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16. Abstract

Marketing in the area of public and mass transportation involves a consumer orientation whereby systems attempt to best serve the needs of potential transit markets. By structuring service developments and promotional activities to satisfy the service requirements of targeted population segments, systems maximize the effectiveness of their efforts to increase ridership and system revenues.

Six viable, adult population segments, as well as the critical factors sought by each segment, were identified using survey data from Beaumont, and Waco, Texas. A concentrated marketing approach, however, which focuses on only four of the six segments, was recommended for small transit systems because of their limited operating resources and generally lower levels of service. This information should prove extremely helpful to smaller transit systems in Texas, particularly those which have not been actively involved with marketing programs in the past. In addition, data concerning optimum promotional techniques and advertising media are included to illustrate the integration of market research findings with subsequent transit marketing activities.

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IDENTIFICATION OF MARKET SEGMENTS:

AN ANALYSIS OF TRANSIT NEEDS AND SERVICE REQUIREMENTS

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Research Report 1052-1
Research Study Number 2-10-76-1052
Marketing Public and Mass Transportation in Texas

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The contents of this report reflect the views of the authors who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Urban Mass Transportation Administration or the State Department of Highways and Public Transportation. The report does not constitute a standard, a specification, or a regulation.

SUMMARY OF FINDINGS

The key factor that differentiates marketing from other forms of transit service provision is the emphasis on assessing and responding to customer needs and the feasible requirements sought by potential patrons. This research effort utilized resident survey samples in two smaller Texas cities, Waco and Beaumont, to obtain data regarding the following topics:

- Segmentation of the transit marketing into viable subgroups;
- Identification of each market segment's broad service requirements and evaluations of buses;
- Promotional strategies, based on service requirements, to effectively attract potential riders to the system and reinforce usage among current patrons; and
- Popular information sources and media habits to identify optimum promotional media for use in advertising and educational efforts.

SEGMENTATION OF THE TRANSIT MARKET

Especially for cities with lower levels of transit service, concentrated marketing is suggested as the most appropriate technique for increasing ridership. Such an approach aims at meeting the transit needs of selected population segments. Based on the Texas Transportation Institute surveys in Waco and Beaumont, the two prime adult market segments are blue collar females and older persons. Additionally, white collar females and housewives were found to be secondary target marets.

SERVICE REQUIREMENTS

For systems with limited resources and lower service levels, working males (that is, white collar and blue collar males) cannot be encouraged to switch to transit usage by any feasible service improvements. Blue collar and white collar females, housewives, and older persons, however, indicate a likelihood to use transit if service improvements or promotional efforts are directed at the following travel dimensions:

I. Convenience
II. Simplicity
III. Enjoyability
IV. Status

These features, therefore, can be utilized as optimum promotional themes to increase ridership. Two other travel dimensions, transit cost and transit safety, are already viewed positively by the public and need not receive major emphasis. Other dimensions, which cannot feasibly be improved in smaller systems because of the costs involved with such service development, also should be excluded from advertising and promotional campaigns. Examples of these features include transit system flexibility, speed, reliability, and punctuality.

PROMOTIONAL STRATEGIES

Effective promotional techniques have been classified for use according to four categories:

1. Increasing public awareness of the system;
2. Reinforcing the positive attitudes of current riders;
3. Encouraging a modal shift away from the automobile; and
4. Promoting new services, facilities, and conveniences that are directed toward target segments.

The inclusion of promotional and advertising techniques for each category should be of benefit to systems that already are involved with marketing programs as well as enabling smaller transit systems to begin effective marketing efforts.

ADVERTISING/EDUCATIONAL MEDIA

As anticipated, the most popular information sources, in order of importance, were found to be:

1. Television
2. Radio
3. Newspapers

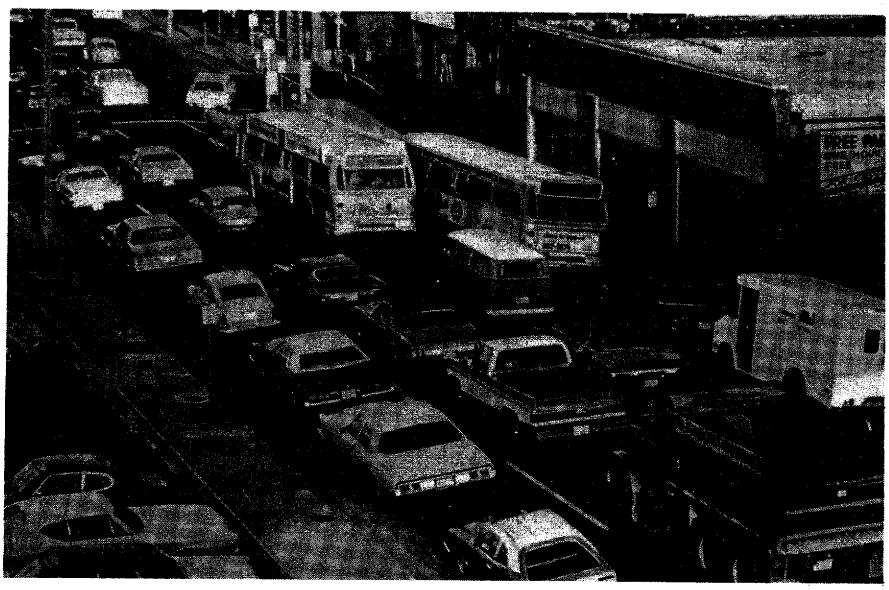
Transit systems are encouraged to utilize public service announcements and press releases to increase awareness of the system and to publicize service improvements.

MARKETING AS A TRANSIT SERVICE TOOL

A successful marketing program includes the following five categories:

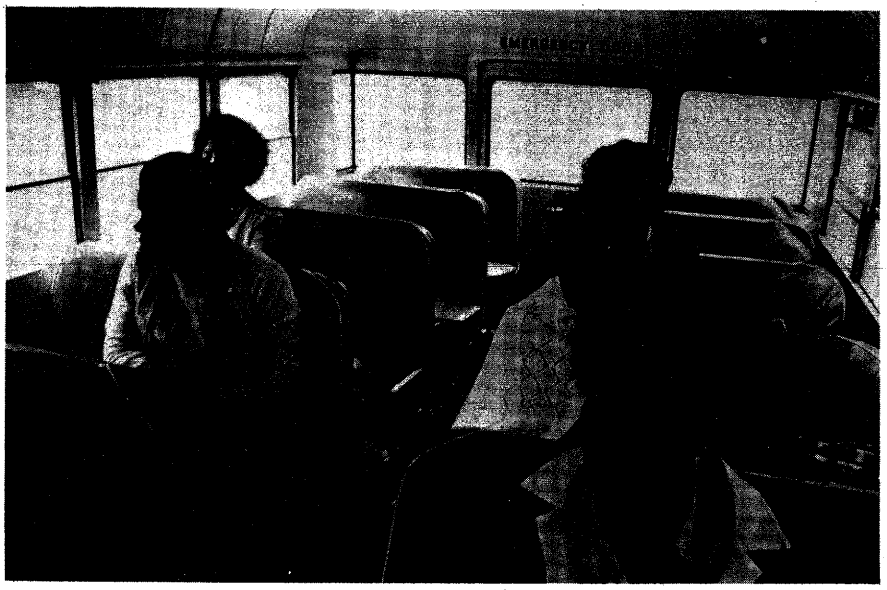
- Market Research
- Service Development
- Information Dissemination
- Promotional Strategies
- Customer Services/Public Relations

The TTI research effort reported here represents an attempt to integrate all five marketing dimensions. The major emphasis of this report and the remaining two volumes, Critical Factors Influencing the Demand for Transit and Promoting Transit: A Marketing Handbook, however, is on market research and service development--the key foci of any effective marketing program. With the use of market research, transit planners are provided with an objective rationale for decision-making regarding service alterations and improvements.



Public transportation can help ease the traffic congestion resulting from dependence upon private vehicles because a transit vehicle occupies the street space of only two cars while serving up to forty times the number of people.

The failure of systems to serve the needs and preferences of the market has contributed to declining transit ridership in the past. A marketing approach, however, focuses on satisfying the travel needs of the public and can help maximize efforts to increase patronage for the system.



CHAPTER I

INTRODUCTION

SIGNIFICANCE OF THE RESEARCH EFFORT

Between 1940 and 1970, the number of registered automobiles increased from 60 to 90 million while transit ridership steadily declined. While this trend is altering, it is extremely important to provide, and to make the urban public aware of, viable transit systems. "A transit system not supported by the community and not used by the citizens will wither away. The result may be more decay in the central business district and highways strangling in their own congestion" (Emmer, 1976:56). Texas residents, in particular, are highly dependent upon private automobiles for their transportation needs. Since 1950, for example, bus transit has been discontinued in 20 Texas cities. In the vast majority of the 18 cities in the state which currently have transit operations, only a minimum level of service is provided.

The difficulty of weaning large numbers of individuals away from deeply entrenched travel behavior patterns is well-documented, and the situation is especially problematic when travel modes are heavily reinforced by existing transportation arrangements. Transit systems are handicapped by the fact that the American city is presently based on the premise that intraurban trips will be made by privately owned and operated vehicles. Furthermore, the automobile is recognized as a symbol of wealth and status -- quite the opposite of the image many people attach to the transit system. According to Reed (1973), transit systems have the opportunity to put a stop to declining ridership, but to do so will mean making major changes in the way the systems operate. Specifically, transit systems must begin to take into consideration the needs and preferences of its market, and plan operations accordingly.

The purpose of this report, therefore, is to show how transit systems, through utilization of a marketing approach, can increase transit patronage and maximize the system's revenues. The benefits incurred, however, go beyond the transit system itself. "As long as fares are charged and subsidies provided, the public seems to be the beneficiary of increased patronage" (Wilson, et al., 1974:46). Such increases in ridership could result in a reduction of necessary subsidies or, better still, justify the expansion of transit services.

The research encompassed in this report represents a departure from previous marketing efforts, in that no previous studies have attempted to identify viable market segments within smaller cities or to depict the promotional strategies, based on service requirements sought by each segment, and advertising media which would successfully increase transit patronage.

DEFINITION OF TRANSIT MARKETING

Transit marketing is that function which serves to understand and respond to customer needs for the services of the system (Lesko,1975). In general terms, the goal of transit marketing is service maximization, but this implies more than just the selling of transit -- it implies a total concern for the service needs of both current and potential transit patrons.

