

A Valuation of Information Sources and Cues by Motorist-Traveler Guests of Lodging Establishments

CHARLES T. MOORE, MORRIS L. MAYER, and JOSEPH B. MASON,
University of Alabama

One of the specific requirements of the Highway Beautification Act of 1965 was to ascertain the effects of signboard regulation, control, and/or removal on consumer-travel choices—especially transients' choices.

The research technique utilized to determine attitudes or judgments concerning the importance of information sources and cues to individuals was the paired comparison technique devised by Leon L. Thurstone. This psychometric research technique permitted comparisons by an individual of the characteristics of an advertising medium, but more importantly, the technique allowed inter-media comparisons. Both media and media-non-media comparisons were obtained and analyzed for respondents who were familiar with the general metropolitan area and for those who were not familiar with the area.

The findings of the research were as follows: (a) physical appearance of the lodging establishment was considered the most important information source; (b) off-premise commercial billboards ranked second in a set of six media-oriented information sources for the entire sample as well as for those travelers not familiar with the area; (c) when the paired comparisons were expanded to include ten media and non-media-oriented sources, billboards dropped to sixth position; and (d) the importance of non-media-oriented information sources to motorist travelers is evidenced by the fact that advice of individuals, referral services, and reservation services outranked all of the media-oriented information sources.

•ONE of the specific requirements of the Highway Beautification Act of 1965 was to ascertain the effects of signboard regulation, control, and/or removal on consumer-travel choices—especially transients' choices.

This major question suggests others. For example, is the information provided by advertising signs significant to the motorist traveler? Does the removal of signboards create costs to the motorist traveler? Or do the present signboards contribute significantly to the motorist travelers' conscious perceptions of the process of identifying, choosing, or locating lodging establishments? This paper abstracts from these questions and specifically provides a partial answer to the following question: Do off-premise, media and non-media-oriented information sources and cues affect the choices of lodging establishments by on-highway private automobile users (motorist travelers)—both those familiar and those not familiar with lodging establishments in a given area?

The problem is not simple since measurement of the influence of advertising on the perception or judgments of an individual requires an analysis of the relationship of an object (product and/or service) to an individual. An accepted research technique for

determining attitudes or judgments concerning the importance of information sources and cues to individuals is the paired comparison technique devised by Leon L. Thurstone. This psychometric research technique permits comparisons by an individual of the characteristics of a medium, but more importantly, the technique allows inter-media comparisons and hence was ideally designed to accomplish the stated objective of this research effort.

Briefly, the technique (1) requires arranging items in pairs so that each item is paired with each other item once. The validity of the method lies in the fact that it forces choice and depends upon the number of pairs being comparatively large, easily identifiable, and easily distinguishable, and also depends upon the number of respondents being rather large and reasonably homogeneous. The forced-choice process of the paired comparison technique overcomes individual bias on the part of respondents about the items in the pairs. The results of each individual test cannot be scored. The results are obtained for the entire group by computing the proportion (decimal fraction) of choices favoring each item over each other item in the total number of choices made. The computations performed on these quantities result in the construction of an interval scale of perceived degree of importance in terms of the frame of reference being used for ranking.

RANK ORDER AND RELATIVE IMPORTANCE OF MEDIA-ORIENTED INFORMATION SOURCES AND CUES

Interviews with motorist travelers (automobile travelers) who were registered in a given highway-oriented lodging establishment were obtained in 15 selected metropolitan

