

The Effect of Framing on the Choice of Supermarket Coupons

William D. Diamond, University of Massachusetts
Abhijit Sanyal, University of Massachusetts

ABSTRACT

One of the most interesting implications of Prospect Theory is that choices are affected by whether the alternatives are framed as gains or as reduced losses. The framing of sales promotions should affect whether they are chosen by consumers. This paper presents the results of a field experiment demonstrating that supermarket shoppers presented with redeemable coupons were significantly more likely to choose a test promotion if it were framed as a gain than if it were framed as a reduced loss. Other factors affecting the desirability of sales promotions are discussed.

INTRODUCTION

If consumers evaluated sales promotions in the straightforward way described by multiattribute attitude models (Sawyer and Dickson, 1984), they would ignore the details of the presentation of promotional offers, and concentrate on the computed values of the offers. Two coupons offering identical amounts off of the same purchase would not be evaluated differently. Yet decision making in other domains is affected by variations in the format of the information presented (Payne, 1982). It would be surprising if the evaluation of coupons and other promotions were not affected by presentational factors.

Prospect theory (Kahneman and Tversky, 1979; 1984) is one of the most important descriptive theories of choice under risk. One of prospect theory's interesting consequences is that people's choices of risky alternatives are affected by how the alternatives are framed. When alternatives are framed as gains subjects make less risky choices than when the alternatives are presented as reduced losses.

Kahneman and Tversky originally used civil defence problems to demonstrate framing effects. Subjects took fewer risks when the alternatives were presented as lives saved (framed as gains). They took more risks when the same alternatives were presented as reductions in lives lost. Prospect theory's value function allows the prediction that a gain of 200 lives (saved) feels like it makes more difference than a reduced loss from 600 to 400 deaths.

The framing of alternatives affects choices in other domains. McNeil, Pauker, Sox and Tversky (1982) showed that the framing outcomes in terms of probability of survival or dying affected the hypothetical medical treatments chosen by physicians and their patients. Levin and Gaeth (1988) showed that whether meat was described in terms of percent fat or percent lean made a difference in whether it was chosen by consumers.

Over the past few years, consumer researchers have adopted part of this theory to hypothesize consumer preferences. Thaler (1985) first used

pieces of prospect theory to predict that consumers would prefer segregated gains to reduced losses in their buying decisions. Thaler argued that rebates were valued because the rebate check, separated physically and temporally from the purchase process, was perceived to be a gain rather than a reduction in cost. Thaler also argued that the car purchaser had hedonic motives for thinking of the rebate check as a separate gain. (Consumers may have now learned to integrate rebates with the original price of the item, especially since many retailers emphasize the cost of the item after rebate.)

If we adopt Thaler's perspective, it is straightforward that if two sales promotions have the same monetary value, the promotion which is framed by the consumer as a gain will "feel" more valuable than a promotion framed as a reduced loss. There are no published tests of this hypothesis. The purpose of this paper is to present evidence, from a study of consumers in a shopping situation, that sales promotions framed as gains are chosen more often than promotions framed as reduced losses.

It is not obvious what makes consumers frame a particular promotion as a gain or as a reduced loss. For instance, in early 1989 Payday candy bars were promoted by a message on the wrapper stating "free 5 cents inside". (We can verify that a nickel was included with the candy bar inside the wrapper.) It is our intuition that consumers are more likely to perceive the nickel as a gain than they would be to perceive a promotion offering 5 cents off the regular purchase price. Sweepstakes may also be perceived as (potential) gains rather than mere reductions of the the purchase price of the product.

One factor which has been robust in affecting the framing of sales promotions is whether the promotion is monetary or nonmonetary (Diamond and Campbell, 1988; Campbell and Diamond, 1989). Diamond and Campbell found that subjects in a laboratory simulation integrated monetary promotions (such as discounts) with the reference price to modify the reference price. Nonmonetary promotions (such as free goods or extra amounts of the product) were segregated from the reference price of the product and did not affect it. Campbell and Diamond's subjects rated nonmonetary promotions as making them feel that they are "gaining something extra". In contrast, subjects rated monetary promotions as making them feel that they were "losing less than usual". In short, nonmonetary promotions are framed as gains and monetary promotions are framed as reduced losses. Several other researchers (Klein and Oglethorpe 1987; Monroe and Chapman 1987; Puto 1987; Rowe and Puto 1987) have studied the effects of framing on different aspects of consumer information processing. These researchers do not consider the

implications of differences in the framing of sales promotions.

