase into a brand choice model calibrated on scanner panel purchase data. They found the negative impact of a promotional purchase to be strongest among consumers who had few prior purchases of the promoted brand. We offer further evidence of an experience-moderated relationship between promotional purchase and repeat purchase by presenting a laboratory study that differs from Ortmeier, Lattin, and Montgomery in research design, measures, and product classes but provides essentially the same conclusion.

The results of the experimental study improve our understanding of the intermediate, post-deal effects of promotions by suggesting that the effects depend on

the consumer's experience with the brand. Critically, from a managerial viewpoint, our results suggest that promotional campaigns most severely impact the subsequent behavior of a common promotional target segment, customers who rarely buy the promoted brand.

Theory

Four frameworks, reference price, price/quality signalling, self-perception, and behavioral learning theory, speak to the issue of the impact of a promotional purchase on repurchase and a possible interaction with brand experience. Our purpose is less to distinguish the theories than to show that all four predict that trial will moderate the negative impact of promotions.

Reference Price Theory (Monroe 1979, Sawyer and Dickson 1984, Winer 1986) hypothesizes that the consumer sets a reference price for each brand based on a weighted average of prices last paid. With a purchase on promotion, the consumer lowers the reference price in the direction of the discounted price, and is thus less likely to repurchase at regular price. If, however, the brand is purchased regularly, the consumer has a better base of knowledge about the brand's price, thereby producing a more stable reference price that is not as strongly affected by current discounts. Therefore, reference price theory predicts that greater experience with the brand should lessen the negative impact of a promotional purchase.

Price/Quality Signalling hypothesizes that when consumers are unable to directly assess product quality, they may infer it from price (Gabor and Granger 1966, Monroe 1973, Spence 1974, Huber and McCann 1982, Gerstner 1985, Urbany, Bearden and Weilbaker 1988). The lower price generated by a promotion signals lower quality, thus lowering repurchase likelihoods. However, if consumers are best able to assess product quality directly after substantial brand experience, then a promotional purchase will have the minimal negative impact among those most familiar with the brand.

Self Perception Theory, originally developed by Bem (1965), has been applied to consumer promotions in a number of studies (Dodson, Tybout, and Sternthal 1978, Scott 1976, Tybout and Scott 1983). The general idea is that consumers infer their attitudes from their behavior. The impact of buying on promotion depends critically on whether the purchase is attributed to an internal cause, liking for the brand, or to an external cause, the promotional incentive. A negative attitude towards the brand results from an attribution to the promotion, which is more likely as the discount becomes greater. However, with brand experience, there is less need to justify the purchase by referring to the discount, so that promotional purchases should have a less negative impact among past purchasers.

Consistent with the above hypothesis, Tybout and Scott (1983) propose that attitude formation is most likely to involve a self perception process when "immediate sensory data are unavailable (and) well-defined internal knowledge is lacking." This is most likely to occur for the consumer who has little brand ex-

perience, the consequence being that the purchase is attributed to the promotional incentive. In contrast, the consumer who has experience with the brand is more likely to have well-defined internal knowledge and attitude formation will therefore involve an "information aggregation process." In this case, the promotional incentive increases the already favorable information and consequently reinforces brand preference.

Behavioral Learning Theory (Rothschild and Gaidis 1981, Rothschild 1987), proposes that consumers develop purchase habits which their current behavior either reinforces or extinguishes. When a consumer buys on promotion, the habit, "buy on deal," may be reinforced to the detriment of the more positive "buy the brand" habit. This former event becomes more likely as the magnitude of the incentive increases. However, to the extent that a brand loyalty habit has been established through frequent brand purchase, it will be more difficult to convert that habit to a deal orientation through purchases on promotion. In fact, for those who purchase the brand on a regular basis, the coupon may serve as a reward thereby reinforcing the purchase habit.

In sum, the four theoretical perspectives suggest the following predictions:

Hypothesis 1: Prior brand experience should moderate the impact of a promotional purchase on repurchase. Consumers with little brand experience should be negatively affected by a purchase on promotion and this negative impact should diminish as brand experience increases. Moreover, both self perception theory, as applied by Tybout and Scott, and behavioral learning theory predict a positive, reinforcing effect at high levels of brand experience.

