

# *Journal of Consumer Research*

*An Interdisciplinary Quarterly*

## Articles

- |                                                                               |     |                                                                                                                    |
|-------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------|
| Richard P. Coleman                                                            | 265 | The Continuing Significance of Social Class to Marketing                                                           |
| Janet Wagner<br>Sherman Hanna                                                 | 281 | The Effectiveness of Family Life Cycle Variables in Consumer Expenditure Research                                  |
| Melanie Wallendorf<br>Michael D. Reilly                                       | 292 | Ethnic Migration, Assimilation, and Consumption                                                                    |
| Joel Rudd<br>Frank J. Kohout                                                  | 303 | Individual and Group Consumer Information Acquisition in Brand Choice Situations                                   |
| Meryl Paula Gardner                                                           | 310 | Advertising Effects on Attributes Recalled and Criteria Used for Brand Evaluations                                 |
| Michael R. Solomon                                                            | 319 | The Role of Products as Social Stimuli: A Symbolic Interactionism Perspective                                      |
| David Brinberg<br>Ronald Wood                                                 | 330 | A Resource Exchange Theory Analysis of Consumer Behavior                                                           |
| Nicholas M. Didow, Jr.<br>William D. Perreault, Jr.<br>Nicholas C. Williamson | 339 | A Cross-Sectional Optimal Scaling Analysis of the Index of Consumer Sentiment                                      |
| Jordan J. Louviere<br>David A. Hensher                                        | 348 | Using Discrete Choice Models with Experimental Design Data to Forecast Consumer Demand for a Unique Cultural Event |

## Research in Brief

- |                  |     |                                                                                     |
|------------------|-----|-------------------------------------------------------------------------------------|
| Z. S. Demirdjian | 362 | Sales Effectiveness of Comparative Advertising: An Experimental Field Investigation |
|------------------|-----|-------------------------------------------------------------------------------------|

# Research in Brief

---

## Sales Effectiveness of Comparative Advertising: An Experimental Field Investigation

Z.S. DEMIRDJIAN\*

Unlike previous studies that have measured comparative advertising effectiveness through such hypothetical constructs as beliefs, attitudes, and intentions, this experiment extends research by examining the impact of comparative advertising on purchase behavior. Results contradict the findings of previous research and show that comparative advertising outweighs its noncomparative counterpart in sales effectiveness.

In past laboratory experiments, researchers have attempted to measure the effectiveness of comparative advertising under the explicit or implicit assumption that attitudes and purchase intentions are the appropriate dependent measures (Etgar and Goodwin 1978, 1980; Golden 1975; Ogilvy and Mather 1975; Wilson 1976). Based on this model the conclusion has been drawn that comparative advertising is as effective as noncomparative advertising (i.e., the conventional format). Belch's 1981 study represents a minor departure from the dependence on attitudes and intentions as criterion variables for the effectiveness measurement. Belch used a cognitive response approach to explore the relative effects of one- and two-sided comparative and noncomparative commercials. Although results indicated "qualitative" differences in the mediating roles of cognitive responses for the two types of messages, no differential effects were found for attitude and purchase intention measures.

The purpose of this study is to explore the differential effects of comparative advertising by measuring the purchase behavior of consumers rather than intervening constructs. Specifically, this study undertakes to test the following hypothesis:

Purchase rate of a low cost product will be higher through a comparative advertising strategy providing objective information than through a conventional advertising strategy.

---

\*Z.S. Demirdjian is Associate Professor of Marketing, California State University at Long Beach, CA 90840. He would like to thank the anonymous reviewers for their insightful and helpful comments.

### METHOD

#### Subjects and Design

A sample of 273 undergraduate marketing students was randomly assigned to either comparative or conventional advertisement treatments based on actual ads for two similar ballpoint pens, Scripto and Paper Mate. The objective information in the ads included selected attributes of both products (such as carbide point vs. nylon point, price, writing performance—skips or does not skip, supply of ink). These two brands were selected because they represented a common product category: they are low in price (98 cents), relatively undifferentiated, and advertise similar product benefits.