To determine whether framing affects the choice of sales promotions, it would be useful to test two versions of the same promotion. In one version, the promotion would be described as a monetary promotion (framed as a reduced loss); in the other version the promotion would be described as nonmonetary (framed as a gain). Our hypothesis is stated as follows:

If consumers are given the choice between a test promotion and some other promotion, the test promotion is more likely to be chosen when it is framed as a gain than when it is presented as a reduced loss.

EXPERIMENTAL STUDIES

Experimental Setting and Subjects

To maximize external validity, we conducted the study in a field setting with nonstudent subjects. Subjects were shoppers in an independent supermarket in a college town in the northeast. Subjects in different experimental conditions were asked to choose between different pairs of store coupons and allowed to keep and redeem the coupons they chose.

Stimuli

To understand the stimuli, it is important to consider several variables which could confound the effects of framing. If the nonmonetary promotions chosen utilized extra amounts of product, the offer might be disliked because subjects might not wish to inventory a larger amount of the product; because of concerns for product freshness; or because of boredom with consuming added quantities of the same brand or product. These problems have nothing to do with framing. Similarly, if a nonmonetary promotion utilized a premium, the value of the offer could be diminished if subjects did not value the particular premium. It is not plausible that all subjects would like *all* premiums of a given magnitude more than an equivalent discount (who wants free cat food if they don't own a cat?). Finally, a subject with a tight budget might use the heuristic "maximize cash flow" to evaluate promotions. This would lead subjects to prefer monetary promotions regardless of how promotions are framed.

To remove these potential confounds, we used two versions of a single promotion (see Figure 1). Throughout this paper, this promotion will be referred to as the *test* promotion. In the nonmonetary (framed as gain) version of the test promotion (Figure 1A), the subject obtains a free can of Campbell's soup with the purchase of Prego spaghetti sauce. In the monetary (framed as reduced loss) version of the test promotion (Figure 1B), the subject receives a discount at the cash register with the purchase of *both* the spaghetti sauce and the soup. Shoppers redeeming the two versions of the test promotion spent identical amounts of money, obtained identical amounts of the same products, and

were given identical pricing information. The retail prices of the items, marked on the coupons, were the actual store prices of the items.

The Comparison Offers

Many informally run pilot subjects comparing the two versions of the test offer in Figure 1 rapidly realized that they were equivalent offers. People aware of this were usually indifferent between the two (although they did express how they "might feel" if they had to choose an offer). Therefore, to see if the forms of the offer affected preference, we asked subjects to choose between *one* version of the test offer, and a different offer consisting of a cash discount on Prego spaghetti sauce. These offers will be referred to as *comparison* offers. One comparison offer is presented in Figure 1c.

Preliminary work.

This study was conducted in the lobby of a local independent supermarket. 33 shoppers, who had been paid \$1 for answering a short questionnaire (a different study), chose between two coupons. They were told that they could keep and redeem the coupon they chose.

The study was a two group experimental design. Subjects were randomly assigned to see one of the two versions of the test offer. This was the only experimental manipulation. Subjects were asked to choose between this version of the test offer and a comparison offer consisting of a 35 cent discount on Prego spaghetti sauce. The experimental conditions are diagrammed in Figure 2.

Results and Discussion of the Preliminary Work

Despite the fact that the percentage saving was slightly greater for the test offer (20.6%) than for the 35 cent discount presented in the comparison offer (18.5%), an overwhelming majority (28 of 33 subjects) chose the discount offered in the comparison offer. Not enough subjects chose the test offer to analyze the importance of framing in affecting choice. While the experimenters did not solicit reasons for the choice, the usual reasons spontaneously given were a preference for cash over Campbell's Tomato and Rice Soup, and a dislike of the soup.

According to the theory presented above, the 35 cent discount would be framed as a reduced loss. However, it was chosen far more than the test offer regardless of how the test offer was framed. These preliminary results were consistent with the ideas discussed above, that monetary offers are valued and that the specific premium may affect desirability as much or more than the framing of an offer.