Hypothesis 2: Prior brand experience should also explain the differential impact of a severe versus a moderate discount: the severe discount should impact repeat purchase behavior more negatively than the moderate discount only when the consumer has little brand experience. As with H1 above, self perception and behavioral learning theory suggest a positive impact for severe over moderate discounts when the consumer has greater brand experience while reference price and price quality theories suggest only a lessening of the negative effect.

Ortmeyer, Lattin, and Montgomery (1990) addressed (1) above using a multinomial logit choice model calibrated on scanner panel purchase data for instant, caffeinated coffee. The multinomial logit model specified utility to be a function of each brand's price and promotion history, along with an indicator for previous promotional purchase and an interaction variable, PREF*. PREF* is an exponentially weighted average of the consumer's past purchases of the brand, with the past purchases being considered in light of the promotional environment at the time of purchase. PREF* thus serves as a measure of prior brand experience.

The authors found that brand experience significantly moderated the negative impact of prior promotional purchases. When PREF* was near 0 (little brand

experience), the impact of a prior promotional purchase was negative. As PREF* increased, this negative impact deteriorated, and at levels of PREF* near 1, the impact was, in fact, positive, though not significantly different from zero.

This study is not without problems, however. In particular, Neslin and Shoemaker (1989) have noted that the negative parameter estimate for a prior promotion purchase, taken from a cross-sectional choice model such as the multinomial logit described above, may be incorrectly interpreted as representing a negative impact of promotional purchase at the individual level.

Such problems in using cross-sectional choice models to test individual-level hypotheses suggest that an experimental approach may be appropriate for investigating the post-purchase effects of a promotion purchase. Specifically our study tested H2 above, relating prior brand experience to the differential impact of a severe versus a moderate discount. The study tested this hypothesis in the context of a manufacturer's coupon for nine different product classes. The motivation for the study is in the spirit of Campbell and Fiske (1959). We used maximally different methods (controlled experiment versus analysis of naturally occurring behavior) and measures (reported purchase intentions versus actual purchase behavior) to triangulate on the same theoretical phenomenon. At the same time, we focused on a different aspect of a promotion's post purchase impact by contrasting the post purchase effects of a severe discount to those of a moderate discount.

2. Experimental procedure

We investigated (2) above by developing a simulated shopping exercise, in which one of the brands could be bought with coupon. We used subjects' purchase intentions and quality ratings taken under different purchase conditions to determine if brand experience moderated the post-purchase impact of a severe versus a moderate discount. We were thereby able to assess the psychological impact of coupons unconfounded by other actions of the company (e.g. shelf space, prices), of the competition (e.g. local price or promotional responses to free standing insert) or of the consumer (e.g. satisfaction with usage, forward buying).

We developed a computer-based (Sawtooth Software, 1986) simulated shopping study which was easy to administer, relatively inexpensive, and provided a reasonably natural task for subjects. The task involved a number of steps. First, respondents were asked to review nine free standing inserts, such as they might find in a Sunday newspaper. These were actual inserts from a wide variety of product classes including tortilla chips, dishwashing liquid and pain relievers. (Table 1 shows the products included in the analysis.) To encourage respondents to pay attention to the inserts, they were asked, for each ad, how familiar they were with the ad. Next, respondents were asked to participate in a simulated shopping trip in which they would purchase brands in each of nine product categories. For each, subjects chose one of three brands shown with prices and any discounts. The three brands comprised one couponed brand, another national brand, and a

Table 1. Effect of discounts (moderate/severe) on choice, full price loyalty and relative quality ratings by trial of brand

