

Applying Social and Traditional Marketing Principles to the Reduction of Household Waste

Turning Research Into Action

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This article provides an overview of past research on household waste management, particularly research that pertains to recycling and to green buying. The authors discuss social marketing principles and make suggestions as to how past research might be applied toward increasing recycling behavior in communities. They also discuss traditional marketing strategy and tactics in the context of selling products based on pro-environmental positionings or attributes, and make suggestions of how past research on green buying can be applied to encourage green buying practices.

So everyone's an environmentalist. Or so they say. Results of numerous polls indicate that Americans are definitely "green." In a poll by J. Walter Thompson, over 80% of respondents indicated that they would pay more for an environmentally friendly product (Levin, 1990); 70% to 90% of respondents indicated that they are concerned with or influenced by the environmental impact of their purchases (cf. Chase & Smith, 1992; Cramer, 1991). As both Dunlap and Scarce (1991) and Hastak, Horst, and Mazis (1994) have documented, the trend has moved upward in recent years in terms of support for environmental protection. A number of indicators provide converging results: The incidence of people citing environmental protection as the most important issue has recently risen, environmental problems have increasingly been viewed as threats to quality of

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AMERICAN BEHAVIORAL SCIENTIST, Vol. 38 No. 4, February 1995 646-657

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life, support for government action has increased, and the perception of the seriousness of environmentally related problems has risen (for a thorough account of these trends, see Dunlap & Scarce, 1991).

Given these findings, one might be inclined to ask, Where does the problem lie? It appears that everyone is on the same track, so a quick route to a clean, beautiful, human- and animal-friendly environment should be inevitable. Yet that does not appear to be the case. Both social marketers (i.e., those attempting to increase acceptance of environmental programs requiring voluntary behavior) and traditional marketers (i.e., those selling products by emphasizing pro-environmental attributes) point to the fact that, poll results aside, both voluntary compliance and purchase of green products are decidedly less than impressive.

In other words, what people say and what people do, do not always correspond. Of course, this is nothing new to anyone who studies human behavior. The relatively poor diagnosticity of attitudes (or any single psychological construct) as predictors of behavior has puzzled social scientists for decades. However, recent developments in attitude research have focused on understanding the conditions under which a greater attitude-behavior correspondence may be expected.

This line of research is but one example of recent findings that have implications for both social marketers and traditional marketers. Clearly, both types of marketers must delve deeper than drawing conclusions from simple correlations (or lack thereof) between polling data and either voluntary behavior (e.g., recycling) or market behavior (e.g., buying green). With this in mind, our purpose for this article is to provide an overview of the research that has implications, both directly and indirectly, for social and traditional marketers, and to provide suggestions for applying these research findings to solve environmental problems. Because a full discussion of all environmental research is beyond the scope of this article, we have confined our discussion to the area of household waste management. For our purposes, this area refers not only to recycling but also to particular types of green buying that relate to waste reduction, such as buying products in reduced packaging, buying products that are recyclable, and buying products made from recycled materials.

SOCIAL MARKETING ISSUES

Because the issues of recycling and buying green involve persuasion to produce behavioral change, research in these areas has primarily taken a psychological perspective. However, we contend that a marketing perspective is also important (Shrum, Lowrey, & McCarty, 1994). Certainly, the perspectives are not mutually exclusive: In fact, marketing often involves application of psychological principles. What a marketing perspective offers is an integration of ideas into a strategy for problem solving.

Kotler and Zaltman (1971) have defined social marketing as the "design, implementation, and control of programs calculated to influence the accept-

ability of social ideas and involving considerations of product planning, pricing, communication, distribution, and marketing research" (p. 5). This definition suggests that the marketing of social ideas employs techniques that firms traditionally use in marketing their products.

In relating this concept of social marketing to recycling, we have argued that community recycling programs are analogous to products (Shrum et al., 1994). The goal of these programs is to sell a voluntary behavior to particular individuals (targets). In selling this behavior, just as with any product, each component of the marketing mix must be managed. In the case of recycling, product issues relate to the nature of the recycling program being offered, with some programs being more complex than others (i.e., some take few materials, others take many; some require source separation, some do not). Price issues relate to the cost to the individual in terms of time, inconvenience, and cognitive effort. Distribution may be thought of as the method by which the consumer delivers the recyclables to the recycling facility (e.g., curbside pickup or central drop-off site). Promotions refer to any type of activity that communicates with the consumer, such as advertising, contests, and sweepstakes.

Viewing recycling compliance as a marketing problem has two particular benefits. First, it provides an organizing framework for categorizing previous research on recycling. Second, this framework allows for the easy flow of information into the development of a cohesive strategy to increase recycling behavior.