All of the advertisements contained the objective information, regardless of the brand of pen and type of advertisement. The comparative and the conventional ad for Scripto included statements about the same number and kind of attributes. The major difference between the two types of advertisements was the naming of the competitor: the comparative ad stated that Scripto has a hard, rough textured carbide ballpoint that writes on any surface and will not skip under any circumstances, while Paper Mate has a nylon point which wears out quickly. The conventional advertisement for Scripto placed the same attributes in a "normative" form: Scripto has a hard, rough textured carbide ball point that writes on any surface and will not skip under any circumstances. In an effort to equalize experimental conditions, the conventional advertisement for Paper Mate contained the same number of attributes used to describe Scripto.

**TABLE 1**  
SALES AND COMPARATIVE VS. CONVENTIONAL  
ADVERTISING

	Scripto	Paper Mate	Total
Comparative ad	84	25	109
Conventional ad	23	42	65
Total	107	67	174

### Experimental Procedure

Part of the experiment was conducted in the classroom and part occurred in the marketplace. The classroom part of the experiment consisted of exposing both treatment groups to a portfolio of advertisements. To hedge against possible reactive arrangement due to a somewhat artificial setting that would bias results, the subjects were told a cover story: as a pretext, they were asked to participate in a study to determine the feasibility of direct marketing of school supplies to college students. The inclusion of experimental and filler advertisements was explained by stating that the companies interested in direct marketing wished to compensate the participants of the study with a product for their time and suggestions and that since the companies offered a number of competing products, advertisements were included to provide information for product selection.

After reading the material individually, subjects were asked to complete a questionnaire on the cover story. Finally, each subject was given a coupon at a 40 percent discount of the retail price toward the purchase of either a Scripto or a Paper Mate ballpoint pen. Each brand of pen happened to be identically priced at 98 cents. Subjects were told that they could redeem the coupons at the university bookstore. The experimental pens were displayed in separate boxes at the pen counter of the store, as they have been customarily merchandized.

The two advertising treatments were administered to students who were enrolled in one of four marketing classes scheduled at the same time. Each student was randomly given one of the following:

1. *The comparative treatment:* A portfolio of advertisements containing one comparative advertisement favoring Scripto over Paper Mate, one conventional advertisement favoring Paper Mate, and two filler advertisements about two kinds of dictionaries (one comparative and one conventional).
2. *The conventional treatment:* A portfolio of advertisements containing the same conventional advertisement favoring Paper Mate, two conventional filler advertisements, and instead of a comparative advertisement, a conventional advertisement favoring Scripto.

To collect data on the purchase behavior, each subject was asked to write his or her name on the coupon, and the clerks at the University Bookstore were instructed to verify the name appearing on the coupon against the student's ID to avoid redemption by nonexperimental subjects. More-

**TABLE 2**  
COUPON REDEMPTION AND NONREDEMPTION UNDER  
COMPARATIVE AND CONVENTIONAL TREATMENT

	Comparative treatment	Conventional treatment	Total
Scripto	84	23	107
Paper Mate	25	42	67
No purchase	33	66	99
Total	142	131	273

over, the clerks at the checkout counter were instructed to circle on the coupon the purchased brand. Such a procedure made it possible to keep track of the experimental subject's purchased brand of pen. To eliminate any possible order effect, half of the coupons were printed with Scripto first and Paper Mate second, and vice versa.

### RESULTS AND DISCUSSION

Sales was used as the dependent variable in a series of chi square analyses. A total of 174 (64 percent) coupons were redeemed. Of the students exposed to the comparative advertising portfolio, 48 percent purchased Scripto and 15 percent purchased Paper Mate pens. Of the students exposed to the conventional advertising portfolio, 13 percent bought Scripto and 24 percent bought Paper Mate. The data is shown in Table 1. Statistical analysis of the data resulted in a  $\chi^2$  of 29.99 (1 *df*,  $p < 0.001$ , corrected  $\chi^2 = 29.92$ ) supporting the hypothesis.

