The Influence of Persuasive Messages on Propensity to Purchase Selected Recreational Services from Public or from Commercial Suppliers

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The impact of persuasive messages on recreation choice decisions involving public and commercial services was investigated, while controlling for subjects' previously held attitudes toward the public and commercial sectors. An experiment was conducted which randomly assigned 60 subjects into one of three groups. Group 1 received a pro-public sector message regarding camping and aerobics opportunities. Group 2 received a pro-commercial sector message related to the same two opportunities, while Group 3 (control group) received messages which described the two sets of opportunities without sector bias. Subjects in all three groups reported positive attitudes toward the facilities and programs depicted in the videotapes. Analysis of covariance revealed that the positive influence of the camping videotapes on camping choice was significant at the .0015 level, while the positive influence of the aerobics videotapes on aerobics choice was significant at the .0543 level. The results suggested that persuasive messages can influence people's decisions to purchase a recreation service from a public or a commercial sector supplier, although the messages may vary in effectiveness depending on the activity (camping or aerobics) in question. Implications for managers, limitations of the study and future research directions are discussed.

KEYWORDS: Persuasive Messages, Experimental Design, Attitudes Toward the Public and Commercial Sectors, Aerobics, Camping

A decade ago it was possible to identify with reasonable consensus which recreational opportunities were usually the prerogative of the commercial sector and which were primarily supplied by the public sector (Lovingood and Mitchell, 1978). It is no longer possible to make such a clear delineation with confidence. The lines of demarcation have become fuzzy and overlap is now the norm.

Two major changes have contributed to this blurring of sector responsibilities. First, the reduced availability of tax funds to support public services has encouraged public recreation agencies to broaden their range of offerings by expanding into new service areas which seem likely to offer a more dependable source of new revenues such as “developed” campgrounds, court clubs, wave pools and travel programs. Many of these services were once the exclusive prerogative of the commercial sector. The second change is a natural corollary of the higher prices most public agencies now charge for services. When prices of public recreation services are

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raised, the commercial sector is more likely to be able to attract customers away from the public sector and to compete successfully. There is a greater probability that the commercial sector can obtain a return on investment if its prices are not being substantially undercut by the public sector.

This merging of the types of services provided by these two sectors led to the questions investigated in this study. Can persuasive messages affect sector choice when both the commercial and the public sector offer a particular recreation service? Is the impact of persuasive messages consistent across different types of recreation activities?

Literature Review

Defining Beliefs, Images and Attitudes

One assumption underlying this study is that attitudes have some affect on choice behavior. While the attitude-behavior link is not conclusive or absolute, such models have received support from many empirical studies (for an overview of this literature see Assael, 1984 and McPhee and Cushman, 1980). However, terminology is not consistent in many cognitive studies. Despite the distinctions which have been developed (cf. Fishbein and Ajzen, 1975), many researchers use the terms image, beliefs and attitudes interchangeably in the recreation and tourism literature. As a result, the research which provides the framework for this study uses a variety of terminology and a clarification of definitions is warranted.

Image is considered to be a set of meanings or associations which form an individual's mental picture of a phenomenon. Using this definition, image is analogous to the term belief in the model developed by Fishbein and Ajzen (1975), where beliefs represent the information that an individual has about an object. Images held by people can be used to anticipate and predict behaviors in a wide range of settings (Kaplan and Kaplan, 1982). Boulding (1956) notes that even though an image may be incomplete or inaccurate, it is the image, not necessarily reality, to which people respond. Attitudes may be formed on the basis of beliefs or images. Fishbein and Ajzen (1975) state that attitudes are distinguished from beliefs by their evaluative nature. Attitudes refer to an individual's favorable or unfavorable evaluation of an object.

Most recreation agencies and businesses are viewed in a positive manner given the personal, social and economic benefits which accrue from their use (Kraus, 1984). However, there is evidence which suggests that negative attitudes may be held by some potential participants in public sector (Balutis, 1986; Dodge, 1986; Levine, 1984; Lipset and Schneider, 1983) and commercial sector (Berger, 1984; Biegler, 1977; Levitt, 1984; Orr, 1976) recreation services. Thus, attitudes emerge from previous experiences and assimilation of information which creates an image for both sectors. Sector bias may be defined as an individual's propensity to purchase a service from one sector rather than another. Empirical studies indicating the possible presence of these sector biases follow.
The Public and Commercial Sectors and Recreation Choice Behavior

Although they may provide further insight into recreation choice behavior, attitudes held toward the two sectors do not explain all choices made in the sector context. English and Cordell (1987) point out that the public and commercial sectors traditionally have not competed directly for the same recreation participants because the services offered are usually substantially different. For example, Henderson and Cooper (1983) found that although the demographic characteristics of members in their two samples were not significantly different, campers at public sector campgrounds participated in different activities than did campers at commercial sector campgrounds. The authors noted that it was difficult to determine whether public sector campers preferred different activities from commercial sector campers, or if the differences were simply an artifact of what was available at the various sites.