Unfortunately, marketing was a neglected function in transit operations for many years. Since World War II, transit managers have generally tended to emphasize operational skills, while they ignored consumer needs and desires.

> The diversion of riders from public to private modes over the years is not merely a reflection of the automobile's ability to satisfy many travel needs better than public transportation has been able to, but also of a failure on the part of transit management to ensure that their services were tailored as closely as possible to consumer requirements and that transit's positive advantages were promoted (Lovelock, 1973:246).

The key to marketing in the mass transit context lies in a consumer orientation, whereby the primary objective of the system is satisfying the public's needs. In contrast, an operations orientation suggests that if the system is well run according to specified performance standards, customers will use it. Stated more simply, an operations-oriented system deals with the customer on a take-it-or-leave-it basis, with no consideration of the fact that transit must compete with other transportation modes for its patrons.

The goal of service maximization does not indicate an aimless waste of money in an attempt to maximize the number of bus-miles, however. Rather, it means identifying consumer needs and developing ways to best meet those needs. Additionally, it means finding ways to increase patronage

of transit facilities in order to spread costs and increase revenues (Institute for Urban Transportation, 1971).

Installing the marketing concept may require major changes and commitments in the organization, but the ability to accept such changes is another characteristic of a consumer orientation. The opposite is true in operations-oriented systems where there is a bias toward standardization of the services provided. The transit system stands to benefit from these changes eventually, because marketing has been found to provide a rational approach for managing operational resources in the most efficient manner. At the same time, the operating resources are being used to best serve the needs of the public.

DEFINITION OF MARKET SEGMENTATION

Perhaps the most important aspect of a marketing approach is the technique of market segmentation. Basically, this involves the "subdividing of a market into distinct subsets of customers, where any subset may conceivably be selected as a market target to be reached with a distinct marketing mix" (Kotler, 1976:144).

Within the transit market, for example, different groups of people are traveling for different reasons with various constraints on their time, energy, and money. Marketing strategies, therefore, involve the integration of various components of the marketing mix (e.g., price, services, and promotion) to tap opportunities uncovered by segmentation analyses (Kangun and Staples, 1975).

In effect, marketers are oriented to conduct research into the differences in consumer behavior, needs, and preferences so that they can direct their advertising to these various market segments and thus maximize their appeal to each. Whether the segments are formed on the basis of differences in age, socioeconomic variables, locational parameters, or even psychological profiles, transit management's recognition of the variety of customer needs and desires represents an important step beyond the stage of stereotyping consumer behavior.

RATIONALE FOR USING MARKETING IN THE MASS TRANSIT INDUSTRY

Marketing is, perhaps, the only management function which directly ties together the transit company and the general public. As mentioned

previously, marketing was ignored for many years, which resulted in a failure on the part of transit management to ensure that services were aimed at satisfying consumer needs and requirements. Additionally, there was the failure to promote transit's advantages to the public. Many systems discovered that, despite years of service, their operations were not recognized, understood, or appreciated, even when quality service was available.

Past research suggests that transit systems have suffered from four major weaknesses which have reduced patronage below potential levels:

1. a lack of information among the general public concerning public transportation services;
2. an unsatisfactory image of transit services in the public's mind;
3. an almost complete lack of involvement by "destinations" in transit planning and promotion; and
4. an absence of marketing and research skills among transit management (Lovelock, 1973:247).

This finding implies a need for marketing activities within transit systems if they are to successfully increase their ridership. Furthermore, within the marketing context, market research is an absolute necessity. "No lasting benefits can be achieved from service, pricing, promotion, or sales projects and programs if they are not based on solid market research" (Lesko, 1975:9).

Specifically, market research enables the identification of such factors as: personal characteristics, trip-making patterns, travel needs, and attitudes of various market segments. It also facilitates the measurement of potential demand per population segment. Above all else, "...market research helps the transit decision-maker to understand what makes the customer decide to buy transit services" (Lesko, 1975:10), and all other marketing information is based on this fact.

To summarize, it has been suggested that a marketing approach, based on a consumer orientation, will provide a sound basis for allocating transit resources efficiently and productively at the same time the transit system is satisfying the travel needs of the public. The technique of market segmentation, which involves the identification of viable population segments, enables transit personnel to effectively channel

marketing strategies to each target market, thereby maximizing their appeal in each case. Finally, it was emphasized that the previous lack of marketing activities was at least partially responsible for reduced transit patronage. Nevertheless, systems may successfully reverse the trend through utilization of a marketing approach, beginning with fairly extensive market research.

SCOPE OF THE PROJECT

Much of the previous work on marketing public transportation deals with large transit systems in metropolitan areas, thus their applicability to smaller systems is problematic. In general, transit systems in cities under 200,000 face a unique set of problems, stemming from differences in their

- city configurations,
- potential markets, and
- available operating budgets.

For example, most small cities do not have a lower-income population segment located in the CBD which travels to the suburbs for employment purposes. Instead, as in the Texas cities of Beaumont and Waco, work trips may involve a cross-town pattern, rather than an outward migration from the central city.

The potential market for smaller-city transit systems may also differ significantly from the market in metropolitan areas. The absense of automobile deterrents, such as heavy traffic congestion and exorbitant daily parking fees, means an even greater difficulty in attracting commuters to the transit system in lieu of their private automobiles.

Finally, limited operating budgets mean that smaller systems are restricted as to the service improvements they can provide to attract potential riders to the system. Transit systems in cities under 200,000 also tend to have markedly higher subsidies per passenger.

These and other similar problems emphasize the need for a study dealing with marketing techniques in smaller cities. This report, which is based on data gathered in Beaumont and Waco, presents information concerning:

1. the segmentation of the transit market into six population subgroups;
2. the service requirements sought by each segment;
3. the transportation needs of the population;
4. the promotional strategies and techniques to be used in accordance with service requirements for each segment; and
5. the most effective advertising media to be used in promotional campaigns.

In part, this information is intended to facilitate the development of a marketing program in systems lacking previous experience in the area. Additionally, however, the detailed information on consumer service requirements, promotional strategies, and appropriate advertising media can supplement existing marketing programs to maximize the effectiveness of efforts to increase transit ridership. Though not based on a typical metropolitan situation, transit systems in larger cities may also find this information useful, particularly for planning future programs to stimulate patronage and thereby increase revenues.

Because of the representative sample of citizens in Beaumont and Waco, the information obtained concerning residents' attitudes toward and evaluations of transit are considered to be applicable to other smaller cities within the state. This decision is based on characteristics of both the populations and the transit systems in these two Texas cities.

CHAPTER II

METHODOLOGICAL APPROACH TO TRANSIT MARKETING SURVEYS IN TWO CITIES

Under the auspices of the State Department of Highways and Public Transportation, two Texas cities with small transit systems -- Beaumont and Waco -- were selected as study sites for transit marketing surveys. Both cities were considered to be representative in regard to small transit service provision. Additionally, the sites were chosen because transit leaders within the two cities agreed to implement, to the extent possible, the marketing recommendations.[1]

The system characteristics and salient population characteristics of Waco and Beaumont are presented in Table 1.

SAMPLING FRAME

Within Beaumont and Waco, a multistage cluster sampling frame was utilized for the marketing surveys. This approach is comparable to the procedures utilized by the U.S. Bureau of the Census for periodic Current Population Surveys. Census tracts were randomly selected within the two cities, then randomly selected blocks within the chosen tracts and finally every other household on these blocks were sampled. Because greater diversity of responses was anticipated between census tracts, approximately one-half were utilized -- that is, 14 tracts in Beaumont and 13 tracts in Waco. Five blocks per tract were incorporated into the sampling frame.[2]

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[1] System representativeness was measured as one component of a Texas transit leadership questionnaire that was disseminated to transit management and selected city officials in June, 1976.

[2] For further information regarding the sampling frame and procedures utilized, please contact participating Texas Transportation Institute staff members. Additional references which may prove of interest include Babbie's (1973) Survey Research Methods, Mendenhall, et al. (1971) Elementary Survey Sampling, and Cochran's (1963) Sampling Techniques.

Table 1. Population Characteristics and Transit System Characteristics for Waco and Beaumont, Texas

	Waco	Beaumont
A. Population Characteristics		
Population Size (1977 estimate)	101,000	125,000
Density of Incorporated Area		
Percent of Adult Population 65+	143	242
Percent of Adult Population in Blue Collar Occupations	23.1	27.9
Percent of Households with Automobiles Available		
0	14.2	15.5
1 or more	85.8	84.5
Percent of Population within 1/4 Mile of Bus Route	80 (est.)	68
B. Transit System Characteristics		
Total Passengers (1975)	768,775	1,130,196
Revenue (1975, from scheduled routes only)	$203,460	$239,875
Passengers/Bus - Mile (average, for all routes)	1.49	2.02
Headways - Peak (average in minutes)	45	30
Headways - Off-Peak (average in minutes)	60	45
Active Fleet Size	11	20
Number of Routes	11	6
Basic Fare	35¢	30¢
Transfers	5¢	5¢
Existence of Zone System	No	No

One-half of the households on each block were sampled where blocks were not commercial or contained other forms of non-residential land use. Alternate blocks and alternate dwelling units within blocks could be utilized in the sample, based on specific guidelines for obtaining alternates. Every adult household member (18 years or over) was surveyed. Based on the number of adults in the dwelling unit, an equivalent number of questionnaires were left at the house, to be completed individually by adult residents. A time was arranged to return for the questionnaires, with up to six return visits necessitated in some cases. For approximately 22 percent of the dwelling units, personal interviews were necessary to administer portions of the questionnaires to one or more household members. An average of 1.69 adults per dwelling unit was surveyed.