Brand name	Trial of brand?	Number mod/severe discount	Percent choosing brand	Percent full price loyal	Relative quality
All*	No	478/471	61%/69%	29%/23%	-1.5/-3.2
Pooled	Yes	961/970	75%/84%	51%/52%	2.0/ 2.9
Sea Kisses	No	143/149	60%/66%	38%/28%	-2.0/-3.9
Imitation crab meat	Yes	16/12	56%/75%	44%/67%	-2.0/-0.7
Campbell's	No	113/116	74%/80%	18%/18%	0.3/-1.2
Instant soup	Yes	46/45	76%/82%	26%/27%	1.1/ 0.9
Ragu	No	7/10	57%/60%	29%/20%	2.1/-9.6
Spaghetti sauce	Yes	154/149	66%/82%	51%/54%	3.2/ 4.8
Kelloggs	No	12/9	58%/89%	50%/33%	-3.3/-4.3
Corn Flakes	Yes	149/150	93%/91%	79%/74%	7.2/ 6.9
Planter's Honey	No	26/22	54%/82%	27%/23%	0.8/-4.0
Roasted peanuts	Yes	133/139	74%/88%	41%/42%	2.3/ 2.1
Tostitos	No	48/48	40%/44%	19%/13%	-2.9/-4.1
Tortilla chips	Yes	111/113	68%/70%	36%/41%	-2.9/-1.8
Sunlight	No	45/37	51%/59%	33%/30%	-5.8/-5.7
Dishwashing liquid	Yes	116/122	72%/79%	50%/50%	-1.4/ 0.4
Visine	No	40/37	72%/84%	47%/27%	0.1/ 0.6
Eye drops	Yes	118/125	81%/92%	66%/66%	2.2/ 6.3
Contac	No	44/43	59%/60%	16%/14%	-1.3/-3.2
Cold capsules	Yes	118/115	65%/82%	36%/37%	2.2/ 0.8

*Read: 478 triers received the moderate discount and 61% chose the brand, 29% said they would still buy it at full price, and its perceived quality relative to a major competitor was -1.5 (scale +1/-25.)

store brand. If the couponed brand was chosen, the subject was immediately asked if he/she would purchase the brand at full price. This question was used as our primary measure of the impact of a coupon on repeat purchase.

Next, previous trial, representing our brand experience measure, was assessed by displaying the couponed brand and asking if the respondent had ever tried it. Finally, we measured perceived quality by asking respondents to rate the relative quality of the couponed brand compared with the other national brand using a pointer on a 50-point scale.

We developed two free standing inserts for each product class differing in the severity of the discount. Steep discounts represented approximately a 40%, and moderate discounts a 20% saving off the shelf price, reflecting relatively high and low discounts for the product classes at the time of the study. The prices were structured so that when the discount was severe, the couponed brand had the lowest purchase price of all; when it was moderate, its price was bracketed between those of the other two brands.

The impact of discount was tested within nine product classes. That is, each subject made choices in nine product classes, and either four or five couponed brands had a severe, while the others had a moderate discount. Versions of the simulation were randomized so that a subject had an equal chance of seeing a given brand at either a high or low discount. The study was run on 320 nonstudent consumers, all but 40 at mall intercepts. Respondents were paid \$2 for participating in the study. Each respondent made choices in nine categories resulting in 2880 (320×9) usable responses.

The simulation produced three variables which were analyzed at the aggregate level to test hypothesis 2. Choice was measured by the percentage of respondents choosing the couponed brand and served primarily as a manipulation check that the severe discount engendered greater market share than the shallow discount. The key dependent variable investigated was full price loyalty, the percentage of all respondents indicating an intention to purchase the brand at full price. Subjects in both the severe and moderate discount conditions were faced with the same purchase environment with the couponed brand available only at full price. A negative impact of the severe over the moderate discount is shown if the full price loyalty percentage for the severe discount condition is significantly lower than the percentage for the moderate discount condition. Perceived quality, measured across all subjects regardless of choice, served as a second indicator of post purchase impact and was analyzed in an analogous way.

In computing the full-price loyalty percentage and average perceived quality, we pooled those who initially chose the brand with the coupon with those who did not (Scott, 1976). Accordingly, both the quality and the full price loyalty measures reflect the average impact of the promotion across subjects regardless of brand choice. This averaging was intentional – to do otherwise could have confounded our results in a manner similar to that reported by Neslin and Shoemaker (1989) for panel studies. If the analysis were done within the group that accepted the discount, there would be the problem of a self-selection by marginal customers to the severely discounted brands. This self-selection may make it appear, among coupon redeemers, that deeper discounts have a more negative impact, whereas the only real change may be that the composition of the set includes proportionally more consumers who are negatively disposed towards the brand.¹

3. Results: moderation of discount effect by trial

We first examine whether the discount increased the number choosing the brand. Exhibit 1 tabulates the impact of discounts for the nine brands and presents the pooled results. As expected, the deep discount had a positive impact on immediate choice relative to the moderate discount, but this impact did not differ by trial. Among those who had not tried the brand, 61% chose it with the moderate discount, compared to 69% with the severe discount. Similarly, among those who had tried the brand, 75% chose it with the moderate and 84% with the severe

discount. Thus, a more severe discount increased choices, but this increase was not moderated by trial.