Other studies suggest that sector considerations may be important determinants of behavior. Hammitt and Strohmeier (1983) argue that one alternative to the substantial recreation demand and limited budget dilemma is for public agencies to cooperate more with nearby commercial businesses. However, they also note that the success of such a program depends on the perceptions of users and the likelihood that public facility users will use commercial areas. Results of their survey of campers at public sector sites suggested that many users may not be willing to substitute across sectors. Over 50 percent of their respondents were not willing to substitute commercial sector sites for public sector options, even after being given information regarding the commercial alternatives. This could be a result of negative attitudes toward commercial recreation. Kelly (1985, p. 22) points out that, “It has been common among those engaged in the public sector of recreation to refer to ‘commercial recreation’ in value-laden ways as somehow second-rate, tainted by the profit motive, and even peripheral to the leisure of children and adults”. Howard and Crompton (1980, p. 112) add that there appears to be a public perception of inherent conflict between profit and social responsibility.

The public's preferences for opportunities offered by the two sectors may not be stable over time. Warnick and Howard (1985) have presented evidence from a nationwide sample which suggests that the relative percent of market share for various recreation activities held by the public sector and the commercial sector fluctuates. In their three year study period from 1979 to 1982, Warnick and Howard (1985) reported that public sector market share declined relative to commercial sector market share for each of the three activities (golf, tennis and racquetball) which they examined. They suggest that one reason for this may be that commercial businesses have been more successful in promoting their strengths than have public agencies. Persuasive messages may have the effect of overcoming negative attitudes toward that sector.

Although it was noted earlier that Hammitt and Strohmeier (1983) found additional information did not persuade the majority of campers to
consider other options to the public sector sites they visited, about a third of their respondents did indicate a willingness to consider alternatives. This may be interpreted as evidence suggesting that sector preferences can be altered, or reduced in intensity, through the use of persuasive messages.

_Persuasion Literature_

Larson and Sanders (1975, p. 178) note that there are three propositions implicit in persuasion research. First, persuasion brings about changes in people’s attitudes. Second, attitudes are constraints on behavior, or pre-dispositions to respond. Third, persuasion brings about changes in what people will (or will not) do, because it affects attitudes which in turn affect behavior. Suggestions from existing persuasion literature were used to guide the formulation of the treatments used in this experiment.

Vocalic cues are important in a persuasion context. Vocalics refers to all stimuli produced by the human voice other than the words themselves. Brown, Strong and Rencher (1974) report that a voice with high pitch and little variation is less credible in terms of competence and benevolence than is a deep pitched, varied voice. Pearce and Brommel (1972) add that a conversational speaking style (calm, not intense, slow and low in volume) creates more favorable judgements as to trustworthiness, honesty, sociability and likeableness than does a dynamic style, but it doesn’t seem to affect judgements of competence.

However, trustworthiness, honesty, sociability and likeableness are not the only important considerations in this context. Speech patterns including high volume, more intonation, faster rate, more fluency and lexical diversity (range of vocabulary) than normally would be used in conversation are vocalic cues most often associated with persuasiveness (Bradac, Bowers and Courtright, 1979; Burgoon and Saine, 1978). Research has also suggested that voices in character with the product are more persuasive than voices out of character with the product (Bradac, Bowers and Courtright, 1979; Kanungo and Pang, 1973).

Metaphorical techniques used in lieu of the exclusive use of literal expressions may enhance persuasive impact (Bowers and Osborn, 1966; Burgoon, Cohen, Miller and Montgomery, 1978). Message repetition also adds to persuasive impact. However, McGuire (1973) explains that an increase in impact usually appears for one or two repetitions, but quickly reaches an asymptote beyond which further repetitions have little effect. Mehrabian (1981) cautions against the use of double-edged (conflicting) messages in a persuasive context. Thus, verbal and non-verbal messages should convey consistent information.