INCLUSION OF TOPICAL AREAS IN THE TRANSIT MARKETING SURVEYS

As no comprehensive market research efforts had been undertaken in small cities, a large amount of travel and attitudinal data was needed. With a comparative frame possible, that is, the joint comparison of two small systems in Texas, an emphasis was placed on eliciting identical information from respondents in both Waco and Beaumont.[3] The following outline represents the major topical areas encompassed in the joint surveys:

- a ranking of transit needs in relation to other needed community services and improvements
- transit financing alternatives
- travel patterns in the household
  - by trip purpose for adults and children
  - by transportation mode
  - by automobile ownership and availability
  - use of transit in the past and present, and propensity for further patronage
  - distance from bus stops to home and to work
  - distance to and location of work

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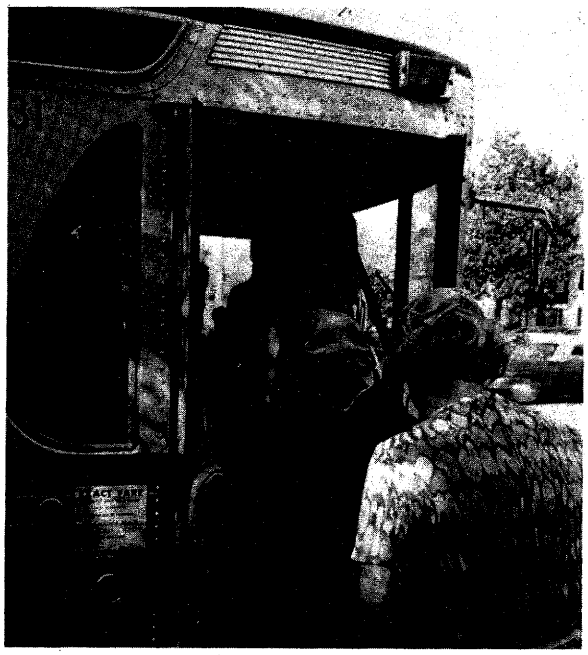
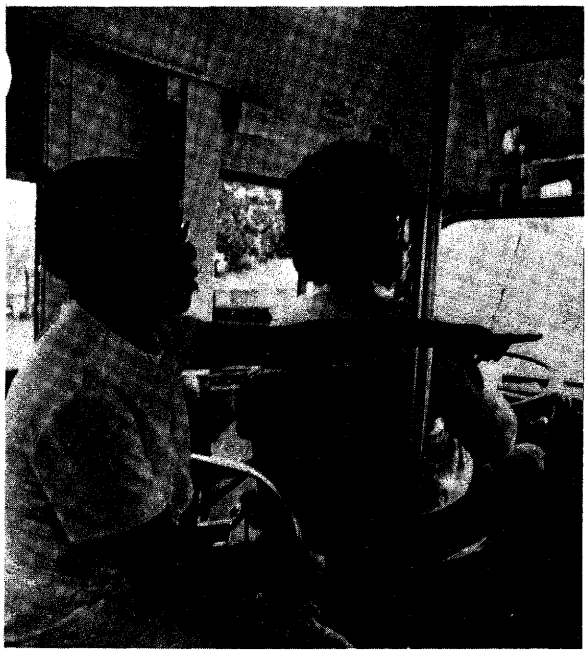
[3]See Appendix A for the survey schedule. Dr. Christopher H. Lovelock, School of Business Administration, Harvard University, provided a review of the questionnaire format and item input. The authors gratefully acknowledge his critical comments and helpful suggestions.

- opinions of transportation
  - transit improvements versus roadway improvements
  - enjoyment of driving
  - status of transportation modes
  - view of transit's prospects
  - perceived propensity to use transit
  - transit performance
  - altruism toward provision of transit service
  - traditionalism and transportation modes
- evaluation of car travel and, correspondingly, of bus travel along 12 dimensions
  - punctuality
  - simplicity
  - safety
  - modernity
  - comfort
  - speed
  - status
  - convenience
  - enjoyability
  - cost
  - reliability
  - flexibility
- perceived service requirements of buses
- optimum methods of information dissemination
- personal background information, including data on physical disabilities

A number of these topics, representing responses elicited by the public, are covered in this report. Other portions of the data obtained from the Waco and Beaumont surveys are encompassed in the remaining two volumes, Critical Factors Influencing Transit Demand and Promoting Transit: A Marketing Handbook.





In cities under 200,000, transit ridership is composed primarily of older persons and lower-income females -- the captive riders who, for various reasons, cannot or choose not to drive private automobiles.

Although small systems cannot expect to attract all city residents to the system, potential demand for transit was found to exist for white collar females and housewives, as well as the elderly and blue collar females.

CHAPTER III

SEGMENTING THE TRANSIT MARKET

With the knowledge that transit in smaller cities will not receive the same intensity of interest for all citizens, nor will ridership levels be identical for all residents, the management's orientation should be to direct service toward broad target groups. The importance of ascertaining population segments along one or more meaningful dimensions, such as homogeneous travel patterns and propensity to use transit, similar service requirements sought, or comparable socioeconomic and attitudinal characteristics cannot be over-emphasized. If all residents in any one city have highly similar travel patterns and identical demands for bus usage, as well as homogeneity in the other aforementioned conditions, then there is no logical reason to isolate out those individuals with specialized needs and service requirements. In this sense, mass transit would be geared to the mass population, with little differentiation in terms of usage or interest levels. Bus service would represent a standardized product, perhaps with high operating efficiency, but tailored to no specified customers.

In some instances, with the availability of federal assistance for capital improvements, standardized and efficient bus operations may have a broad appeal to city officials and transit managers. Nevertheless, to utilize this approach is to lose sight of the primary objective of intracity transit provision, that is, to provide a service to urban residents. Bus transit currently serves a small residual market -- primarily the captive riders. Several strategies, utilized for marketing other products, can be applied to increase ridership, based on the transit needs and requirements sought by the public. Three broad approaches are outlined below.

It has been mentioned that, in undifferentiated marketing, transit systems choose not to recognize the differences among population segments. Rather, the focus is on the common needs of people, i.e., providing a transit system that appeals to all. In appealing to the majority, however, the positive interest and usage that could be stimulated with a more selective marketing orientation is lost. Further, small transit systems may never have a broad-based appeal or usage level.

With differentiated marketing, transit systems make an attempt to divide the total population along some descriptive dimensions(s) which depict current and potential use as well as other significant differences in the public-at-large. An attempt is thus made to serve each segment delineated. Such a strategy should lead to a higher level of use and revenue, but higher operational, administrative, and promotional costs are evidenced as well.

A third approach, and one which appears very useful for increasing transit ridership, lies in concentrated marketing. In the latter two marketing strategies -- differentiated and undifferentiated marketing -- there is the implication that (1) information dissemination, (2) promotional strategies, (3) customer services and, (4) most important, service improvements, are aimed at the total population. On the other hand, the third possibility depicted relies on appeals to a specified proportion of the total population. This approach is especially efficient in public service operations where resources are limited. Instead of attempting to attract a portion of all population segments or a sizeable proportion of the total population to transit, concentration which focuses a strong marketing effort on a few, well-chosen population segments may prove most successful.

Whether the transit system is entirely new, partially new, or old, the marketing strategy should be geared to fit, as exactly as possible, the needs of only as many segments of the total population as can be effectively served. In smaller transit operations especially, the potential resources and the relative homogeneity/diversity of the population must be considered at all times. If segmentation is to be utilized, there must be objective bases for determining dividing points among individuals. Segments created arbitrarily by market researchers or transit planners have no useful function. The purpose of the following section is to provide information regarding alternative approaches to segmentation. Normally, a combination of these criteria are used to segment the transit market.

BASES OF TRANSIT MARKET SEGMENTATION

The rationale for grouping the population into broad, meaningful categories has been presented as a requisite for effective transit provision. However, the bases for segmentation are almost without bounds,

in terms of the types of criteria used. Before proceeding further, it may prove beneficial to outline four requirements for effective segmentation, the first three of which have been delineated by Kotler (1976: 143).

- The first condition is *measurability*, that is, the extent to which information can be obtained about individuals on the particular criteria of interest. Because of this need, socioeconomic characteristics of residents or other easily obtained variables, often are used as the basis for segmentation.
- The second condition is *accessibility*, or the extent to which a transit system can focus on chosen segments. For example, residents outside the territorial jurisdiction of service provision may evidence a high propensity to use the system, but it is not possible to provide bus service to this segment.
- The third condition is *substantiality*, i.e., the degree to which the segments are large and/or interested enough to be worth considering for separate market cultivation. As segmental marketing is costly, in terms of the service improvements and many other features, the segments should be the largest possible clustering of individuals who are homogeneous according to some criteria.
- The fourth condition is *viability* or *stability*, that is, the extent to which the chosen segments evidence a demand for the product over time. For instance, renovating all conventional buses in a city to serve the handicapped would not be feasible if separate, specialized vehicles are to be provided for this segment at a later point in time.

The outline provided in Table 2 points to feasible bases for transit market segmentation. Other feasible bases or criteria for segmentation not presented in Table 2 include: (a) extent of handicap (including physical handicaps, foreign language, and other individually disabling characteristics); (b) current transit knowledge/awareness levels; and (c) media habits. These latter forms of segmentation will not be discussed at this time, however. Additionally, in analyzing possible bases of segmentation across several transit systems, characteristics of the transit service also enter in as possible means of segmenting the transit market population. Residents differ in sensitivity regarding fare structure, routing, and other operation/level of service measures.

Table 2. Alternative Bases for Transit Market Segmentation

- Demographic Characteristics of Individuals
  - A. Age
  - B. Sex
  - C. Socioeconomic characteristics
- Travel Behavior Characteristics
  - A. Automobile availability
  - B. Trip purposes
  - C. Current transit use
  - D. Origins-destinations (locational considerations)
- Attitudinal and Evaluational Characteristics (popularly known as "psychographics")
- Benefits Sought from Transit, or Service Requirements
- Situational Characteristics

Demographic Characteristics of Individuals

It is well known that such personal characteristics as age, income, occupation, family size, and sex have been significant determinants in forecasting modal choice. One or more of these criteria may be effectively utilized to subdivide the transit market. Current bus ridership for smaller systems is comprised predominantly of: females (approximately 70 percent of the patrons for all systems), those with median family incomes under $6,000 and blue collar workers, with approximately 15 percent of the ridership aged 65 and over.

Socioeconomic Status. Income consistently has been a critical factor because of the high correlation between income and car ownership. Occupational ranking also is a surrogate for educational level and median income, as well as indicating to some degree locational parameters within a city for place of residence and place of work.

Sex. Distinctions by sex are significant because of high levels of current transit usage among women. While automobile availability is an intervening factor in the majority of cases, females also evidence less enjoyment of driving, have less ego satisfaction in owning a car, and generally have different travel patterns than do males (see Institute for Urban Transportation, 1971:250).

Age. An extremely important segmental element for transit marketing is age distribution. Those in the age category of six to sixteen are transportation dependents. Especially in smaller metropolitan areas, younger people can safely, effectively, and productively utilize the bus system. Time and reliability constraints may be of less importance to this younger age grouping, so that the lower levels of service provided in smaller cities prove no hindrance to patronage. Older persons typically drive less, have fixed incomes, and, like younger persons, have a variety of trip purposes that could be effectively served by transit.