Our primary focus here is on the two measures of the post-promotional impact of the discount: the full-price loyalty percentage and the relative quality ratings. A model was run predicting these variables as a function of the nine product classes, two trial conditions, two discount conditions, and all their interactions. Hypothesis 2 predicts that the impact of discount will be moderated among those who have tried the brand. CATMOD (SAS Institute 1988) offers a test of interactions appropriate to the binary full-price loyalty variables.² It was significant ($X^2(1) = 4.1, p = .04$). Similarly, the analysis of variance on the continuous quality ratings resulted in a significant trial discount interaction ($F(1,2844) = 5.3, p = .02$). The means for this interaction are shown graphically in figure 1. As predicted, there was a strong negative impact of severe discounts among non-triers, but among triers this negative effect was greatly reduced or even reversed. The pooled results, in fact, show a positive impact of severe discounts over moderate discounts among triers, for both full price loyalty and perceived quality. This result, though consistent with the behavioral learning and self perception/information aggregation perspectives, did not achieve conventional levels of statistical significance.

It is important to note that the non-triers were not able to actually use the product when buying with a coupon, a factor which may have encouraged attribution to the discounted price. Our results suggest, however, that the non-trier, induced to purchase by a coupon, will be more likely to focus on the coupon's incentive, a fact which must be overcome through favorable usage.

4. Robustness of results

Before trumpeting a new empirical generalization, it is important to rule out alternative explanations. We tried a large number of tests to try to uncover conditions under which the moderating effect of brand experience on promotions did not occur, and were amazed at the robustness of the effect. The first alternative explanation we tested was that those brands with low trial rates had less effective free standing inserts. If so, then the effect due to trial could be due to differences across promotional messages. One appropriate test is to examine the trial \times discount \times product interaction to see if the trial \times discount effect differed by product class. This test was not significant for full price loyalty ($X^2(8) = 3.0, p = .94$), or for perceived quality ($F(8,2844) = 0.6, p = .81$). A second way to test this possibility is to look within each product class. Exhibit 1 gives the trial \times discount means for each product class. While the numbers within each cell are generally not sufficient for within-brand statistical tests or speculation about differences in effects across product classes, it is useful to assess the direction of the interactions. For example, among non-triers of Tostitos Tortilla Chips, the severe discount resulted in a 6 point drop in full price loyalty ($19\% - > 13\%$), while among

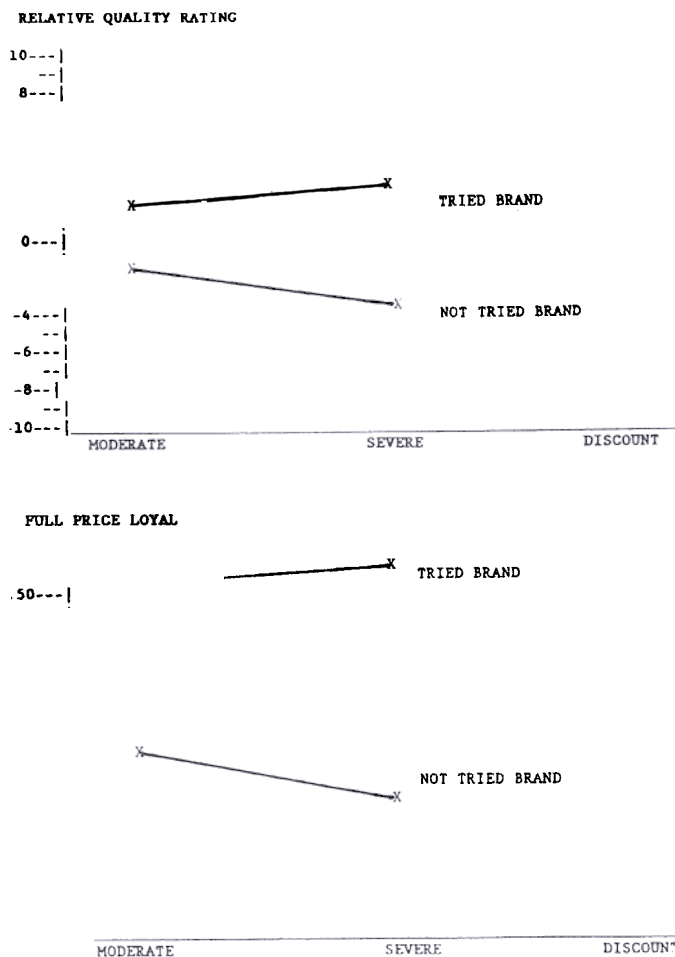


Figure 1. The impact of the discount depends on the trial experience with the brand.