Brewer (1979) conducted research regarding the concept of “groupness” which showed that an emphasis on words and phrases such as “we” and “people like us”, as being differentiated from “they” and “people like them”, is effective in persuasive contexts. Brewer (1979) suggests that persuasiveness is greatly enhanced if subjects can identify with or against specific concepts or groups as they are presented.
Methodology

Sample Selection

The sample was comprised of 60 undergraduate students at a large southwestern university. They were selected from a larger population of 466 students enrolled in introductory classes in the departments of Sociology, Political Science, and Marketing. The subjects were chosen because they scored highest on an instrument that measured their level of involvement with aerobics and camping (see Zaichkowsky, 1985). These two activities were selected because they possess very different characteristics or attributes (Allen and Buchanan, 1982; Lovelock, 1984). In addition, the two activities were readily available in the geographic region where the study took place, and both activities are commonly offered by the public and commercial sectors.

A highly involved pool of subjects with respect to the two recreation activities included in the study was desired, because it has been suggested that people who do not have a strong interest in the recreation activities selected are less likely to care which sector offers the service (Krugman, 1966). The subjects chosen were not expected to be representative of any specific population. Many authors (cf. Henshel, 1980; Martin and Sell, 1979) suggest that a relatively homogeneous sample is preferable in experiments so that response differences that are found can be attributed with greater confidence to the various treatments, rather than to differences between subjects. Selection of only highly involved individuals ensured a greater degree of homogeneity in the sample.

Research Design

From the n of 60, twenty subjects were randomly assigned to three groups. The treatments to which these groups were exposed were a pro-public sector, a pro-commercial sector, and a neutral (control) videotape, respectively. The experimental design was a randomized control group design with two treatments. It can be depicted as:

\[
\begin{align*}
G1(R) & \quad I1 \quad X1 \quad I2 \quad I3 \\
G2(R) & \quad I1 \quad X2 \quad I2 \quad I3 \\
G3(R) & \quad I1 \quad X3 \quad I2 \quad I3
\end{align*}
\]

where:

- G indicates group number
- R indicates random assignment of subjects
- I1 refers to Instrument 1 (which measured general attitudes toward the public and commercial sectors)
- I2 refers to Instrument 2 (which measured specific attitudes toward the facilities and services depicted in the treatment videotapes)
I3 refers to Instrument 3 (which measured recreation choice behavior)
X1 refers to the exposure of a group to the pro-public sector experimental treatment
X2 refers to the exposure of a group to the pro-commercial sector experimental treatment
X3 refers to the exposure of a group to the control treatment

Instrument 1 consisted of a battery of semantic differential items developed to measure attitudes (sector biases) towards both commercial sector businesses and public sector agencies in general, without specification of recreational activities. The fifty-three item scale was included in both the public and commercial sector sections of the questionnaire. The items were constructed to measure eleven dimensions relevant to the sector issue reported by Havitz (1987). Five of these dimensions focus specifically on the issue of service quality and have been tested in a variety of settings (Hamilton, Crompton and More, 1989; MacKay and Crompton, 1989; Parasuraman, Zeithaml and Berry, 1986).

These five dimensions include: Tangibles, which represent the physical facilities, equipment, appearance of personnel, and presence of other users; Reliability, which refers to the ability to perform the promised service dependably and accurately; Responsiveness, willingness to help users and provide prompt attention; Assurance indicates courteous and knowledgeable employees who convey trust and confidence; and Empathy which connotes caring individualized attention to users.

Six additional dimensions proposed by Havitz (1987) for evaluating attitudes toward the public and commercial sectors were also operationalized: Efficiency, a measure of time spent on relevant work as opposed to dealing with extraneous obligations; Effectiveness, the ability to produce a definite and desired result; Environmental Consciousness, the degree of concern for the long term conservation or preservation of natural resources; Importance, a measure of the overall value to society of the agency or business in question; Scope, an indication of the breadth and depth of services provided; and Social Consciousness, the degree of concern shown by the agency or business depicted for the various groups and individuals which make up society.

Cronbach’s alpha was used to test the reliability of scale items as they were grouped in each of the eleven dimensions (Table 1). Nunnally (1978) states that in the early stages of research on measures of a construct, reliabilities of .70 or higher will suffice. While the items used in this study clearly need further refining, the reliability scores reported generally meet Nunnally’s criterion. Sixteen of the 22 scores were greater than .70, while 21 of the 22 were greater than .60.