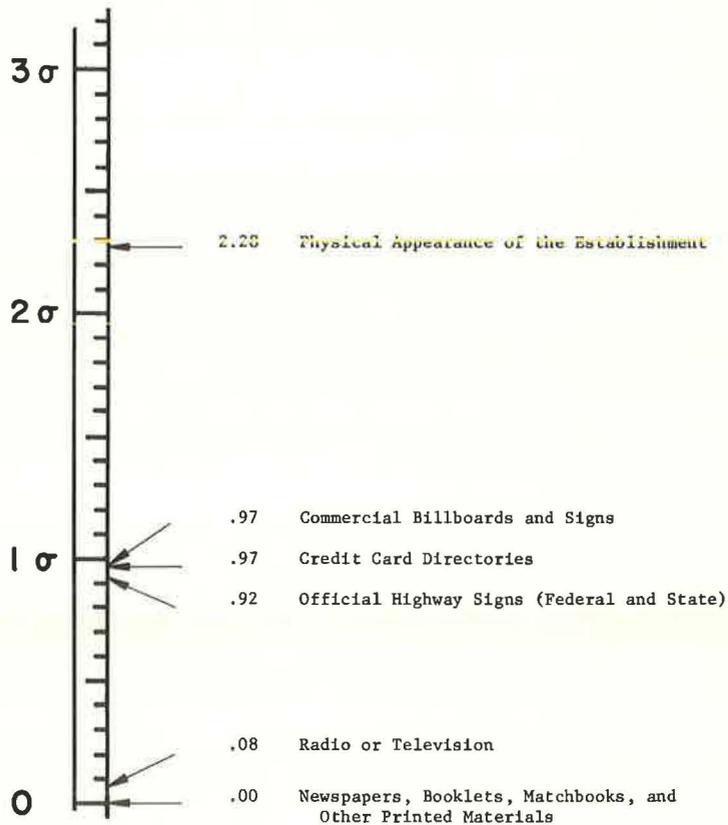


Figure 1. Sigma values derived from motorist travelers' paired comparison judgments of media-oriented information sources and cues.

Birmingham, Alabama, lodging establishments. The sample includes 133 motorists who were registered in motels.

Motorist-traveler respondents supplied paired judgments of six essentially media-oriented information sources and cues, and the results are shown in Figure 1. The Thurstone-type scale utilizes the standard deviations of the dispersion of preferences (σ) as the unit of measurement. In constructing the scale, the information source or cue judged lowest in rank is used as a zero point, and all others are placed in ascending order according to rank and interval. Such an arrangement is considered better than assigning the origin to the cue highest in order of preference for the reason that it provides positive scale values (a "thermometer" approach as opposed to a "depth gage" approach). This placement of the zero should not be interpreted to mean the factor at the origin has no value to the motorist traveler.

The scale depicts a rank order of the information sources and cues as follows: (a) physical appearance of the establishment, (b) commercial billboards and signs, (c) credit card directories, (d) official highway signs (federal and state), (e) radio or television, and (f) newspapers, booklets, matchbooks, and other printed materials.

Physical appearance of the lodging establishment ranks at the top of the scale and is considered to be the most important factor influencing the choices of the sample of motorist travelers. The high positive value (discriminal difference) of physical appearance of the lodging establishment is pronounced in terms of the absolute level obtained and in relative terms to the other items on the scale. (Preliminary experimentation in converting ordinal values to cardinal values has been performed with a moderate level of success.)

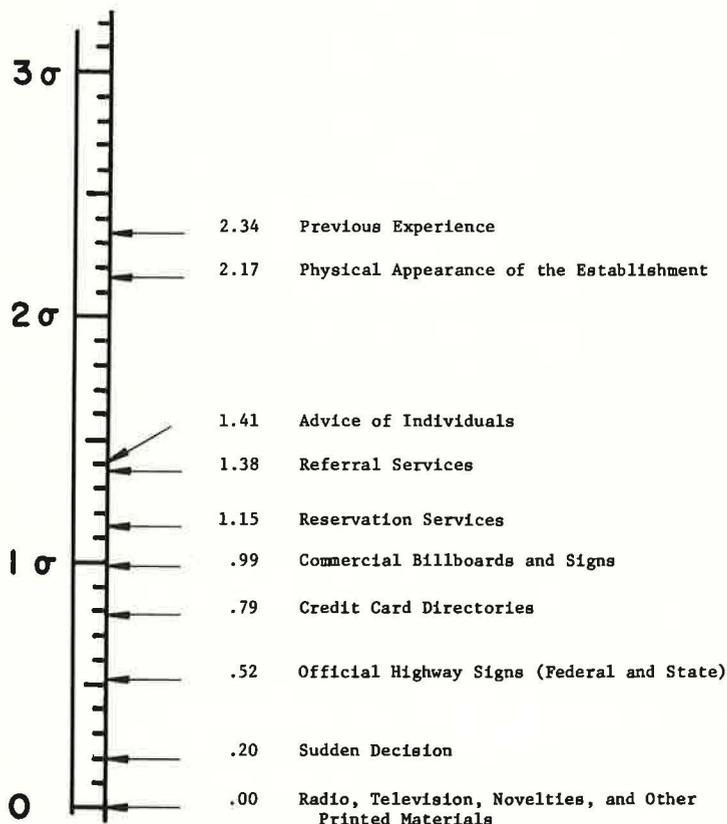


Figure 2. Sigma values derived from motorist travelers' paired comparison judgments of media and non-media-oriented information sources and cues.