It may prove helpful to depict the means by which all three dominant demographic characteristics could be utilized to segment the transit market, as shown in Figure 1. As can be discerned, using only three determinant variables for purposes of segmenting the transit market provides 18 possible population groupings. In most cases, using one or two bases of segmentation is the only feasible approach. The choice and numbers of determinant variables to utilize in subdividing the transit market for smaller systems will be presented in a later portion of this chapter.

Travel Behavior Characteristics

Response to transit, in terms of interest, evaluation, and propensity to give buses a "trial ride" rests primarily on one set of predictive variables: current travel behavior. Each of the conditions surrounding travel behavior is discussed briefly below.

Automobile Availability. Travel choices, and thereby the use of transit, depend on the other transportation opportunities available to the individual. Hartgen (1974), in delineating modal choice models, found that car ownership and socioeconomic status accounted for 80 to 90 percent of the variance in modal choice, while attitudinal

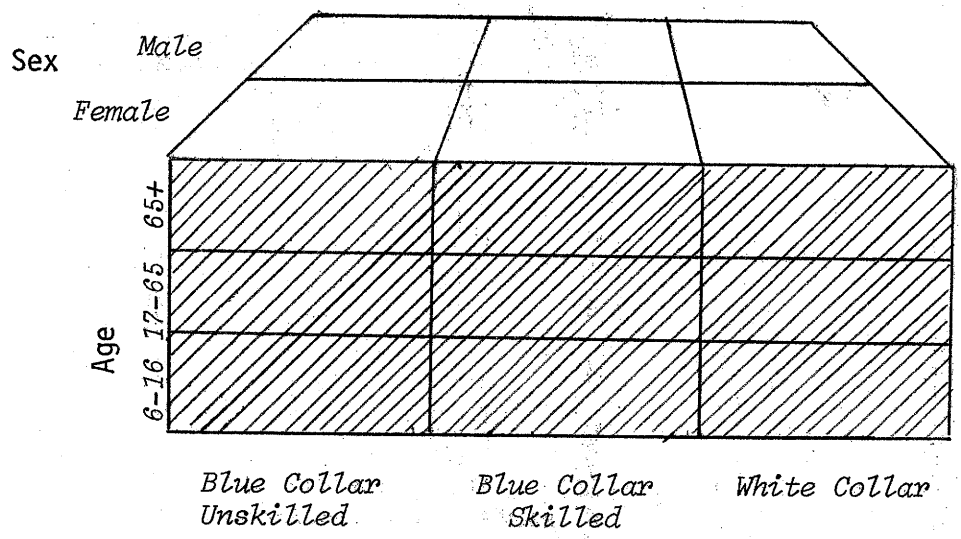


Figure 1. Segmentation of the Transit Market with the Use of Three Demographic Criteria

*Occupational ranking is utilized as a measure for socioeconomic status, since it is obtained more readily and accurately in marketing surveys than is income.

variables measuring preferences for particular modal characteristics could explain only 10 to 20 percent of the variance in modal choice [from Wachs, 1976:102]. For systems with lower levels of service, located in cities where over 80 percent of the households own automobiles, segmentation of the market by automobile availability or ownership is extremely useful; this is the predominant transit situation in small Texas cities.

Trip Purposes. It is further possible to subdivide the population according to purpose of travel. For example, discretionary and non-discretionary trips provide one means of dividing the market. In cities with low off-peak ridership levels, transit use for discretionary trips can be promoted.

Current Transit Use. As will be noted in the second volume of the study, entitled Critical Factors Influencing the Demand for Transit, current use by specific segments leads to a positive evaluation of transit relative to the opinions of non-users. Further, regular use by members of one segment precipitates use among peers. Thus, if a smaller proportion of white collar females, primarily in clerical and sales positions, begin riding buses to places of work, other peers will become attracted to the transit system. Analysis of current ridership levels among segments aids in determining the extent to which specific segments could be encouraged to increase patronage.

Locational Considerations. A final basis of segmentation based on travel characteristics concerns origins and destinations of broad population groupings. One effective mode of dividing the transit market revolves around the determination of service availability for specific segments. All white collar workers who are employed in the downtown area, or other commercial complexes, for instance, can provide a viable segment for the application of marketing strategies.

Attitudinal and Evaluative Characteristics

Attitudinal concensus regarding the quality or the usefulness of transit services provides another important basis for segmentation. Knowledge of the fact that particular clusters of individuals rank bus service as extremely poor and state that they never plan to ride a local bus, provide a means of deleting these segments from all promotional strategies.

Particularly for smaller systems, promotional/informational efforts and service improvements should not encompass these low-evaluation segments.

It is difficult to isolate attitudes toward transit from the demographic characteristics and travel behavior variables just discussed. Population groups differ in terms of satisfaction with the bus system and other transit-related attitudes, but these opinions most often have a basis in income, occupation, age, sex, automobile availability, and locational considerations. The lower socioeconomic segments, females, and older persons, for example, tend to rate transit as more equal in quality to cars than do their counterparts.

Benefits Sought from Transit, or Service Requirements

No transit system can expect to appeal to every urban resident. "The very act of attracting one segment may automatically alienate others"(Haley, 1968:34). Just as with automobile purchases, diversity in automobile characteristics sought has precipitated the manufacturing of a diverse supply of vehicles. The benefit segmentation approach is based upon the marketer's ability to measure consumer needs and to provide services to meet these needs for substantial, viable segments. Differences in types of service requirements sought by six separate segments are presented in a later portion of this report.

Situational Characteristics

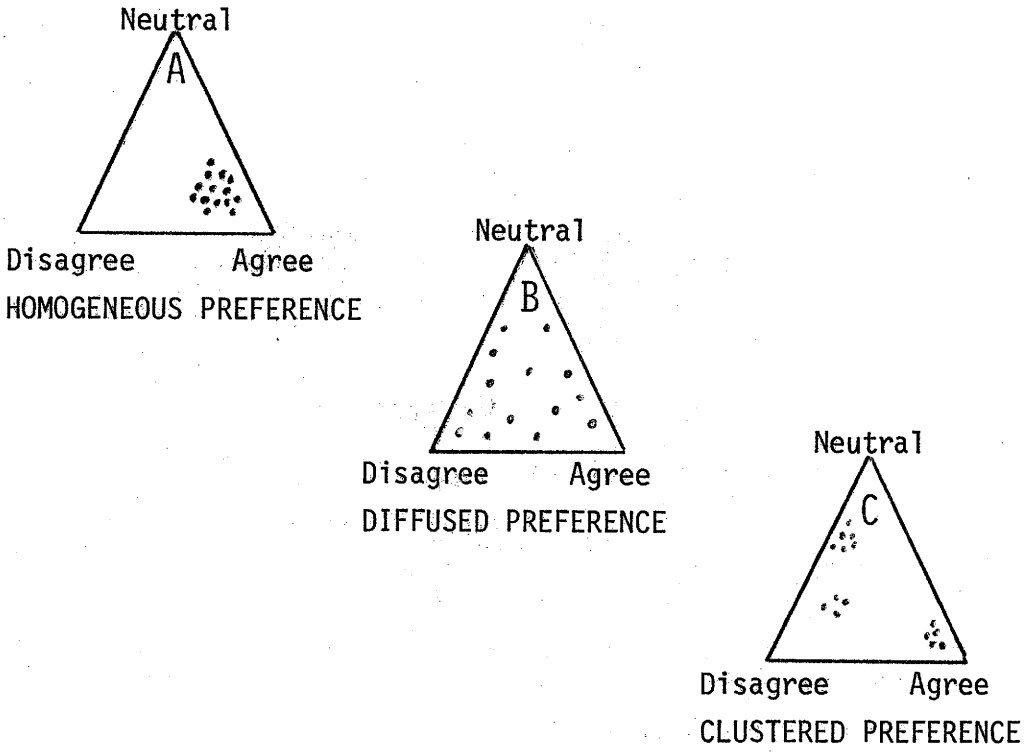
Criteria for dividing the population may depend on situational parameters. In cities beseiged periodically by frequent snow storms, transit can prove more reliable and safe than automobiles. Car repairs provide an opportunity for a "trial ride" on the bus. Availability of bus route maps and schedules often bring about interest or usage. While it may be problematic to determine the segments most directly affected by these "situational" characteristics, such conditions provide useful promotional devices for attracting specific individuals to transit.

ONE METHODOLOGICAL APPROACH TO SEGMENTATION

A wide variety of segmental devices have been provided. Each dimension delineates a different means of concentrating on specific clusters of

homogeneous individuals. In assessing such attributes as (1) propensity to use transit, (2) evaluation of transit as compared to automobiles, (3) requirements sought from transit, and other salient features of service provision, residents evidence one of three possible preference patterns, as shown in Figure 2. In a hypothetical example, three possible clusterings of responses are provided to the survey item, "I would ride buses if they always arrived and departed at the specified time." Respondents could (1) "Strongly Agree" or "Agree", (2) have "No Opinion" or be "Neutral", and (3) "Disagree" or "Strongly Disagree".

Figure 2. Hypothetical Triangular Plots Depicting Transit Preferences



In the first case, there appears to be agreement across the general public with the importance of bus scheduling. In the second instance, case B, the general public has no homogeneity, either when viewing population preferences as a whole or in assessing the opinion of clusterings of individuals. Finally, in case C, there appears to be three clusters of opinion. Knowing the characteristics of the individuals in each cluster should provide some insight into the rationale for these varying decisions. Those who cluster near the "agreement" corner of the attitudinal space are perhaps employed and would seek transit as a viable transportation mode if they could depend on specific arrival and departure times. Other characteristics such as work force status, age, and car ownership, may explain the remaining two clusters in case C. It should be noted that the resultant segments formed from responses suggested in case C could be based on several segmentation approaches, according to: (1) Attitudinal and Evaluative Characteristics; (2) Benefits Sought from Transit; (3) Demographic Characteristics; or (4) Travel Behavior Characteristics.

When a transit system seeks to utilize market segments, the following steps should be considered (see Kotler, 1976:143):

- First, transit management must determine those criteria along which to identify the possible existence of distinct market segments.
- Second, the size, viability, and accessibility of the various market segments should be ascertained.
- Third, inadequacies in service (including information dissemination) for target segments must be delineated.
- Fourth, correlated characteristics of target segments, such as locational considerations and demographic characteristics, must be determined, because they suggest efficient methods for recruitment of these segments.