The Treatments to which the respective groups were exposed consisted of two narrated videotapes of approximately four minutes duration which depicted a camping experience and an aerobic dance experience, respec
TABLE 1
Reliability Scores for Instrument 1 Listed by Sector and Dimension

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Commercial Sector</th>
<th>Public Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assurance</td>
<td>.8793</td>
<td>.8602</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>.8650</td>
<td>.8689</td>
</tr>
<tr>
<td>Efficiency</td>
<td>.6597</td>
<td>.7050</td>
</tr>
<tr>
<td>Empathy</td>
<td>.8885</td>
<td>.6326</td>
</tr>
<tr>
<td>Environmental Consciousness</td>
<td>.7966</td>
<td>.5387</td>
</tr>
<tr>
<td>Importance</td>
<td>.8596</td>
<td>.7274</td>
</tr>
<tr>
<td>Reliability</td>
<td>.7084</td>
<td>.6022</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.7475</td>
<td>.9620</td>
</tr>
<tr>
<td>Scope</td>
<td>.7487</td>
<td>.6935</td>
</tr>
<tr>
<td>Social Consciousness</td>
<td>.8547</td>
<td>.7934</td>
</tr>
<tr>
<td>Tangibles</td>
<td>.6847</td>
<td>.7840</td>
</tr>
</tbody>
</table>

Reliability scores for Instrument 1 are presented for the commercial and public sectors. Each edited videotape was comprised of scenes taken from a variety of different facilities located in areas not likely to be familiar to the subjects. The videotapes attempted to give a comprehensive visual view of a high quality facility, and they were carefully designed to incorporate the eleven dimensions measured by Instrument 1.

The three treatments differed from each other in two ways. First, although the body of each tape for each activity was identical, the opening scenes of Treatment 1 were intended to give the impression that the subject was viewing a public sector recreation facility. In Treatment 2, the opening scenes clearly visually identified the facility as being a commercial operation. The opening scenes of the control treatment made a point of showing both types of facilities. The majority (290 seconds out of the total 301 seconds for camping, and 245 seconds out of 256 seconds for aerobics) of the video portion of each videotape was identical in all three cases.

The second difference between treatments was in the verbal narrative which accompanied each videotape. The videotapes in Treatment 1 presented a message which was pro-public sector for both camping and aerobics services, while the videotapes in Treatment 2 presented a message which was pro-commercial sector for both camping and aerobics. The message in the control videotapes did not praise or criticize either the public or the commercial sector, but concentrated only on describing the activities. Thus, the purpose of the treatments was to give subjects a one-sided view of the recreational offering depicted in each treatment, even though the actual visual content within each videotape was essentially identical. The treatments attempted to eliminate situational differences including price, availability, and level of involvement which have been identified by Assael (1984, p. 185) as inhibitors of the relationship between attitudes and behavior, and to isolate the sector issue as the only relevant difference between treatments. This procedure is similar to that used by Ennis and Stafford (1969) in their study of brand image.
Information discussed earlier in the persuasion literature was incorporated into the narratives. For example, all narration was done by professional announcers who attempted to strike a balance between a "conversation" and "persuasive" speaking style. Voices in character with the activity were also selected. Because aerobics is dominated by female participants, a female voice was used to describe the aerobics experience. A male voice was used in the camping videos not because males predominate in camping situations, but to clearly contrast the voice heard describing the aerobics experience and the voice heard describing the camping experience. Participation rates for camping are relatively equal among males and females (Simmons, 1986). Metaphors were used when appropriate and the audio and visual components of the videos were kept consistent in order to avoid the problem of double-edged messages.

The aerobics and camping videotapes were shown in a randomized order in order to avoid any primacy or recency differences between groups. However, because both videotapes seen by each subject gave consistent messages (both pro-public, both pro-commercial, or both neutral), primacy and recency affects were probably less important than they would have been if conflicting messages had been given.

Perdue and Summers (1986) note that researchers involved in experimental research often neglect to check the independent variable (experimental treatment) in order to see if it is actually measuring the construct that it is designed to measure. Manipulation checks conducted as pretests to the experiment revealed no significant differences in the trustworthiness, expertise and persuasiveness of the two narrators. The manipulation checks did reveal significant differences in the message content of the narrations. These results were desirable because they showed that the pro-public sector messages were positively biased toward the public sector, and the pro-commercial sector messages were positively biased toward the commercial sector. The sample used in this pretest consisted of 33 subjects with characteristics similar to those of the subjects in the main experiment (students at the same university). The pretest subjects were randomly split into three groups of 11, and were assigned to either the pro-public, pro-commercial or control treatment. Pretest subjects did not participate in the main experiment.