triers the severe discount increased loyalty by 5 points (36% - > 41%). Thus trial lessened, and in this case reversed, the negative impact of severe discounts. Using the same directional test on the other products for both full price loyalty and quality, we find that they all follow the predicted moderation due to trial. That is, in all 18 cases, the difference due to discounts was less negative for triers over

non-triers. In sum, the moderation hypothesis appears to occur across a very heterogeneous group of product classes.

The robustness of our results was tested with several additional data analyses:

***Stimulus differences:** Within each product class, we manipulated the degree of emphasis the discount received in the copy by creating a 2×2 design, crossing discount level and degree of emphasis. For example, for some inserts a prominent "SAVE" tag was boldly displayed on the ad copy. Degree of emphasis did not significantly affect either the impact of a discount on choice or the interaction between trial and discount.

***Subject pool differences:** Our subjects included mall intercept participants from a lower-middle class mall outside a large New England city and an upper-middle class mall in a small central-Atlantic city along with staff from a large university. These three groups differed in their promotion elasticities, but the predicted interaction effect between trial and discount occurred in all three groups.

***Familiarity with the promotions:** The level of familiarity with the brand's promotions was not found to significantly impact the direct discount effect on choice or the trial \times discount effect on full-price loyalty and perceived quality.

***Process differences:** Neither decision time nor recall of the discount or product claims altered the trial \times discount interaction effect.

***Elaboration of the trial concept:** For about half of the subjects, trial was measured simply by asking whether the subject had tried the brand. The other half of the subjects answered trial questions that included measures of category usage, the focal brand's share of category usage, and recency of trial. Investigation of these more elaborate measures produced some differences in the general trial \times discount interaction effect but none of these differences approached statistical significance.

Thus, different kinds of subjects, stimuli, processing styles and measures of trial all produced the same interaction effect: the severe discount produced lower full-price loyalty and perceived quality ratings than the moderate discount among those who had not tried the brand, but did not produce such effects for triers.

5. Discussion

We have presented evidence that brand experience moderates the negative impact of promotions on repurchase. While the interactive effect of brand experience is consistent with a variety of behavioral theories, it has not heretofore been shown to exist. The post-purchase effects of a promotion purchase have been investigated by a number of authors but as noted by Blattberg and Neslin (1989), the

results have been mixed: "In general, choice models find negative and positive effects and one panel data study analysis finds no effect." Since these studies have not explicitly controlled for brand experience, our results may account for the inconsistencies found.

This research offers prescriptions to market researchers and practitioners. To market researchers, our results suggest that, when considering past promotion purchase effects, particularly in the context of choice models, it is important to capture individual differences through a brand experience variable. To practitioners, our results confirm the prediction from managers as well as from current behavioral theory, that the negative impact of promotions is most severe among nonusers of the brand. This suggests that promotions aimed at nonusers are far more risky to the brand manager than those aimed at current users. The results of this study, however, do not go so far as to suggest that promotions can benefit a brand with a loyal following since our experimental design compared the post-purchase effects of two discount levels rather than comparing those of a discount to a purchase at regular price.

Our study points to further research needed in this area, most notably investigations into the specific behavioral mechanisms that govern the relationship between promotional purchase, brand experience and repeat purchase. We have demonstrated a general and robust interaction of brand experience on the impact of discounts that is consistent with a number of behavioral theories. The important work before us is in the determination of the boundaries of this effect and the precise micromechanisms that make it happen.

Notes

1. The analysis of full price loyalty and perceived quality however, was also conducted on the subgroup of only those subjects who chose the discounted brands. The results for this subgroup were less strong, but directionally equivalent to the results reported.
2. Regression was also used to predict the binary dependent variable with virtually the same result. For example, the analogous linear regression yielded an R^2 of 0.13 and a significant discount by trial interaction ($F(1,2844)$, $p = 0.04$).