Multiple Discriminant Analysis As an Effective Segmenting Method

Originally, it had been anticipated that smaller cities would contain fewer market segments than did large metropolitan areas, with perhaps only two segments existing, such as "captive" and "modal choice"

population groupings. From the Beaumont and Waco surveys, however, marked differences in attitudes and in bus service requirements of males versus females were plotted. Of those in the work force, low socio-economic and high socioeconomic individuals varied greatly in their evaluation of transit. Additionally, older persons were more positive toward local bus systems than were any other population clusters.

Transit Market Segmentation in Waco and Beaumont

Given these preliminary findings, an attempt was made to determine objectively, "What are the distinct transit markets in Beaumont and Waco?" Multiple discriminant analysis was used to determine the "distance" among the aforementioned categories of individuals. Six adult population groupings were placed into several discriminant analyses.[5] These groupings were:

1. Older Persons (population 65 +)
2. Blue Collar Males (those who were craftsmen, operatives, laborers, and service workers)
3. Blue Collar Females (primarily private household or other service workers)
4. White Collar Males (those in professional, managerial, clerical or sales positions)
5. White Collar Females (primarily clerical and sales workers)
6. Housewives

The discriminant analysis statistical technique points out the extent to which hypothesized segments actually are clustered, with the constraint that the opinions or other salient characteristics of each segment be uncorrelated with those opinions or traits of all other segments.

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[5] Discriminant analysis is a procedure for constructing a spatial model of the distinctiveness of segments. First, it finds the combination of attributes which discriminates most among segments, maximizing an F-ratio of between-segment to within-segment variance. Where overlapping does exist among segments, these incorrectly placed individuals (a) may be small in number and diffused throughout all other segments or (b) may readily cluster with only one other segment. In the latter case, the two similar population groupings would be combined (see Massey, 1971).

Two of the discriminant analyses undertaken for the six predicted segments are presented in Tables 3 and 4. The first such analysis points to high homogeneity of nine transit-related attitudes within the six predicted segments. The differences in the predicted segments' and the actual segments' attitudes toward transit are depicted in Table 3. As shown in Table 3, older persons were perfectly homogeneous, followed by white collar males and blue collar females. Blue collar males showed the least effective clustering, with 8.86 having attitudes similar to housewives and others possessing opinions similar to blue collar females, white collar males, or white collar females. The degree of misclassification, however, is extremely small, pointing to the existence of six viable adult segments in regard to transit-related attitudes.

Table 3. Discriminant Analysis of Six Population Segments in Waco and Beaumont Based on Attitudinal Differences Regarding Bus Transit*

	Older Persons	Blue Collar Males	Blue Collar Females	White Collar Males	White Collar Females	Housewives
Older Persons	100.00	0.00	0.00	0.00	0.00	0 00
Blue Collar Males	0.00	83.54	2.53	2.53	2.53	8.86
Blue Collar Females	0.00	0.00	92.45	0.00	1.89	5.66
White Collar Males	0.00	2.35	1.18	92.94	0.00	3.53
White Collar females	0.00	0.00	1.69	3.39	91.53	3.39
Housewives	0.00	2.20	1.10	8.79	2.20	85.71

*The 28 transit attitude items included in the discriminant analysis are provided in Appendix A, which is the actual survey schedule. Pages 108 and 109 in Appendix A point to these attitudinal statements.

Figure 3 depicts further the direction of misclassification, that is, the top two segments for which a predicted segment (such as blue collar males) were most closely associated.

Table 4 shows the extent of correct clustering between predicted population groupings and actual segments for nineteen bus requirements. Because of the large number of variables (or bus service requirements) included, there was less perfect agreement within population segments. For each predicted segment, however, the percent of actual individuals falling into the correctly predicted segment was larger than for any other classified segments (note the underlined figures in Table 4).

Table 4. Discriminant Analysis Based on Differences in Bus Requirements Sought by Six Population Segments in Waco and Beaumont*

	Older Persons	Blue Collar Males	Blue Collar Females	White Collar Males	White Collar Females	House-wives
Older persons	35.00	20.00	0.00	10.00	15.00	20.00
Blue Collar Males	2.67	40.00	2.67	26.67	10.67	17.33
Blue Collar Females	2.78	16.67	33.33	16.67	19.44	11.11
White Collar Males	0.00	16.05	2.47	58.02	9.88	13.58
White Collar Females	4.84	12.90	12.90	8.06	40.32	20.97
Housewives	1.20	15.66	2.41	21.69	7.23	51.81

*The 38 bus requirements are delineated in Appendix A, pages 111 and 112, from the actual survey schedule. Twelve of the 38 items concerned broad evaluative dimensions of buses, such as cost and convenience (see p. 111), while the remaining 26 encompass more specific types of service requirements, including such items as maintenance of current bus fares and provision of bus shelters and benches (see p. 112).

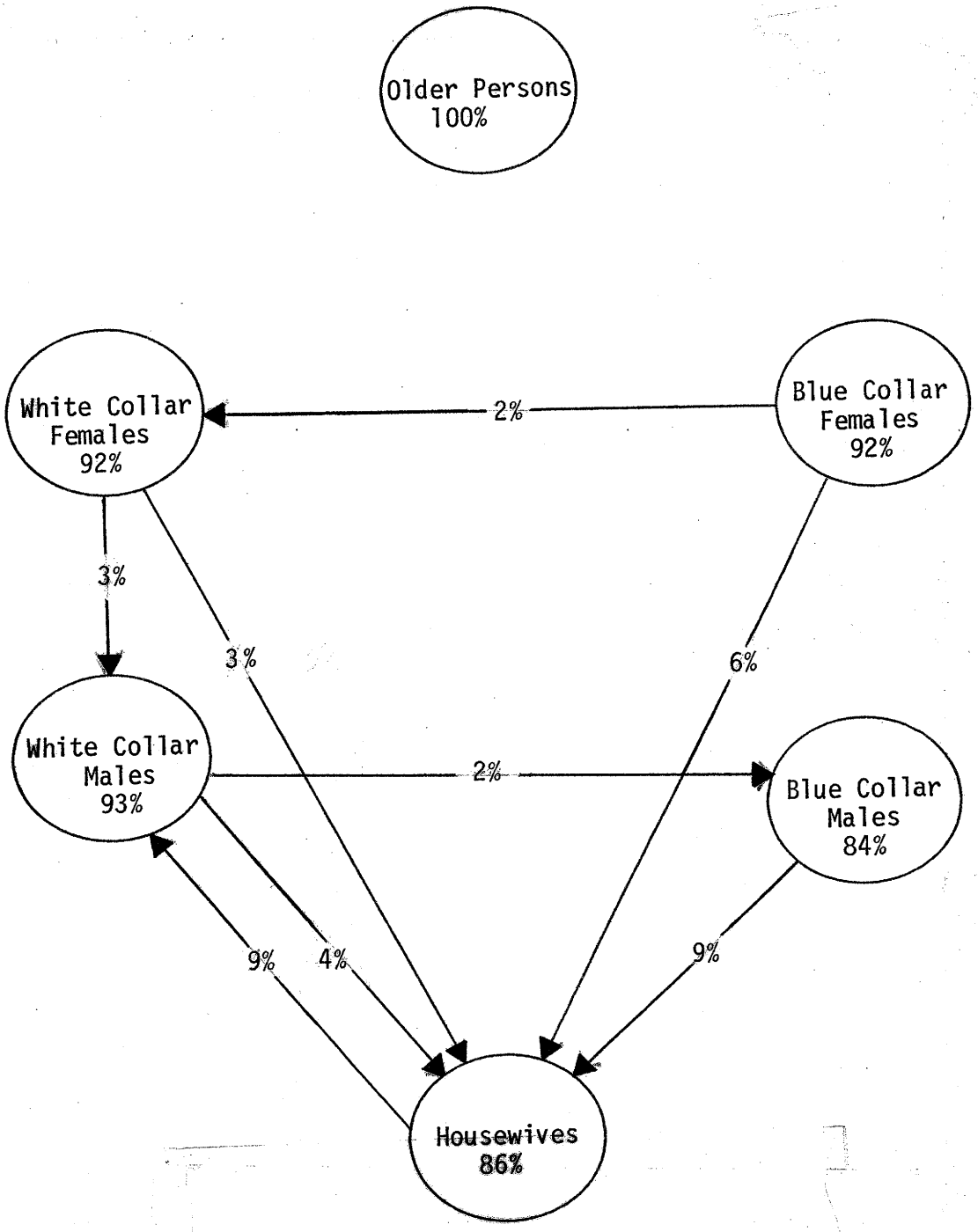


Figure 3: Association Diagram for Nine Attitudinal Variables
(Arrows Indicate the Direction of Misclassifications
in the Largest Two Cases)

In looking at bus service requirements, white collar males were the most homogeneous in terms of benefits sought from transit, with 58.02 percent correctly classified. Housewives ranked second in effective clustering, with 51.81 percent classified accurately. Nevertheless, blue collar females, older persons, blue collar males, and white collar females were correctly classified less than 50 percent of the time. More diversity within segments existed in regard to bus requirements perceived as necessary before these individuals would ride the local bus.

A misclassification diagram is presented in Figure 4. Association arrows indicate the largest misclassifications per segment, or the extent of overlap with the highest two overlapping segments. As can be noted, housewives were correctly classified over 50 percent of the time, but 16 percent sought transit benefits similar to blue collar males (presumably inculcating their husbands' evaluations) and 22 percent of the housewives surveyed portrayed transit needs comparable to those of white collar males (again, the influence of spouse is assumed). Other segments can be similarly assessed by careful observation of Figure 4.

IMPLICATIONS OF SEGMENTATION FOR TRANSIT MARKETING

As noted from the segmentation approach, several different bases were utilized for dividing the potential transit market in Waco and Beaumont:

- Demographic characteristics, including age, sex, and socio-economic (occupational) categories
- Transit attitudinal characteristics
- Benefits sought from transit, or service requirements

While the segments formed in the use of a discriminant analysis approach were numerous, concentration on several of the six population groupings is necessary. Thus, the remainder of the report deals with the differences among the six segments and suggested promotional strategies for each grouping. Further, concentrated marketing efforts, including certain service improvements, are suggested for four of the six segments .