Instrument 2 consisted of a battery of semantic differential items developed to measure attitudes toward the facilities and programs depicted in the treatment videotapes. This instrument will not be discussed in-depth because it was not used in this analysis. It is mentioned because it may have had an affect on responses to Instrument 3, although any affects were likely the same across all three treatment groups.

Instrument 3 measured preferences for purchasing from a public or a commercial supplier of aerobic dance or camping services. Ideally, the experiment would have measured actual purchases (termed "overt behavior" by Fishbein and Ajzen, 1975) of subjects regarding sector preferences.
for the two activities. However, such a measure was not feasible given the
time frame and financial constraints of the research project, and the lo-
gistical problems of keeping track of all 60 subjects over an extended period
of time. Instead, a lottery was devised for the purpose of allowing subjects
to state their preferences in a setting that was not totally hypothetical.
Subjects were told that because they had participated in the study, they
had a one-in-twelve chance of winning an aerobics prize and a one-in-
twelve chance of winning a camping prize both valued at between $30 and
$50. They were then presented with the following instrument:

IF I WIN ONE OR BOTH OF THE PRIZES, I WOULD . . .
(please check an answer for both items)

strongly prefer                 strongly prefer a
a public sector      — — — — — — commercial sector
campground

strongly prefer a
commercial sector  — — — — — —
strongly prefer
a public sector

aerobics class  — — — — — —
aerobics class

Thus, subjects were able to select a public sector program, a commercial
sector program, or no preference, for both the camping and aerobics prizes.
Subjects were informed that their choices did not increase or decrease
their chances of winning. Names of the public agencies and commercial
businesses associated with each of these prizes were withheld in order to
ensure that subjects made choices based on their perceptions of the sectors
and not on the characteristics of a particular agency or business. Because
each subject made a choice for both activities, it was possible for a subject
to win both a camping package and an aerobics package. Prizes were awarded
to winning subjects several weeks after all experimental procedures had
been completed.

Hypotheses

The hypotheses were:

H1: Subjects’ sector choices for camping options will be positively in-
fluenced by the treatment received.

H2: Subjects’ sector choices for aerobics options will be positively in-
fluenced by the treatment received.

Analysis of covariance was used to test the hypotheses. Duncan’s mul-
tiple range test was used to make further comparisons between groups
whenever significant differences were found. The independent variable for both hypotheses was the type of treatment received by the subject. Summary scores on both sections of Instrument 1 (attitudes toward the public sector and the commercial sector) were treated as covariates. The covariates were used because of the potential influence of attitude on behavior and out of concern that random assignment with small sample sizes might not result in comparable attitudes across treatments. The dependent variables for both hypotheses were subjects' responses to Instrument 3.

It was expected that the choice behavior (measured by Instrument 3) of subjects in the various groups would differ depending on the treatment received. The two treatment groups received a strongly pro-public sector message or strongly pro-commercial sector message immediately before they made their recreation choice decisions. The control group received a neutral message. Subjects in the Pro-Public Sector treatment group were expected to favor public sector alternatives for both camping and aerobics, while subjects in the Pro-Commercial Sector treatment group were expected to favor commercial sector alternatives.

Data Collection Procedures

A researcher was present throughout administration of treatments and data collection instruments to answer procedural questions, and to ensure that subjects did not interact with each other during the experiment. The intent of the experiment was not disclosed to subjects until they were given a final debriefing. This debriefing occurred after all treatments had been received and all data were collected.

The nature of the experimental design suggested that testing effects were a possible concern. Testing effect is the effect of a prior observation on a later observation which occurs when subjects consciously attempt to make their response consistent over each measure (Churchill, 1983). Although the items in Instruments 1 and 2 were not identical, the format and type of questions asked were generally similar. In an attempt to minimize the effect of testing, Instrument 1 was presented to subjects by a colleague of the researchers and was portrayed as being part of a separate study unrelated to the camping and aerobics videotapes or Instruments 2 and 3.

After completing Instrument 1, subjects viewed both treatment videotapes (camping or aerobics) in a randomly determined order. When both videotapes had been shown, subjects were informed of their one-in-twelve opportunity to win a prize valued at between $30 and $50 from a public or commercial supplier of that service and requested to complete Instruments 2 and 3. Subjects were clearly informed that the monetary value of the public sector and commercial sector prizes were equal. It took subjects approximately 45 minutes to complete all tasks (the three instruments and viewing the treatment videotapes) associated with the experiment.
Results

A summary of general attitudes toward the public and commercial sectors held by the sample (Instrument 1).