It is important to note, however, that recycling compliance is only one part of the recycling "loop." It is one thing to remove materials from landfill designation and put them into the recycling stream. But if companies have no incentive to use the recycled materials when "remanufacturing" products and packaging, then the recyclables will accumulate, with the end result that we have simply created two places to store solid waste (landfills and recycling centers) rather than achieving any net reduction in solid waste. On the other hand, if consumers demand products that use recycled materials, that are recyclable, or both, then economic theory assures us that companies will supply such products.

Figure 1 depicts how "closing the loop" works. After consumers purchase, use, and then recycle the qualifying materials, the materials must then be used to manufacture new products to reenter the consumer purchase/use-disposal-recycle loop. If this does not occur, the loop remains open. Clearly, the manufacturer must have incentives to use recycled materials in making new products. This incentive may come from consumer demand, as consumers "pull" the product through the distribution channel. Alternatively, incentives may come from regulatory measures that mandate using recycled materials in product manufacture, thereby "pushing" the product through the distribution channel.

Note also in Figure 1 that recycling research and green buying research are concerned with different parts of the loop. Clearly, each is important in understanding how to promote the behavior involved in the particular part of the loop.

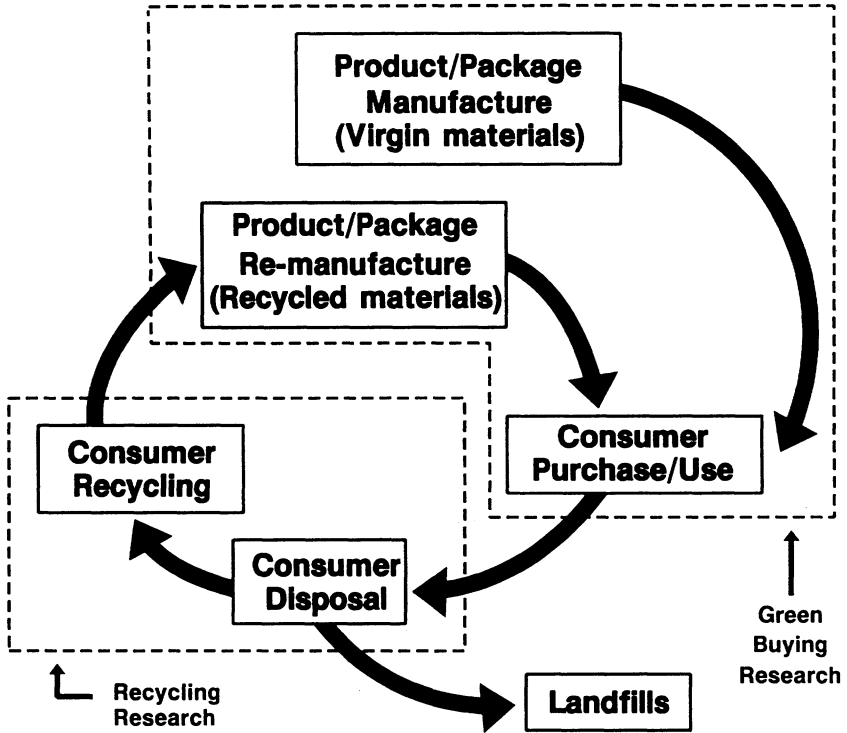


Figure 1: Closing the Recycling Loop: How Virgin and Recycled Materials Pass Through the Materials Life Cycle.

Toward this end, we provide a review and synthesis of past research on both recycling and buying green. The review of recycling research is organized around the different elements of the marketing mix and focuses on *disposal behavior* issues. Suggestions regarding how the research findings might be integrated into marketing strategy to promote recycling are presented. The review of green buying looks at the latest findings on the nature of *purchase behavior* with regard to green products and provides suggestions as to how marketers may address the needs of green buyers.

RECYCLING RESEARCH

CONSUMER RESEARCH

One of the most heavily researched areas of recycling deals with characteristics of the recycler. In marketing research, demographic and psychographic information guides the marketer about who to talk to (segmentation and target-

ing) and how to talk to them (communication strategies). In terms of the relation of demographic variables (e.g., age, income, gender) to recycling, the results appear contradictory. Earlier studies have tended to find some relation between certain demographics and recycling. Age was typically found to be negatively correlated with recycling behavior, and income was positively correlated. However, more recent studies have often found little or no relation (for reviews, see Schwepker & Cornwell, 1991; Shrum et al., 1994; Van Liere & Dunlap, 1980). This trend is not surprising in that as recycling becomes diffused throughout a community, demographic differences may disappear. This may be especially true in states that have passed mandatory recycling statutes.