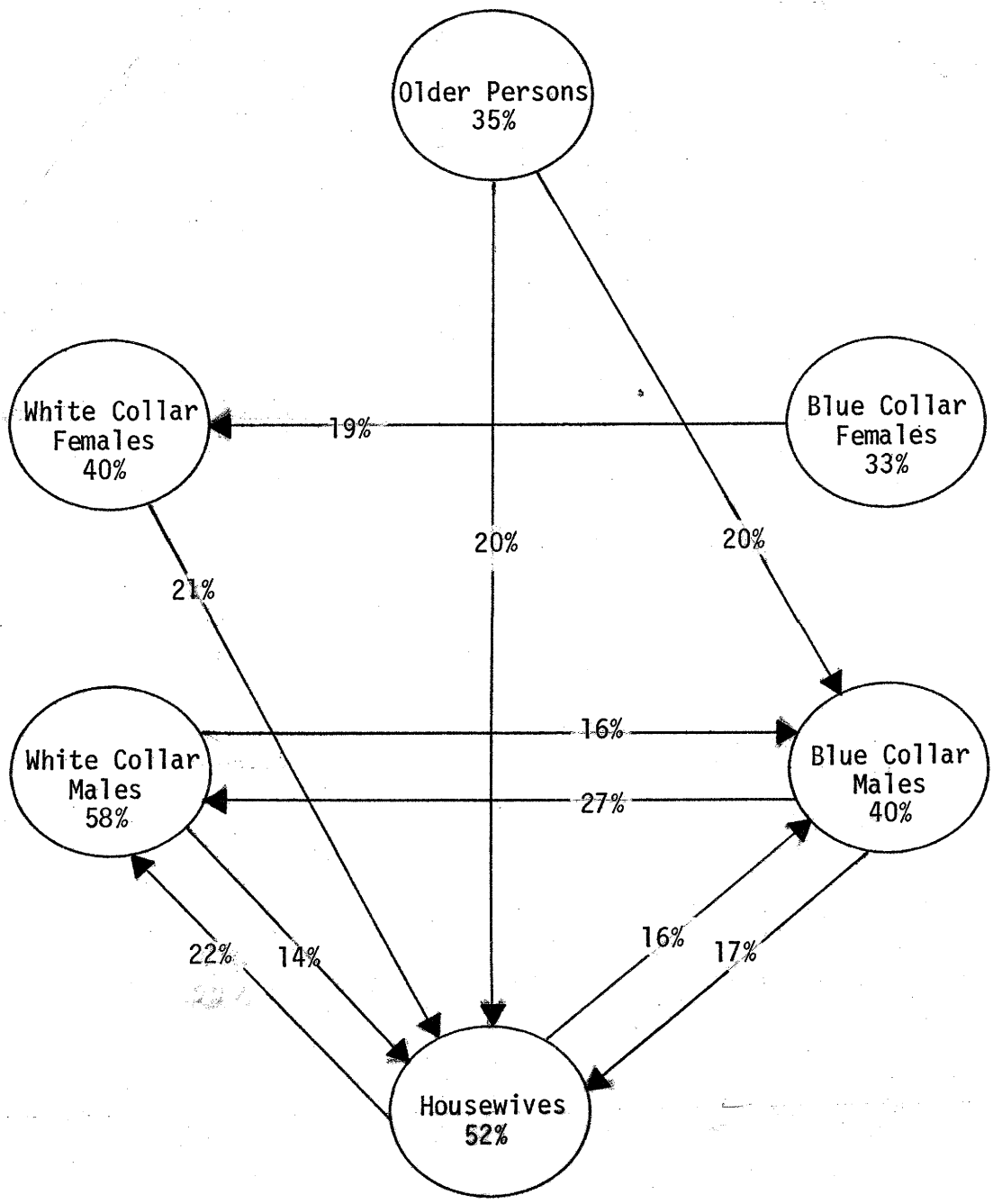
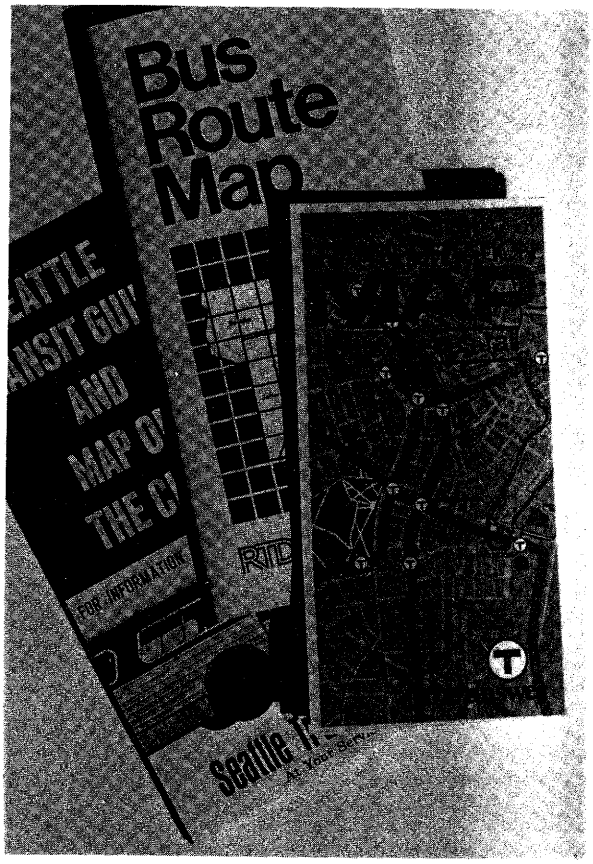


Figure 4: Association Diagram for Nineteen "Bus Requirements" Variables (Arrows Indicate the Direction of Misclassification in the Largest Two Cases)[a]

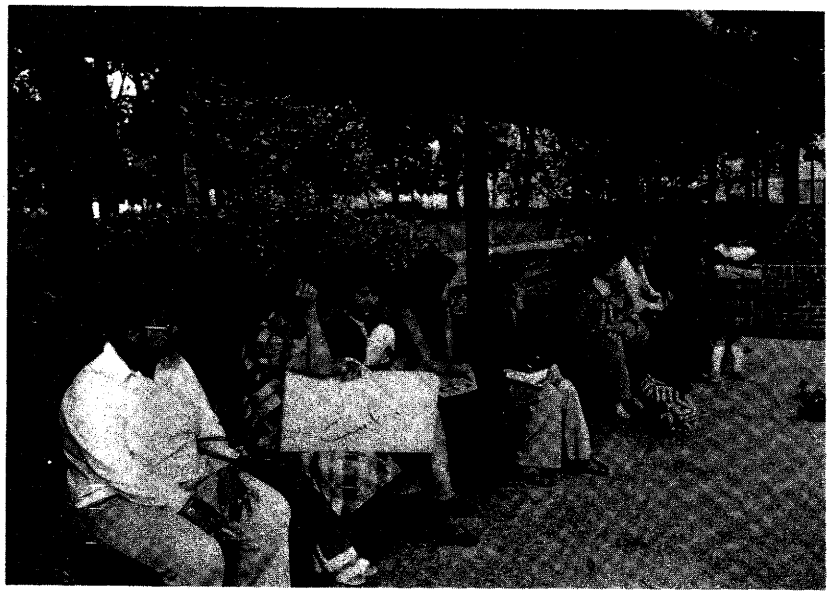
[a]In the cases of misclassifications for older persons and white collar females, only one misclassification path was used as the next two in importance were ties of a lower order significance than the first path.

Segmenting the market provides a basis for determining, as exactly as possible, the transit needs and services sought by target segments. These findings can then be integrated so that *information dissemination, promotional efforts, customer services,* and *service improvements* are based on customer needs of the specific, targeted segments.



Before potential patrons can begin to use the transit system, factual rider information (e.g., route maps, schedules, and fare structures) must be made readily available to the public.

Buses must compete with automobiles and taxis for patrons; therefore it is essential to minimize the inconvenience associated with waiting for the bus, particularly during inclement weather.



CHAPTER IV

SERVICE REQUIREMENTS

A key to promoting transit and increasing patronage is an understanding of the service requirements for specific marketing segments. In general, service requirements are those improvements in the existing transit system which the public feels are needed to encourage their patronage. While the emphasis appears to be solely on attracting non-riders to the bus system, these service improvements also will help insure that present riders continue their patronage. For transit managers, the awareness of critical features sought by residents will help in making decisions concerning allocation of funds and in determining topics to stress during promotional campaigns.

Several approaches were utilized in the TTI surveys to determine the service requirements for specific market segments. First, respondents were asked to evaluate buses and automobiles on the following 12 broad travel dimensions.

1. Punctuality
2. Simplicity
3. Safety
4. Modernity
5. Comfort
6. Speed
7. Status
8. Convenience
9. Enjoyability
10. Cost
11. Reliability
12. Flexibility

Each respondent was instructed to rate (separately) buses and automobiles on a scale from 1 to 7 for the 12 travel characteristics. The lower the rating given, the more positive the evaluation. For each of the 12 features, the rating given to buses was subtracted from that given to automobiles, resulting in mean difference scores ranging from -6 to +6. For example, if a respondent gave buses a score of 6 for convenience (indicating a negative evaluation), and

gave automobiles a score of 1 for that dimension (indicating a very favorable evaluation), the respective difference score would be -5, which points to a negative evaluation of buses relative to automobiles. The results of this analysis are presented in Figure 5. Additionally, the evaluative scores assigned to buses were broken down by market segments to identify which of the six segments were most critical of the transit system and which were most favorably disposed toward it (see Figures 6a, 6b, and 6c).

Thus, those aspects of bus travel which are viewed most negatively by the respondents (and which need to receive the most attention) were identified. Accordingly, the following four areas were chosen as the ones which can and should be emphasized in order to attract potential riders to the smaller transit systems:

- convenience
- simplicity
- enjoyability
- status

These four dimensions were selected for three primary reasons:

1. The public's evaluation of buses along these dimensions was unfavorable, indicating a need for transit improvements;
2. Unlike other negatively-evaluated dimensions, these four can be enhanced with feasible service improvements and subsequent promotional campaigns; and
3. Many of the improvements related to these dimensions were identified as critical factors for the potential transit market.