References

- Bem, D. (1972). "Self-Perception Theory." In L. Berkowitz (ed.), *Advances in Experimental Social Psychology*. New York: Academic Press, 1-62.
- Blattberg, Robert C., and Scott A. Neslin. (1989). "Sales Promotion: The Long and the Short of It," *Marketing Letters* 1, 81-97.
- Bowman, Russ. (1988). "Sales Promotion," *Marketing and Media Decisions* 23 (July), 150-154.
- Campbell, D. T., and D. W. Fiske. (1959). "Convergent and Discriminant Validation by the Multitrait-Multimethod Matrix," *Psychological Bulletin* 56, 81-105.
- Dodson, Joe A., Alice Tybout, and Brian Sternthal. (1978). "Impact of Deals and Deal Retraction on Brand Switching," *Journal of Marketing Research* 15 (February), 72-81.

- Gabor, Andre, and C. W. J. Granger. (1966). "Price as an Indicator of Quality: Report of an Enquiry," *Economica* 33 (February), 43-70.
- Gerstner, Eitan. (1985). "Do Higher Prices Signal Higher Quality?" *Journal of Marketing Research* 21 (May), 109-115.
- Guadagni, P., and John D. C. Little. (1983). "A Logit Model of Brand Choice Calibrated on Scanner Data," *Marketing Science* 2 (Summer), 203-238.
- Huber, Joel, and John McCann. (1982). "The Impact of Inferential Beliefs on Product Evaluations," *Journal of Marketing Research* 19 (August), 324-333.
- Monroe, Kent B. (1973). "Buyers' Subjective Perceptions of Price," *Journal of Marketing Research* 10 (February), 70-80.
- Monroe, Kent B. (1979). *Pricing: Making Profitable Decisions*. New York: McGraw Hill.
- Neslin, Scott A., and Robert W. Shoemaker. (1989). "An Alternative Explanation for Lower Repeat Rates after Promotion Purchases," *Journal of Marketing Research* 26 (May), 205-213.
- Ortmeyer, Gwen, James M. Lattin, and David B. Montgomery. (1991). "Individual Differences in Response to Consumer Promotions," forthcoming. *International Journal of Research in Marketing*.
- Rothschild, Michael L., and William C. Gaidis. (1981). "Behavioral Learning Theory: It's Relevance to Marketing and Promotions," forthcoming. *Journal of Marketing* 45 (Spring), 70-78.
- Rothschild, Michael L. (1987). "A Behavioral View of Promotions' Effects on Brand Loyalty," In M. Wallendorf and P. Anderson (eds.), *Advances in Consumer Research*. Association of Consumer Research, 14, 119-120.
- SAS Institute. (1988). *SAS User's Guide: Statistics*. Cary, North Carolina.
- Sawtooth Software. (1986). *ci2 System for Computer Interviewing*. Ketchum, ID.
- Scott, Carol A. (1976). "The Effects of Trial and Incentives on Repeat Purchase Behavior," *Journal of Marketing Research* 13 (August), 263-269.
- Sawyer, Alan G., and Peter Dickson. (1984). "Psychological Perspectives on Consumer Response to Sales Promotion," In Katherine Jocz (ed.), *Research on Sales Promotion: Collected Papers*. Cambridge, MA: Marketing Science Institute.
- Spence, M. (1974). *Marketing Signalling*. Cambridge, MA: Harvard University Press.
- Tenowitz, Ira. (1988). "Coupons Gain Favor with U.S. Shoppers," *Advertising Age* 64 (November 14).
- Tybout, Alice M., and Carol A. Scott. (1983). "Availability of Well-Defined Internal Knowledge and the Attitude Formation Process: Information Aggregation versus Self Perception," *Journal of Personality and Social Psychology* 44, 474-479.
- Urbany, Joel E., William O. Bearden, and Dan C. Weilbaker. (1988). "The Effect of Plausible and Exaggerated Reference Prices on Consumer Perceptions and Price Search," *Journal of Consumer Research* 15 (June), 95-110.
- Winer, Russell S. (1986). "A Reference Price Model of Brand Choice for Frequently Purchased Products," *Journal of Consumer Research* 13 (September), 250-256.