Although this sample was not expected to be representative of all populations, this information is presented in order to clarify the attitudes of the subjects prior to administration of treatments and provide a basis for further discussion. The grand mean for the 55 items in the Commercial Sector section of Instrument 1 was 2.94, while the grand mean for the 55 items in the Public Sector section of Instrument 1 was 3.35 (where 1.00 is extremely favorable, 4.00 is neutral and 7.00 is extremely unfavorable). This indicates that while subjects exhibited more favorable attitudes toward the commercial sector than toward the public sector, overall attitudes toward both sectors were generally positive, as both grand means were less than 4.00. Additional information suggesting the pro-commercial preferences of the sample was provided by a summary question at the end of Instrument 1, on which 32 of the 58 subjects indicated that overall they perceived the commercial sector more favorably than the public sector. Seventeen subjects indicated that overall they perceived the public sector more favorably than the commercial sector, and nine subjects indicated neutrality. There were missing values for two subjects.

An analysis of the items by dimension also provided useful information. Public and commercial sector mean scores for each of the eleven dimensions were compared using z-scores as a test for significant differences as suggested by Parasuraman (1986). Subjects rated the commercial sector more favorably than the public sector on six of the eleven dimensions including: Assurance, Effectiveness, Efficiency, Reliability, Responsiveness, and Tangibles (Table 2). The public sector was rated more favorably than the commercial sector on two dimensions: Environmental Consciousness and Social Consciousness. No significant differences were found for the dimensions of Empathy, Importance, and Scope. These findings are generally consistent with the literature. For example, the commercial sector is perceived as being more reliable, responsive and efficient (Lipset and Schneider, 1983; Balutis, 1986), while the public sector is perceived in more altruistic terms regarding environmental protection and concern for people (Howard and Crompton, 1980; Berger, 1984).

Two limitations of the study including the nonrepresentative sample and the relatively unrefined nature of the eleven dimensions suggest that other groups may not rate their perceptions of the two sectors in the same manner. However, the results do suggest that significant differences in perceptions of the nature and quality of the services offered by the two sectors may be found in other samples.

The random assignment of subjects to various treatment or control groups was important to the internal validity of the study because it minimized the possibility of placing all subjects with similar attitudes into the
TABLE 2
An Analysis of Subjects’ Attitudes Toward the Public and Commercial Sectors by Dimension

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Commercial Sector Mean</th>
<th>Public Sector Mean</th>
<th>Z-Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assurance</td>
<td>2.31</td>
<td>3.43</td>
<td>-6.71^a</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>2.61</td>
<td>3.59</td>
<td>-7.10^b</td>
</tr>
<tr>
<td>Efficiency</td>
<td>2.68</td>
<td>4.01</td>
<td>-8.97^b</td>
</tr>
<tr>
<td>Empathy</td>
<td>3.37</td>
<td>3.61</td>
<td>-1.16</td>
</tr>
<tr>
<td>Environmental Consciousness</td>
<td>3.76</td>
<td>2.74</td>
<td>6.89^b</td>
</tr>
<tr>
<td>Importance</td>
<td>2.28</td>
<td>2.39</td>
<td>-0.85</td>
</tr>
<tr>
<td>Reliability</td>
<td>3.04</td>
<td>3.67</td>
<td>-3.74^b</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>2.68</td>
<td>3.48</td>
<td>-4.47^b</td>
</tr>
<tr>
<td>Scope</td>
<td>2.90</td>
<td>2.87</td>
<td>0.21</td>
</tr>
<tr>
<td>Social Consciousness</td>
<td>5.03</td>
<td>3.79</td>
<td>6.63^b</td>
</tr>
<tr>
<td>Tangibles</td>
<td>2.58</td>
<td>3.02</td>
<td>-3.49^b</td>
</tr>
</tbody>
</table>

^a 1.00 indicates extremely favorable attitudes, 7.00 indicates extremely unfavorable attitudes.
^b Indicates differences significant at the .05 level (two-tailed test).

same group. Thus, differences between the choices of the groups can be more readily ascribed to the treatments rather than to individual predispositions.

Hypothesis 1.