Psychographic information, unlike demographics, tells us about the internal make-up of individuals. Such information is important to marketers because it allows them to understand the motivations of the consumer—that is, why consumers behave as they do. In terms of which psychographic variables are related to recycling, the research suggests that three constructs are important: attitudes, values, and traits.

Attitudes have often been characterized as relatively poor predictors of behavior. This is consistent with the contentions of both marketers and pollsters that attitude and public opinion are not very predictive of behavior. However, recent developments in attitude research, and specifically in attitude research related to recycling, have provided new perspectives on the attitude-behavior relation. This research has focused on the conditions in which attitudes tend to drive behavior, and the results suggest that the simple valence of the attitude is not sufficient information. One also needs to know the strength of these attitudes: Strong attitudes tend to be better predictors of behavior than weak attitudes (see Fazio, 1989). A few studies have found this to be the case with recycling, where stronger attitudes, measured via accessibility, tend to be better predictors of self-reported recycling behavior (Berger, 1993; Smith, Haugtvedt, & Petty, 1994).

Attitude research has also found that attitude-behavior correspondence is highest when the attitudes and behaviors are measured at the same level of specificity (Fishbein & Ajzen, 1974). Specific attitudes toward recycling are likely to be linked to specific recycling behaviors but may not be linked to other pro-environmental behaviors. Similarly, general pro-environmental attitudes may not predict specific behaviors such as recycling, but when behavior is measured using multiple indicators of pro-environmental behavior (e.g., energy and water conservation, recycling, etc.), the attitude-behavior correspondence will typically be greater. This notion was confirmed in studies by Weigel and Newman (1976) and Smith et al. (1994).

A number of studies have also indicated that the values people hold are related to recycling. Values are different from attitudes in that they are more global, abstract beliefs and are neither object nor situation specific. Research has shown that the propensity to recycle is positively related to the importance of values such as helpfulness and accomplishment (Batson, Bolen, Cross, & Neuringer-Benefiel, 1986), frugal living (DeYoung, 1985-1986), self-actualization and

aesthetics (Dunlap, Grieneeks, & Rokeach, 1983), and respect and achievement (McCarty & Shrum, 1993). Additionally, McCarty and Shrum (1994a, 1994b) have found a collectivistic value orientation to be positively related to recycling.

Traits, or stable characteristics of individuals, have also been linked to pro-environmental behaviors. Specifically, locus of control has shown very consistent relations with environmental concern (Henion & Wilson, 1976) and green purchase intent (McCarty & Shrum, 1994a; Schwepker & Cornwell, 1991). Those who display an internal locus of control (i.e., those who believe that they have control over events and that their actions make a difference) engage in more pro-environmental behaviors. This relation has received additional support in the research on perceived consumer effectiveness—a domain-specific belief that individuals' actions make a difference in particular consumption situations. This research has shown that perceived consumer effectiveness is positively related to pro-environmental behaviors (Berger & Corbin, 1992; Ellen, Wiener, & Cobb-Walgren, 1991).

So what does all of this consumer research tell us? First, if one wants to assess attitudes to infer recycling behavior, one should (a) assess attitudes about recycling rather than general environmental attitudes and (b) make some attempt to determine the strength of the attitudes being measured. Second, research on values and traits suggests that certain beliefs are linked to pro-environmental behaviors in general, and recycling in particular. As one might expect, those who feel their actions make a difference are likely to recycle. Clearly, promotional activities should emphasize in very concrete terms the effects of recycling. This may be accomplished on a specific level by providing feedback on recycling performance of a community (e.g., "we met our goal this month"). Such efforts may help combat consumers' perceptions of importance in terms of individual contributions to solving problems (see Ellen et al., 1991).

Combating feelings of individual powerlessness and ineffectiveness can also be accomplished on a more general level by providing information on what recycling has accomplished on a state or national level. Research on personal values can be applied to promotional campaigns that emphasize how particular values are being fulfilled through recycling efforts. Again, we emphasize that these persuasive communications should be as specific as possible.

PRODUCT, PRICING, AND DISTRIBUTION RESEARCH

With respect to issues of household waste management, we conceptualize price as the cost to the individual, including issues of time, inconvenience, and cognitive effort. We think of the product as the type of recycling program offered, with programs differing in terms of what is recyclable and how the recyclables are to be presented for pickup. We view distribution as the means by which recycled materials are delivered from the consumer to the recycling facility, such as curb-side pickup versus central drop-off sites. We have combined the product, pricing, and distribution functions because they are, in our view, inextricably entwined. The differences in recycling programs, in terms of

what gets recycled, how the recyclables are prepared for delivery, and how delivery occurs, are directly related to time and inconvenience.