The Main Study

To be able to detect differences in preferences resulting from the framing of the test offer, we "tuned" the stimuli in the preliminary study by reducing the value of the comparison offer from 35 cents to 25 cents. Again, subjects were randomly

FIGURE 1
COUPONS USED IN THE STUDIES

LU-947

**PURCHASE A LARGE JAR OF
PREGO SPAGHETTI SAUCE**
Regularly \$1.89
**AND GET A CAN OF
CAMPBELL'S TOMATO AND RICE SOUP**
Regularly 49 cents
FREE
THIS IS A STORE COUPON WHICH WILL NOT BE DOUBLED

(A) The test offer framed as a gain

LU-947

**PURCHASE A LARGE JAR OF
PREGO SPAGHETTI SAUCE**
Regularly \$1.89
**AND
A CAN OF
CAMPBELL'S TOMATO AND RICE SOUP**
Regularly 49 cents
AND GET 49 CENTS OFF THE TOTAL
THIS IS A STORE COUPON WHICH WILL NOT BE DOUBLED

(B) The test offer framed as a reduced loss

LU-947

**GET 25 CENTS OFF IF YOU PURCHASE
A LARGE JAR OF
PREGO SPAGHETTI SAUCE**
Regularly \$1.89

THIS IS A STORE COUPON WHICH WILL NOT BE DOUBLED

(C) One version of the comparison offer

FIGURE 2
Experimental Conditions in the Preliminary and Main Studies

<u>Gain Condition</u>	<u>Reduced Loss Condition</u>
Choose between:	Choose between:
Free Soup worth 49 cents with purchase of Prego ¹ (version A of test offer)	49 cents off Purchase of Both Prego and Soup ¹ (version B of test offer)
and	and
A smaller discount on Purchase of Prego ² (comparison offer)	A smaller discount on Purchase of Prego ² (comparison offer)

¹paying \$1.89 for \$2.38 worth of merchandise. Saving 20.6%.

²In the preliminary study, the discount was 35 cents (18.5%). In the main study, the discount was 25 cents (13.2%).

assigned to choose between one version of the test offer and the 25 cent discount in the comparison offer. The procedures of the study were otherwise unchanged.

Results of the Main Study

Seventy three shoppers made a choice between a version of the test offer and the comparison offer. Table 1 presents the choices of the subjects in the different experimental conditions.

Different proportions of subjects chose the test offer and the comparison offer in the different experimental conditions, $\chi^2(1) = 6.13$, $p < .05$. More than half of the subjects seeing the test offer framed as a gain chose the test offer rather than the comparison offer. Almost three quarters chose the comparison offer when the test offer was framed as a reduced loss.

DISCUSSION

The framing interpretation of the results.

Kahneman and Tversky presented framing as a factor affecting choice. Here, choices of sales promotions were determined by how they were framed. The results presented here are consistent with the theory that framing affects the desirability of sales promotions. Formally, the two versions of the test offer were equivalent, both in terms of the utility of the coupon and in terms of the information presented to the consumer. Yet the offer apparently felt more desirable and was chosen more often when it was presented as a potential gain in the form of a free good.

Other interpretations of the results. There are other possible reasons why the nonmonetary version of the test promotion was chosen more than the monetary version. One reason invokes an information processing perspective. A second alternative cause of the results is reactance theory.

Both versions of the test promotion contained identical information. To use an information processing perspective to explain why one version was preferred more than the other, one would have to posit reasons why the information had different salience in the two experimental conditions. For instance, one might reason that consumers are most likely to use simple heuristics for evaluating sales promotions in some situations.

One analogy which may help to explain this is Kahneman and Tversky's (1979) description of the "certainty effect". This may be seen as a heuristic leading to the increased preference for risky alternatives with probability 1. Of course, certainty is as good a probability as you can have--it is at the top of the bounded interval from zero to one. Similarly, free goods are at the upper boundary of possible discounts. Therefore, consumers may invoke the simple heuristic that "if something free is offered, the promotion must be good." The explicitly free can of soup offered in the nonmonetary version of the test promotion might trigger this heuristic; the monetary version would not.

This explanation is only subtly different than the hypothesized effects of framing described in this paper. The heuristic might be described as evaluating the free good positively because it is a clear gain. Johnson, Payne and Bettman (1988) argue that when choice alternatives are complex looking or difficult to process, people are more likely to employ simple decision heuristics for evaluation or choice. Because it may be more difficult to integrate a premium with the reference price than it is to integrate a discount with a reference price, consumers offered a premium may be more likely to employ simple heuristics which positively evaluate the promotion.