CONVENIENCE AS A SERVICE REQUIREMENT

Because convenience is such a broad concept, it is important to spell out the specific transit features which can be promoted under this heading, and to avoid those aspects which transit systems cannot effectively remedy. For example, the following list contains items which could be emphasized to the public to promote the convenience of buses:

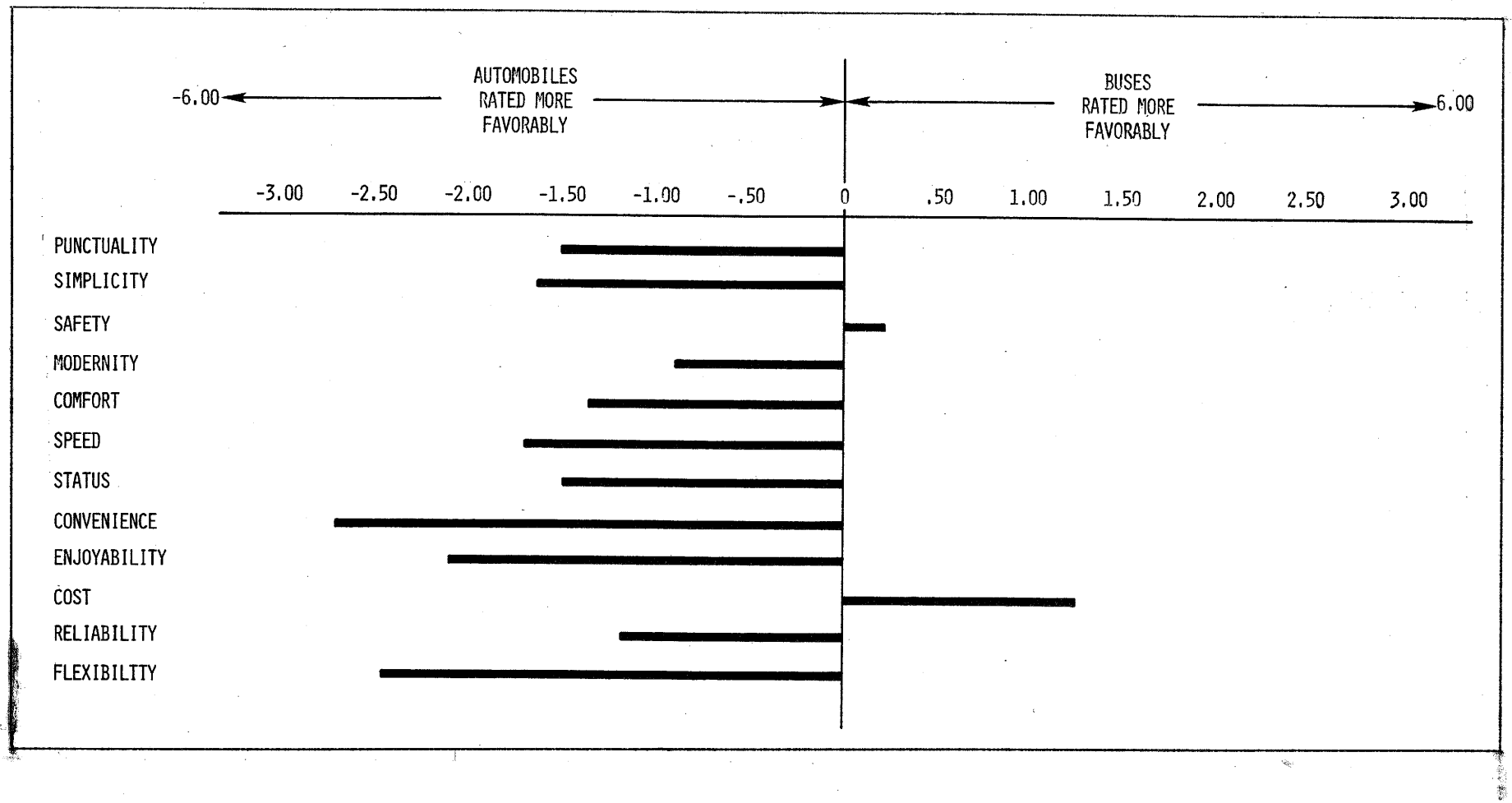


Figure 5. Evaluation of Buses Compared to Automobiles

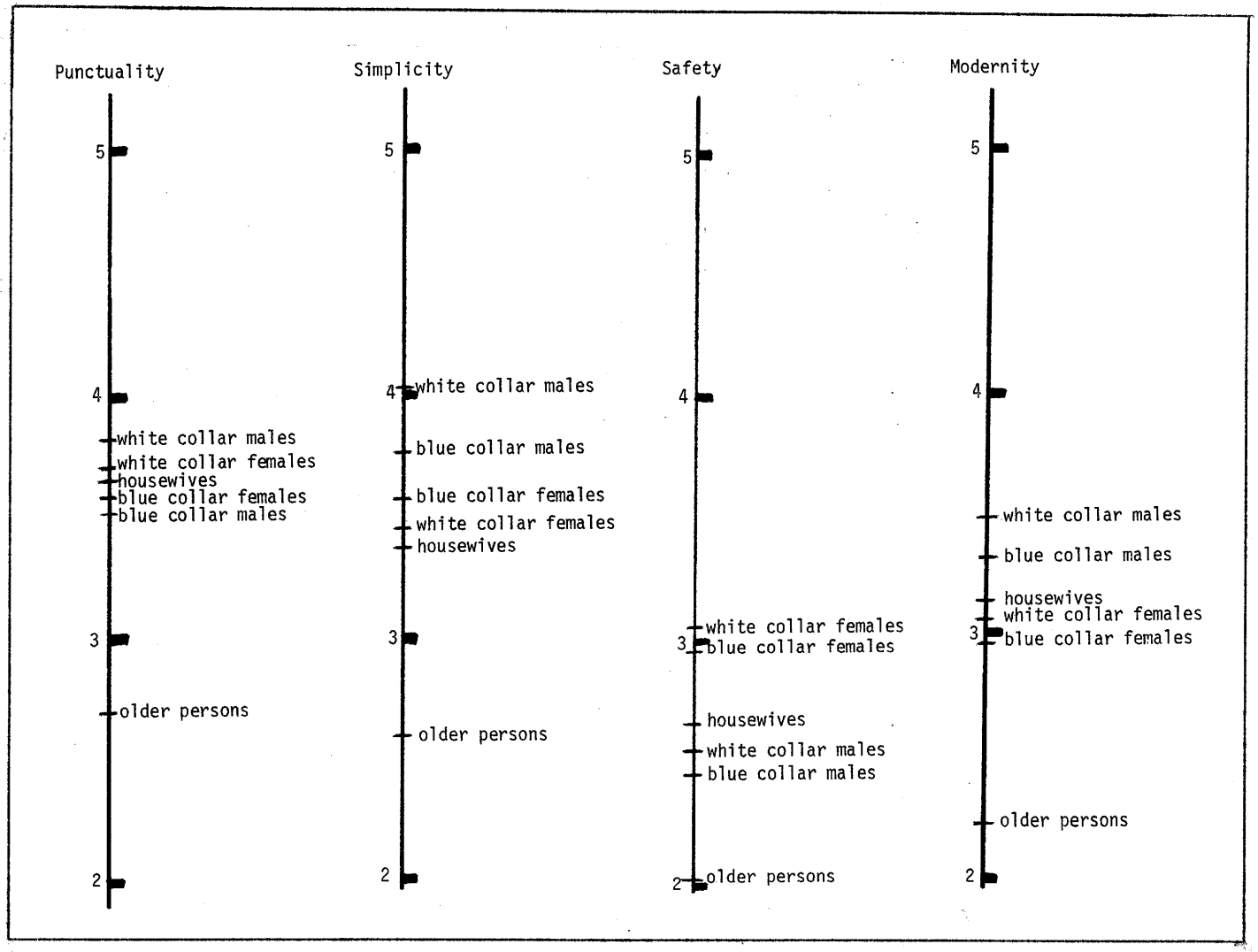


Figure 6a. Evaluation of Buses for Twelve Broad Categories by Market Segments (5=slightly negative; 4=neutral; 3=slightly positive; 2=quite positive)