The research clearly shows that inconvenience is a major barrier to recycling behavior, and the relation of inconvenience to recycling takes a number of forms. Studies have shown that merely increasing the number of recycling bins in a particular area (Reid, Luyben, Rawers, & Bailey, 1976) and providing source separation containers (Jacobs, Bailey, & Crews, 1984) increased recycling participation. A number of studies have also looked at consumer perceptions of inconvenience, and these studies have found that those who perceive more inconvenience or effort tend to recycle less (DeYoung, 1988-1989; McCarty & Shrum, 1993, 1994b).

Two things are worth noting from these results. First, it seems clear that there is a "critical mass" that level of convenience must attain to overcome inconvenience as a significant barrier to participation; the issue of curbside pickups versus community drop-off sites is a good example. It is intuitive that providing consumers with a recycling program that is basically as convenient as a waste disposal program is important. This notion is confirmed from interviews we conducted with coordinators of community recycling programs. Second, the results of research indicating that perceived inconvenience is a barrier to recycling have implications for promoting recycling. It is quite possible that these perceptions are not based on direct experience. One clear strategy would thus be to induce trial so that these perceptual barriers may be overcome. This may be accomplished through various promotions, which we discuss next.

PROMOTION RESEARCH

Promotions refer to efforts to communicate information about the product or service, and consist of four major components (the promotions mix): advertising, sales promotions, personal selling, and publicity. A number of studies have been conducted that we believe relate to these components, although the studies have typically not been conceptualized in marketing terms. These studies, often referred to as "applied behavior analysis," investigate the effect of intervention strategies and tactics aimed at increasing recycling. Examples include informational fliers and prompts (i.e., advertising), lotteries, raffles and contests (i.e., sales promotions), and door-to-door solicitations of verbal and written commitments (i.e., personal selling).

The results have been fairly consistent (for a complete review, see Shrum et al., 1994). Lotteries, raffles, and contests have generally been successful in increasing recycling behavior; however, once the promotions cease, recycling levels may return to the baseline level (Couch, Garber, & Karpus, 1978-1979). Additionally, the cost of the incentives generally outweigh the value of the recyclables (Jacobs et al., 1984). Advertising and informational fliers have been shown to increase recycling, but the effects have generally been quite small. Programs using block leaders, neighborhood volunteers who talk face-to-face

with residents and obtain commitments to recycle, have also been effective in increasing recycling (Burn, 1991).

Although it is often the case that evaluating one type of promotion technique in isolation often yields small effects and that a particular program alone may not be cost effective, these results do not necessarily suggest that the programs are not potentially useful. From a marketing perspective, and especially from an integrated communications perspective, the entire marketing or promotional package is the important variable, not each component in isolation. For example, marketers do not expect advertising to be overly effective in the absence of support from sales promotion and personal selling. Thus a combination of the various promotional techniques may in fact yield significant gains in terms of recycling compliance.

Overall, the results of past research suggest that a careful development of a promotional campaign, carried out over time, may prove beneficial. Periodic provision of information to explain recycling procedures (especially to new residents); participation in community events (e.g., Fourth of July celebrations, community festivals); periodic contests or raffles to increase interest, involvement, and trial; and organization of neighborhood volunteer groups may prove effective in the long run. Research that attempts to measure the cumulative impact of a particular promotional program would be extremely beneficial.

SUMMARY

The above discussion highlights the complexity of the problem of increasing recycling. At any given point in time, many individual, normative, and situational factors may influence a person's decision to recycle. We argue that applying a marketing perspective to the problem helps categorize these factors and provides a framework for addressing each in a systematic manner.

The research findings imply a number of courses of action. First, attention to the more fundamental problems, such as pricing and distribution, must occur before fine-tuning the promotional mix. Just as with any product, promotions typically cannot overcome shortcomings in other parts of the marketing mix. Second, emphasis on providing consumers with the knowledge to be good recyclers is essential. Recycling, even for experienced recyclers, is often difficult. For example, communities differ on what can be recycled, making it difficult to keep things straight for those moving from one community to another. Finally, steps to increase involvement at the community level (e.g., neighborhoods, condominium and apartment complex organizations) are important. Promotional efforts that operate within these smaller groups may in the end prove more effective than citywide efforts.