It should be pointed out that the differences in coupon redemption are substantial: in the comparative advertising treatment group, 33 students (12 percent) abstained from coupon redemption, while in the conventional advertising group 66 students (24 percent) abstained (see Table 2).

Inasmuch as the incidence of nonredemption rates is high, the Brandt-Snedecor method of partitioning the total  $\chi^2$  was employed to make independent comparisons to increase our confidence in the results (Batson 1956). The first comparison of total coupon redemption for Scripto and Paper Mate versus total nonredemption resulted in a  $\chi^2$  of 21.73 (1 *df*,  $p < 0.001$ ); the second comparison of Scripto redemption versus Paper Mate redemption resulted in a  $\chi^2$  of 28.03 (1 *df*,  $p < 0.001$ ). Here again, a significant relationship is shown between the two treatments. When conventional advertisements for both brands were presented, subjects preferred Paper Mate to Scripto. But under the comparative advertisement treatment, purchase of Scripto increased dramatically, as did total sales.

### CONCLUSION

In drawing conclusions from this research, one must be cognizant of possible limitations of the measures. Although the conventional and the comparative treatments contained the same general product attributes, evaluative comparisons of attributes in the comparative treatment may well have

persuaded the subjects to purchase Scripto (e.g., the carbide ballpoint doesn't wear out as quickly as the nylon point used by Paper Mate). Only if the respondents knew these relations a priori might we consider that the two types of advertisements presented the same information to the respondents. Furthermore, confidence in the results could have been enhanced had we made both experimental brands (Paper Mate and Scripto) the preferred pen for different subjects rather than only Scripto. Thus corroborating evidence would have been obtained in the same study on the sale effectiveness of the comparative advertising treatment.

The results of this study do suggest, however, that comparative advertising may have a strong influence on purchase behavior, contradicting the results of previous research using attitudes and "intentions to buy" as a surrogate measure of actual purchase. The results are consistent with the reports of successful practices of comparative advertising from the marketplace (Tannenbaum 1976), which state that comparative advertising does increase sales for the sponsor.

[Received May 1982. Revised August 1983.]

### REFERENCES

- Batson, H. C. (1956), *An Introduction to Statistics in the Medical Sciences*, Minneapolis: Burgess Publishing, 45.
- Belch, George E. (1981), "An Examination of Comparative and Noncomparative Television Commercials: The Effects of Claim Variation and Repetition on Cognitive Response and Message Acceptance," *Journal of Marketing Research*, 18 (August), 333-349.
- Etgar, Michael and Stephan Goodwin (1978), "An Experimental Investigation of the Communications-Effectiveness of the Sidedness of Comparative Message Appeals, Information Load, and Utility of Product Class," Working Paper No. 360, School of Management, State University of New York at Buffalo.
- and Stephan Goodwin (1980), "An Experimental Investigation of Comparative Advertising: Impact of Message Appeal, Information Load, and Utility of Product Class," *Journal of Marketing Research*, 17 (May) 187-202.
- Golden, Linda L. (1975), "Consumer Reaction to Direct Brand Comparisons in Advertisement," unpublished dissertation, University of Florida, Gainesville, FL 32611.
- Ogilvy and Mather International, Inc. (1975), "The Effects of Comparative Television Advertising that Names Competing Brands," unpublished paper, 2 East 48th St., New York, NY 10017.
- Tannenbaum, Stanley I. (1976), "For and Against Comparative Advertising," *Advertising Age*, 47 (27), July 5, 25-29.
- Wilson, R. Dale (1976), "An Empirical Evaluation of Comparative Advertising Messages: Subjects, Responses on Perceptual Dimensions," in *Advances in Consumer Research*, Vol. 3, ed. Beverlee B. Anderson, Ann Arbor, MI: Association for Consumer Research, 53-57.