A review of the descriptive statistics showed that the distributions of the data approximated normal, and that the assumptions for using analysis of covariance had been met. The analysis revealed differences between group means regarding the camping choices of subjects which were significant at the .0015 level (Table 3). This suggests that the experimental treatments were successful in influencing the choice behavior of subjects for the activity of camping. Table 3 shows the group mean scores for camping choice. A score of 1.00 indicates a strong preference for public sector campgrounds, a score of 4.00 indicates a neutral position, and a score of 7.00 indicates a strong preference for commercial sector campgrounds. As predicted, subjects in the Pro-Public Sector treatment group had the lowest mean score (2.2), indicating their preferences for public sector camping options. Subjects in the Pro-Commercial Sector treatment group had the highest mean score (5.1), indicating preferences for commercial sector camping options. Subjects in the Control Group had a mean score of 3.8, which was very near the neutral score of 4.00.
TABLE 3

Analysis of Covariance for Camping Choice. Independent Variable: Treatment Group; Covariates: A Priori Attitudes Toward the Commercial Sector, A Priori Attitudes Toward the Public Sector

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>PR &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>4</td>
<td>75.9624</td>
<td>18.9906</td>
<td>5.10</td>
<td>0.0015</td>
</tr>
<tr>
<td>Commercial Attitude</td>
<td>1</td>
<td>0.6984</td>
<td>0.6984</td>
<td>0.19</td>
<td>0.6667</td>
</tr>
<tr>
<td>Public Attitude</td>
<td>1</td>
<td>0.2288</td>
<td>0.2288</td>
<td>0.06</td>
<td>0.8052</td>
</tr>
<tr>
<td>Treatment Group</td>
<td>2</td>
<td>75.0351</td>
<td>37.5176</td>
<td>10.08</td>
<td>0.0002</td>
</tr>
<tr>
<td>Error</td>
<td>52</td>
<td>193.5464</td>
<td>3.7221</td>
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</table>

Treatment Group

<table>
<thead>
<tr>
<th>Group Mean</th>
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<tr>
<td>Pro-Public</td>
<td>2.2 A</td>
</tr>
<tr>
<td>Pro-Commercial</td>
<td>5.1 B</td>
</tr>
<tr>
<td>Control</td>
<td>3.8 B</td>
</tr>
</tbody>
</table>

Further analysis revealed no significant interaction between the independent variable and the covariates. R-Square = .2819.

Hypothesis 2.

Differences between group means regarding the aerobics choices of subjects were significant at the .0543 level (Table 4). The group mean scores for aerobics choice ranged from 1.8 to 3.2, where a score of 1.00 indicates a strong preference for commercial sector aerobics facilities, a score of 4.00 indicates a neutral position, and a score of 7.00 indicates a strong preference for public sector aerobics facilities. As predicted, subjects in the Pro-Commercial Sector treatment group had the lowest mean score (1.8), while subjects in the Pro-Public Sector treatment group had the highest mean score (3.2). The mean score of 3.2, while more pro-public sector than the mean scores of the other groups, is still on the pro-commercial side of neutral. Subjects in the Control Group had a mean score of 2.6.

Discussion and Conclusions

The fundamental purpose of the research was to examine the effects of persuasive messages on choice behavior for specific recreation activities. Two major findings emerged in the choice behavior of subjects regarding the two activities. First, subjects appeared to have a greater propensity to shift their choice for camping than for aerobics. The effect of the treatments was clearly significant (.0015) for camping choice, and it was only marginally significant (.0543) for aerobics choice. The relatively small sample size (n = 20) in each treatment group suggests that the possibility of Type II
TABLE 4
Analysis of Covariance for Aerobics Choice. Independent Variable: Treatment Group; Covariates: A Priori Attitudes Toward the Commercial Sector, A Priori Attitudes Toward the Public Sector

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>PR &gt; F</th>
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</thead>
<tbody>
<tr>
<td>Model</td>
<td>4</td>
<td>27.6932</td>
<td>6.9233</td>
<td>2.49</td>
<td>0.0545</td>
</tr>
<tr>
<td>Commercial Attitude</td>
<td>1</td>
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<td>8.5835</td>
<td>3.09</td>
<td>0.0848</td>
</tr>
<tr>
<td>Public Attitude</td>
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<td>1.5524</td>
<td>0.56</td>
<td>0.4582</td>
</tr>
<tr>
<td>Treatment Group</td>
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<td>17.5573</td>
<td>8.7787</td>
<td>3.16</td>
<td>0.0508</td>
</tr>
<tr>
<td>Error</td>
<td>52</td>
<td>144.5524</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Treatment Group | Group Mean
--- | ---
Pro-Public | 3.2
Pro-Commercial | 1.8
Control | 2.6

R-Square = .1608

error is high (Gregoire and Driver, 1987; Stevens, 1986). Therefore, these results may represent a conservative interpretation of the effect of the treatments. Second, subjects seemed willing to select both public and commercial options for camping, but were strongly pro-commercial in their aerobics choices. Some pro-commercial choice behavior might have been predicted given the profiles from Instrument 1, yet there were clearly differences in the choices for the activities.