The next five information sources and cues (Fig. 1) depict relatively small scalar separations. Even though the scale separations are small, the inferences are significant. The rankings of the items are easily identified, but more importantly, the respondents apparently saw only limited values in the five items as information sources or cues, compared to the first ranking item. Sigma values for commercial billboards and signs, credit card directories, and official highway signs are clustered near the $1\text{-}\sigma$ level, and relatively unimportant differences characterize the cluster. Broadcast and print media cluster near the point of origin on the scale and were consistently rated at this level by the respondents.

RANK ORDER AND RELATIVE IMPORTANCE OF MEDIA AND NON-MEDIA-ORIENTED INFORMATION SOURCES AND CUES

The same sample of motorist travelers supplied paired judgments of a list of media and non-media-oriented information sources and cues. This second listing (Fig. 2) permits observations as to whether the rankings and scalar distances in Figure 1 retain a consistent order and/or maintain the same relative importance to other information sources and cues.

The rank order of the information sources and cues (Fig. 2) is as follows: (a) previous experience, (b) physical appearance of the establishment, (c) advice of individuals, (d) referral services, (e) reservation services, (f) commercial billboards and signs, (g) credit card directories, (h) official highway signs (federal and state), (i) sudden decision, and (j) radio, television, novelties, and printed materials.

The clustering characteristics in Figure 1 are not as apparent in Figure 2. Separations of the items on the scale in Figure 2 are more clearly demarcated, and except for the most important two items, the scalar items depict relatively regular dispersion. The addition of the non-media-oriented information sources and cues in Figure 2 to the original listing apparently served the motorist-traveler respondents as agents for further discrimination. The items included in the second list acted as disassembling agents for the respondents' ranking efforts. Such items as sudden decision, reservation service and referral services depict an orderly relationship with the original items appearing in Figure 1. Three of the new items (advice of individuals, referral services, and reservation services) were considered by the motorist travelers to be more important than all but the highest ranked item in Figure 1.

Other observations about the judgments of the respondents include the following:

1. Even though discriminial differences are weak in Figure 1 except for one item, physical appearance of the establishment, the orderliness of the results obtained in the Figure 1 scale is confirmed by the order of these items in Figure 2.
2. Motorist travelers indicate that media-oriented information sources and cues are secondary to non-media-oriented sources and cues which depend upon, for instance, personal contacts, habit, reputation, services, and sensory satisfactions.
3. An item included in the non-media-oriented list which does not fit tightly within the framework of information sources and cues is the term "sudden decision." Apparently few motorist travelers felt that they made sudden decisions concerning choice of lodging establishments, but even this item is considered to be more important than radio, television, and printed materials.

The importance of media and non-media-oriented sources and cues for both motorist travelers familiar with the study area and those not familiar with the study area were subjected to analysis via the Thurstone paired comparison technique. Results were as follows:

1. The regularity and the scale differences for both groups corresponded closely to the scalar solution presented in Figure 1.
2. The dominant item (physical appearance of the establishment) was the same for the familiar and non-familiar groups.

3. The most important difference between the familiar and non-familiar groups is that there were rank order shifts of the remaining five media-oriented information sources and cues.

SUMMARY

1. Even though off-premise commercial billboards and signs are consistently judged most important among the pure media-type information sources and cues, this item actually ranks second in the set of six media-oriented information sources for the entire sample of motorist travelers as well as for motorist travelers not familiar with the area. When the list was expanded to include ten media and non-media-oriented items, billboards dropped to sixth position, but still outranked all other media.

2. The importance of the non-media-oriented information sources to motorist travelers can be highlighted by the fact that advice of individuals, referral services, and reservation services outranked all of the media-oriented information sources influencing lodging establishment selection, and the scale separations were significant.