BUYING GREEN AND CLOSING THE LOOP

Most environmentalists realize that recycling is only a partial solution to the problem of solid waste. In fact, it addresses a symptom of the problem (how to

reduce solid waste disposal given a large amount of waste material) rather than the problem itself (we generate too much solid waste). Green buying addresses both. For our purposes, we have confined green buying to the purchase of products based on attributes that relate to solid waste reduction. Such product attributes would include being made out of recyclable materials, using reduced packaging, and being returnable.

Buying green is extremely important for at least two reasons. First, buying products that are packaged using a minimal amount of material and that are packaged in reusable or returnable containers reduces solid waste disposal apart from recycling. Second, as alluded to earlier, buying products that are made from recycled products closes the loop.

GREEN BUYING RESEARCH

A number of recent studies have looked at the relation of demographic and psychographic variables with green buying behavior. As one might expect, the results of these studies are similar to those discussed earlier when the dependent variable was recycling. Perceived consumer effectiveness has been found to be positively related to the propensity to buy green (Berger & Corbin, 1992; Ellen et al., 1991), attitude strength moderates the relation between environmental attitudes and intention to purchase environmentally friendly products (Berger, 1993), and attitudes and locus of control discriminate between consumers who have high and low intentions to purchase ecologically packaged products (Schwepker & Cornwell, 1991).

In a departure from the typical psychosocial variables that have been investigated, Shrum, McCarty, and Lowrey (in press) looked at the relation between green purchase intent and variables that are more directly related to buyer behavior. They found that, compared to those who indicated less propensity to buy green, those who indicated a greater propensity to buy green were more likely to be opinion leaders, were more careful shoppers who were price conscious and actively sought out product information (including information from advertising), and indicated more interest in new products. No differences in brand loyalty were found, and demographics showed little relation to green buying.

Additional findings in the study by Shrum et al. (in press) have at least tangential relevance to the lack of correspondence between attitudes and behavior. The study has found that those who were more concerned with buying green products were also more skeptical of advertising, compared to those indicating less concern with buying green. Specifically, compared to those less inclined to buy green, those indicating a greater propensity to buy green tended to agree more with such statements as "Advertising insults my intelligence" and "I refuse to buy a brand whose advertising I dislike." From these results, it appears that green buyers are, for the most part, distrustful of advertising. This may explain why advertisers are complaining that consumers are not following through on

their expressed pro-environmental attitudes by buying their green products: It may not be the products that the consumers do not like, but the advertising that accompanies the products.

There is ample evidence that consumers' distrust of advertising is well-founded. Both Morris, Hastak, and Mazis (1994) and Mayer, Scammon, and Gray-Lee (1994) have found that consumers often misunderstood product claims referring to "recyclable" and "recycled." Although inducing confusion may not be the goal of advertisers, knowledgeable and experienced green buyers may note the vague and misleading characteristics of many green claims and ignore or avoid products with such claims. In fact, requests for regulatory guidelines by advertisers themselves (and pressure from environmental activist groups) resulted in the issuance of guidelines by the Federal Trade Commission in 1992 (Mayer et al., 1994; Scammon & Mayer, in press).

Although we can only speculate, it may also be the case that those consumers committed to buying green may resent what they perceive to be typical marketing tactics, absent any true pro-environmental commitment on the part of marketers. An example might be making pro-environmental claims for a product (e.g., no harmful chemicals) but at the same time using environmentally harmful packaging (e.g., excess packaging, not recyclable) or, alternatively, using environmentally friendly packaging for products that themselves are harmful to the environment.

One can probably think of several other examples of such practices. Indeed, it seems that many marketers have simply assumed that if everyone says they are pro-environmental, they will surely be persuaded by any pro-environmental claim, no matter how vague, misleading, or specious. We would simply like to point out that if marketers want to successfully sell their products using a green positioning strategy, they should remember that consumers are not stupid. In fact, the research indicates that those who recycle and buy green are typically very knowledgeable, hold strong attitudes, are good consumers, and do not blindly succumb to advertising messages, although they do pay attention to them.

An additional issue worth noting for marketers is that the majority of Americans are probably not committed to the environment at the expense of all other issues. For example, although they may desire environmentally friendly products, they would also like them to perform at a reasonable level. Put differently, consumers may indeed, as surveys indicate, be willing to pay a premium for green products, but they may not necessarily be willing to pay more and receive a product that is inferior to their initial choice.

In conclusion, rather than merely complaining that what consumers say and what they do, do not always correspond, marketers should spend time trying to figure out why this discrepancy occurs, just like they do with any product. Perhaps marketers have been seduced by a match between overwhelming public opinion and product attributes that they perceive to be fairly simple to deliver, when in fact, as always, things are never as simple as they seem.

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