The results reported from Instrument 1 and the skewed distribution of choices (Instrument 3) regarding the activity of aerobics lend support to the work of Hammitt and Strohmeier (1983) and Havitz (1987) which challenge the assumption that sector biases have little impact on recreation choice decisions. The findings also appear to support research which documents the traditional complementary nature of the commercial and public sector leisure delivery systems (for example, English and Cordell, 1987; Henderson and Cooper, 1983; Lovingood and Mitchell, 1978). The preference for commercial sector aerobics options, regardless of treatment received, suggests that subjects held strong attitudes regarding the type and quality of aerobics offered by the two sectors. The persuasive messages were successful in influencing choice, yet the pro-public sector message was able only to weaken the strength of subjects' preferences for commercial sector options, not necessarily to move subjects into making pro-public sector choices.

The strong preference for commercial sector aerobics among this sample suggests that managers should use caution when considering expansion of their program offerings. Diversification into a wide variety of new program areas should not be viewed as a panacea. For example, a public sector
aerobics program offered to a clientele who reflect the perspectives of the sample in this study may generate little interest or participation. Programs should be offered only after analyzing the perspectives of the local population and the competitive situation in the region. Conversely, the apparent relative propensity to change which subjects exhibited regarding camping choice lends support to the assertion that sector considerations have little bearing on choice decisions in some situations, and that potential participants will choose from options based on variables such as convenience, price, and on whoever does the most effective job of promoting their offerings.

Further refinement and testing of the 11 dimensions relevant to sector based choice decisions is needed. For example, the dimensions may vary in importance between activities, especially activities with characteristics as diverse as aerobics and camping. Although the literature suggests that these dimensions are important to the sector issue, they have not been extensively refined or tested. Additional studies are needed which test the 11 dimensions regarding their appropriateness to the sector issue, and their relative importance in identifying sector biases in specific cases.

A potential participant's level of involvement with the activity in question may also influence the degree to which sector considerations impact choice decisions (for an overview of the involvement issue see Assael, 1984 or Zaichkowsky, 1985). Presumably, high levels of involvement would increase the likelihood that sector considerations would be important, therefore only highly involved subjects were chosen for this study. The involvement literature suggests that people with lower levels of involvement in the two recreation activities may have been even more receptive to persuasive efforts. Additional research into the possible relationships between sector bias and level of involvement appears warranted.

Several limitations of this study restrict generalization. First, the study sample was not necessarily representative and was homogeneous regarding many socio-demographic and behavioral characteristics. A more diverse and representative sample may have been either more or less receptive to the persuasive efforts. Thus, although the internal validity of the study was high, the external validity was low. The primary purpose of the experimental design employed in the study was not to simulate a real purchase decision, but rather to isolate the sector variable as the only meaningful basis for making a choice. Second, the experimental situation was very controlled, so the researcher had the undivided attention of the subjects. This situation is seldom enjoyed by most organizations attempting to persuade potential patrons. Third, the time period between reception of the treatment and the actual recreation choice decision was very short (less than 25 minutes) which may not be characteristic of other situations. Fourth, subjects were exposed to a message from only one sector as opposed to the mixed messages they are likely to receive in the real world.

Nevertheless, it should also be recognized that the persuasive messages used in this study were relatively short and were seen only once by the
subjects, which contrasts with the repeated messages that are often used in persuasive contexts. The "snapshot" approach used in this experiment provides an incomplete indication of the likely impact of longitudinal promotional efforts in the real world. In addition, more sophisticated equipment than was used in this study is available to many businesses and agencies for producing persuasive messages. The videos used were not polished to the extent that professionally made and commercially produced messages could be. A variety of messages and media may also produce more striking results than were suggested by the single mode used in this study. Television appears to be a persuasive medium in this context, but the effects of other media were not examined.

The findings reported here suggest that there is potential for persuading people to alter their recreation choice behavior between public and commercial sector options, and this is a practical and potential valuable finding. However, they also imply that some sector biases may prove difficult to overcome, and that activity differences may be important. Increasing concern regarding the roles of the various sectors (Burch, 1985; Clawson, 1985), and questions left unanswered by this exploratory study suggest that more work is needed in this area in the future.

References
Influence of Persuasive Messages