3. The media-oriented scalar analyses of the familiar and unfamiliar groups indicate that those respondents who considered themselves familiar with the locations of lodging establishments in an area apparently considered credit card directories more important as an information source than did those respondents who were not familiar with the area. The familiar group apparently utilizes commercial billboards and broadcast media (radio and television) to a lesser degree than does the group not familiar with locations of lodging establishments.

4. Of the media-oriented items, physical appearance of the establishment is ranked first by the familiar and not familiar groups. The information source official highway signs retains the same rank for the group reporting familiarity but is discriminally less distinct.

5. When the set of ten media and non-media-oriented information sources and cues are scaled for the familiar and not familiar groups, a comparison reveals that the following sources and cues have the same ordinal rank within the scales: (a) reservation services, (b) commercial billboards and signs, (c) credit card directories, and (d) official highway signs (federal and state).

SIGNIFICANT CONCLUSIONS

1. The cost to motorist travelers of the removal or transfer of highway advertising information signs of lodging establishments from primary and Interstate highway systems, especially in rural areas, appears to be minimal based on the scalar analyses of media and non-media-oriented information sources and cues influencing choices of lodging establishments. Apparently the loss of information will not be significant to the motorist traveler if his conscious judgment of rank order and relative importance reflect an ability, possibly a willingness, to substitute or to intensify the use of other information sources and cues.

2. The sigma values and ranks of highway advertising signs in the scales reveal that other factors or sources of information are considered to be much more important to the motorist traveler in his efforts to identify and locate lodging establishments. The analyses do not suggest that commercial billboards and signs are not used or are not of some importance to motorist travelers. These signs do provide specific directions to lodging establishments for motorist travelers and hence have value. But if physical appearance of the lodging establishment and previous experience are as significant to the motorist traveler as they appear to be in selection of lodging establishments, then other types of signs such as an official highway sign with more information or near-highway information panels can serve the same purpose.

3. Other means of advertising might serve to influence more effectively the motorist traveler in his choice of lodging establishments. For example, the importance of the physical appearance of the establishment and previous experience as information sources to the motorist traveler suggests that selected kinds of print media might be more effective advertising tools. A study of the composition and amounts of advertising by lodging establishments would seem to be in order, not only to influence their

long-run success but also to provide a means of evaluating impact of external variables such as new highways, bypasses, and obviously highway beautification.

4. Analysis of information sources and cues reveals the rankings and importance of sources of information but does not indicate the total process by which the motorist traveler may or may not have judged the information sources and cues in selecting lodging establishments. The motorist traveler can avoid costs by pre-planning, and a preliminary evaluation of the importance of the rankings and levels of information sources and cues can be obtained by measuring where in space the motorist traveler made the decision to stop for lodging. If, for example, the decision was made before the trip began, the importance of highway signboards, or in fact many of the so-called media-oriented sources and cues, might require reevaluation. More than 52 percent of the respondents indicated that the decision of where to stop for lodging was made at the start of a day's trip or before. More than 47 percent of the respondents not familiar with the area indicated that they made a lodging-stop decision at the start of a day's trip or before, while almost 63 percent of the familiar group of respondents indicated that they made a lodging-stop decision at the start of a day's trip or before.

5. The suggestion that expenditures might be redirected or reallocated does not mean that outdoor advertising can be or should be eliminated. Although a complete answer cannot be given at this time, apparently the outdoor medium is a necessity to motels since direction and distance information is usually included on a signboard. More importantly, there is a significant contribution made to the motel firm which goes beyond merely locating the establishment for the motorist traveler. The consumer's perception of a specific motel's offering is reinforced, and the consumer may be influenced to select a specific motel.

6. To a large extent motorist travelers apparently are habituated in their use of commercial billboards and signs, and have limited perceptions of outdoor advertising and alternative means of advertising and promotion. In one sense it can be suggested that the use of outdoor advertising, which is designed as an information source and cue, may represent the best advertising medium, but other media might be utilized more effectively today. If the outdoor medium and the motorist traveler are victims of habit, then what is needed may be new designs and messages which can influence the motorist traveler as well as provide information for him.

ACKNOWLEDGMENT

This research was performed under the sponsorship of and in cooperation with the Alabama Highway Department and U. S. Bureau of Public Roads of the Department of Transportation.

REFERENCE

1. Thurstone, Leon L. *The Measurement of Values*. Univ. of Chicago Press, 1959.