TABLE 1
Subject Choices in the Experiment

	Test Offer	Comparison Offer
Test Offer Framed As Gain (Free Soup)	20	16
Test Offer Framed As Reduced Loss (Buy Both)	10	27

Reactance theory (Lessne and Notarantonio, 1988) posits that people become very stubborn and rebellious if they believe that they are being coerced or that their freedoms are threatened. If consumers felt that the nonmonetary version of the test promotion was forcing them to purchase two products in order to get a discount, they might feel reactance and reject the promotion without thoroughly evaluating it. This would not occur as readily when the free can of soup was given with the purchase of a single item. Verbal protocol data might provide a good test of the degree to which reactance causes the results seen in this study. In general, protocol data could be used in future studies to clarify the heuristics which consumers use to evaluate sales promotions.

CONCLUSION

Two conclusions may be drawn from the research reported here. First, sales promotions which are framed as gains do appear more desirable than those framed as (merely) reduced losses. Secondly, the desirability of a sales promotion is determined by factors other than how it is framed. After all, the coupon offering a 25 cent discount on Prego spaghetti sauce offered a substantially smaller percent off than either version of the test offer; and was a "reduced loss" according to the criteria described in this paper. Yet it was chosen more than 50% of the time by the subjects in the main study. It will be of interest and value to determine the strategies and heuristics which consumers use to evaluate sales promotions, and whether different groups of consumers use different heuristics.

There would be value in extending this research by determining other factors which lead consumers to frame promotions as gains or losses. Some determinants of framing, like the nickel packaged with the Payday bar or the sweepstakes discussed earlier, might be the attributes of the promotion itself. Other factors might be motivational or situational. We suspect that when the consumer frames the promotion as a gain, he or she will perceive real value in the offer, and be most satisfied with the purchase.

REFERENCES

- Campbell, Leland and William D. Diamond (1989), "Effects of Framing on the Perception of Sales Promotions." Paper presented at the Annual Conferences of the American Academy of Advertising, San Diego.
- Diamond, William D. and Leland Campbell (1988), "The Framing of Sales Promotions: Effects on Reference Price Change." Paper presented at the Annual Meeting of the Association for Consumer Research, Honolulu.
- Johnson, Eric J., John W. Payne and James R. Bettman (1988) Information Displays and Preference Reversals. *Organizational Behavior and Human Decision Processes*, 42, 1-21.
- Kahneman, D., & Tversky, A. (1979) Prospect theory: an analysis of decision under risk. *Econometrica*, 47, 263-291.
- Kahneman, D., & Tversky, A. (1984) Choices, values and frames. *American Psychologist*, 39, 341-350.
- Klein, Noreen M. and Janet E. Oglethorpe (1987), "Cognitive Reference Points in Consumer Decision Making," *Advances in Consumer Research*, Vol 14, Mellanie Wallendorf and Paul Anderson, eds., Provo, UT: Association for Consumer Research, 183-187.
- Lessne, Greg J. and Elaine M. Notarantonio (1988) The Effects of Limits in Retail Advertisements: A Reactance Theory Perspective. *Psychology and Marketing*, 5 (Spring) 33-44.
- Levin, Irwin P. and Gary J. Gaeth (1988) "How consumers are affected by the framing of attribute information before and after consuming the product", *Journal of Consumer Research*, 15 (December) 374-378.
- McNeil, B.J., Pauker, S.E., Sox, H.C., & Tversky, A. (1982) On the elicitation of preferences for alternative therapies. *New England Journal of Medicine*, 306, 1259-1262.
- Monroe, Kent B. and Joseph P. Chapman (1987), "Framing Effects on Buyers' Subjective Product Evaluations," *Advances in Consumer Research*, Vol 14, Mellanie Wallendorf and Paul Anderson, eds., Provo, UT: Association for Consumer Research, 193-197.

- Payne, John W. (1982), "Contingent Decision Behavior," *Psychological Bulletin*, 92, 382-402.
- Puto, Christopher P. (1987), "The Framing of Buying Decisions," *Journal of Consumer Research*, 14 (December), 301-315.
- Rowe, Debra and Christopher P. Puto (1987), "Do Consumers' Reference Points Affect Their Buying Decisions?", *Advances in Consumer Research*, Vol 14, Mellanie Wallendorf and Paul Anderson, eds., Provo, UT: Association for Consumer Research, 182-187.
- Sawyer, Alan G. and Peter R. Dickson (1984), "Psychological Perspectives on Consumer Response to Sales Promotion," in *Research on Sales Promotion: Collected Papers*, Katherine E. Jozs, ed. Cambridge MA: Marketing Science Institute, 47-62.
- Thaler, Richard (1985), "Mental Accounting and Consumer Choice," *Marketing Science*, 4 (Summer), 199-214.

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