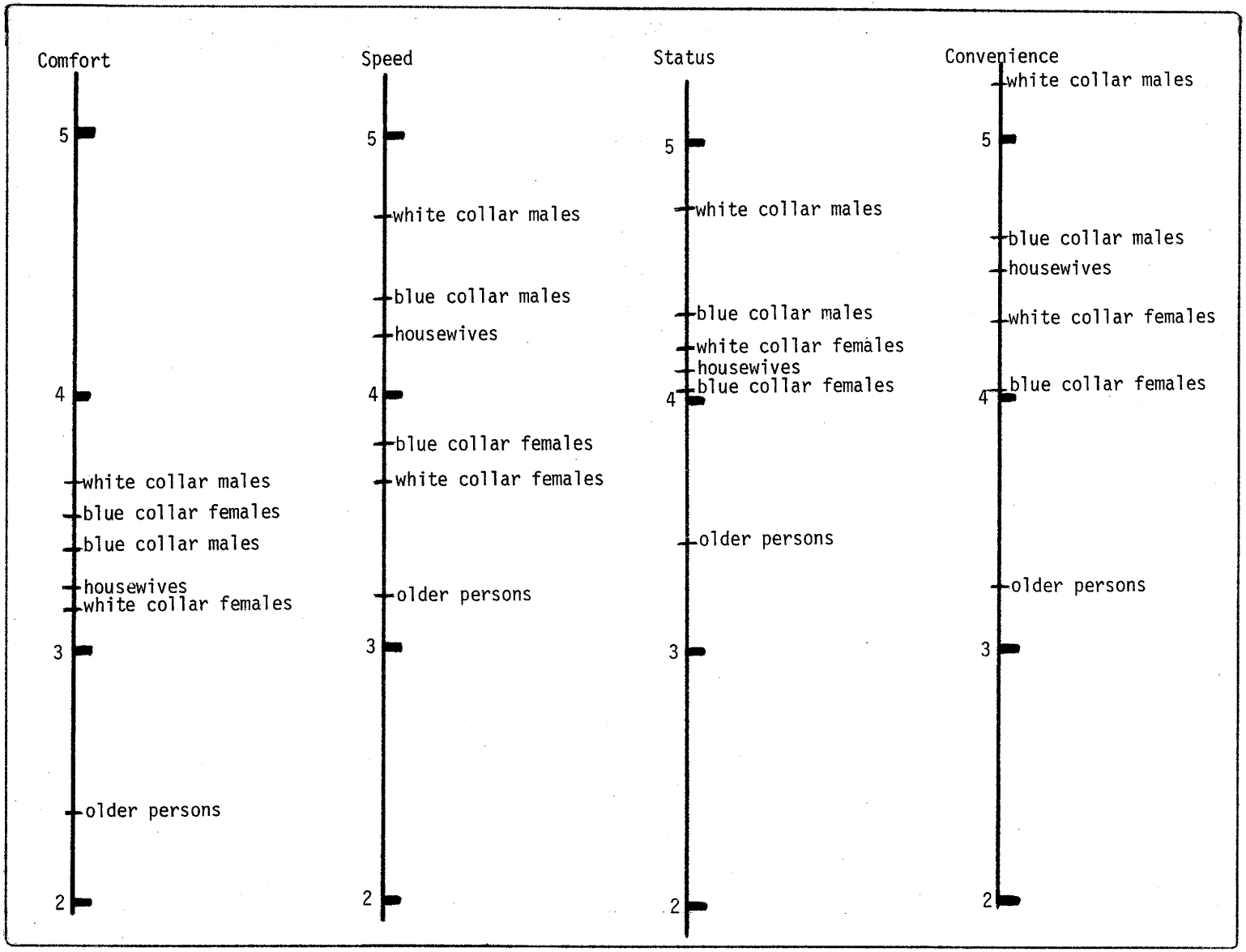


Figure 6b. Evaluation of Buses for Twelve Broad Categories by Market Segments

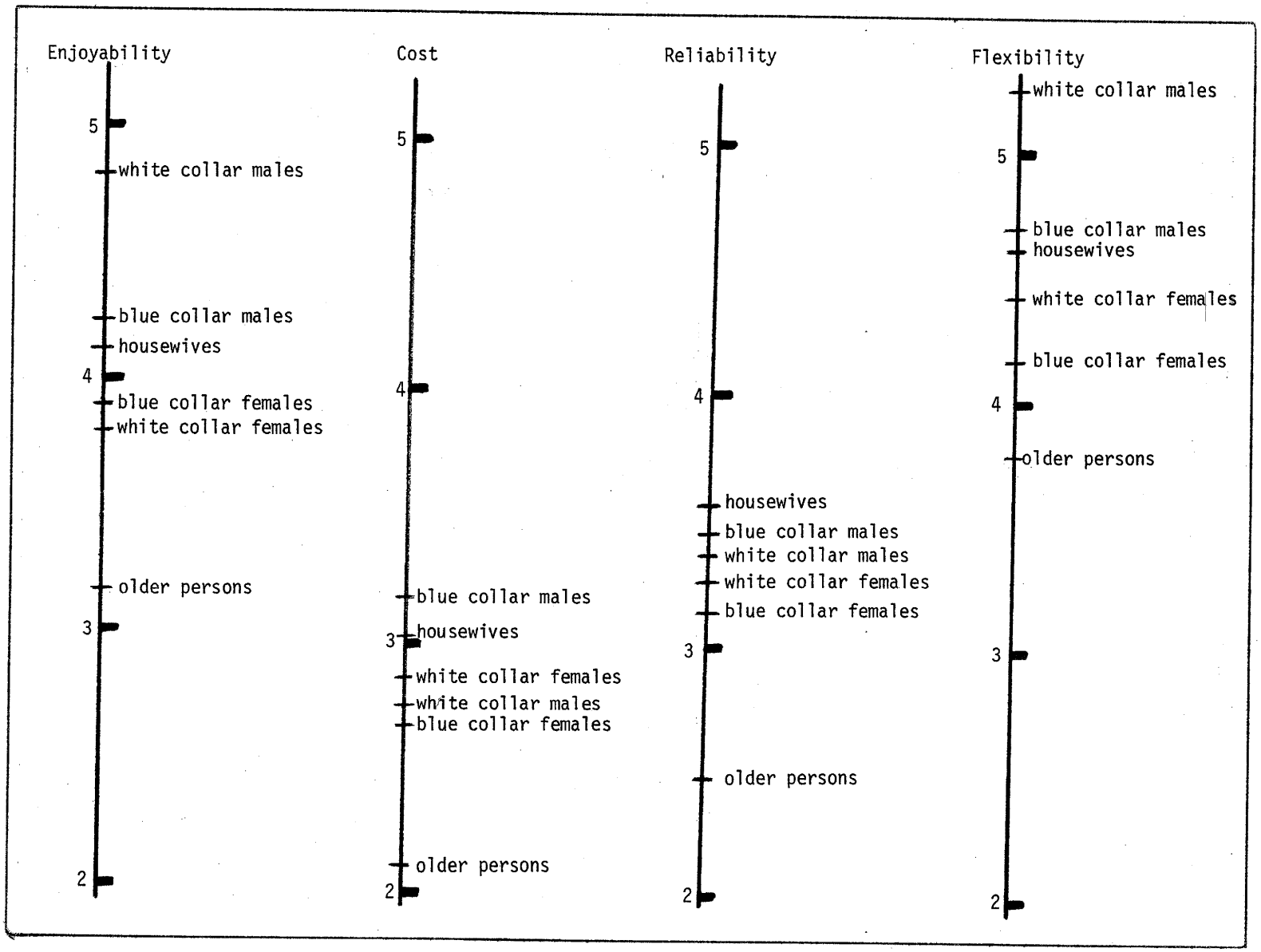


Figure 6c. Evaluation of Buses for Twelve Broad Categories by Market Segments

- children can be less dependent on their parents for transportation
- in one-car families, spouses can be independent (i.e., husbands and wives do not have to adjust schedules in order for both to use a single car)
- time spent on the bus can be devoted to personal interests because someone else is driving
- no parking problems
- no gasoline expenses, and no time wasted at service stations
- no maintenance problems

As far as actual service improvements which would enhance bus convenience, the TTI surveys found that for all segments except the white collar and blue collar males, ridership would increase if patrons were not required to have the correct change for fares. This problem can be remedied for some people by providing monthly passes at a set fee. The passes could be sold at selected local businesses (e.g., banks, grocery stores, and department stores) and could provide either unlimited riding for a one-month period, or a specified number of bus trips. For patrons using the bus for other than the home-to-work trips, the unlimited riding option is especially popular. Shoppers, for example, enjoy being able to get on and off the bus at different store locations without having to pay each time.

There are a number of service improvements related to convenience, however, which are <u>not feasible</u> for most small systems. Many respondents in the TTI surveys stressed such "convenience" requirements as:

- the routes need to be closer to home, work, or shopping
- the bus should run frequently on these routes
- the bus should pick you up and drop you off at your front door
- the buses need to run closer to the places you want to go
- there needs to be better night and weekend service
- there should be better service between shopping centers
- the trip should not require transfers

Unfortunately, it was found that the only service improvements capable of attracting white collar males and blue collar males to the transit system were far beyond the scope of smaller operations.

The majority of these critical factors for working males were related to the dimensions of convenience, speed, flexibility, and punctuality, but even these unrealistic requirements did not greatly increase the likelihood of their riding the bus. This simply indicates an unwillingness on the part of these two market segments to consider a modal switch from private automobiles to buses. Other researchers also have commented on the difficulty of encouraging choice travelers to use the existing transit system in lieu of the private automobile. According to Rosenbloom and Miller (1973:36), " . . . it is unlikely that mere advertising and promotion alone will significantly increase transit ridership on the existing system for those who find their car so attractive."

The fact that there were no feasible service improvements which would increase the patronage of working males, however, leads to a decision not to consider these segments potential transit patrons. Thus, extensive efforts to attract white collar and blue collar males to smaller systems are not recommended, at least at this time. It was found, however, that the other four market segments (i.e., white collar females, blue collar females, housewives, and older persons) can be attracted to the transit system by more feasible service improvements.

SIMPLICITY AS A SERVICE REQUIREMENT

Under the general heading of simplicity, it was determined that making information about routes and schedules available to the public is extremely important. When infrequent transit users or nonusers consider riding the bus, their evaluation process requires the attainment of considerable knowledge about the system (Wilson, et al., 1974). The initiative needed to seek out such information may arise only if they are forced into a temporary captive position in conjunction with a necessary trip. More often than not, however, these individuals will simply delay the trip until an automobile is available, or phone a friend or neighbor who may be able to provide transportation.

Several studies have shown that residents have little knowledge of transit and of its potential for them personally, even where it is highly accessible. Wilson, et al. (1974), for example, conducted a study in which the majority of the sample lived within two blocks of the bus route and the maximum distance to the route was less than one-quarter mile. Yet they found that fewer than 67 percent of the respondents knew the location of the nearest bus stop, and only one-third of the sample knew when the bus was scheduled to pass through the neighborhood. Furthermore, only a small percentage knew the name of the bus route or the fare.

The TTI study data tend to support these findings; 85 percent of the respondents in Waco were able to correctly name the bus company in their city, but only 25 percent of the sample in Beaumont could correctly name their city's bus company. In addition, approximately 60 percent of the respondents interviewed in Beaumont and Waco agreed with the statement: "I've never really bothered to find out details about what city bus services are available around here." Yet this same sample showed evidence of a willingness to use transit if it were simpler to obtain information about routes and schedules.

White collar females, blue collar females, housewives, and older persons also indicated a desire for better telephone information service. Evidently, the task for transit managers is to make information as readily available as possible. Portable information display units, set up at frequently used bus stops or popular neighborhood locations (grocery stores, shopping areas, etc.) have been used successfully in the past. This method of distributing information is especially good because it reaches the public in general, and not just current riders.

The major point to keep in mind is simply that " . . . unless people know about and understand the bus system, it cannot be used as a means of accomplishing a desired trip, and it will not be evaluated on (its) attributes . . . " (Wilson, et al., 1974:54).

ENJOYABILITY AS A SERVICE REQUIREMENT

Under the travel dimension enjoyability, the service improvements most desired were:

- shelters at bus stops
- benches at bus stops
- guaranteed seating on the bus

The cost involved with installing benches and shelters eliminates the possibility of providing these features at all bus stops. It does appear, however, that this type of service improvement has the potential to significantly increase ridership among the elderly and female market segments. The most feasible solution, then, would be to determine frequently used bus stops, and allocate funds for the installation of shelters and benches at as many of these stops as possible. Because buses must compete with automobiles and taxis for patrons, it is essential to minimize the undesirable features associated with transit whenever possible. All fixed-route service requires that patrons walk to designated bus stops and wait for the arrival of the bus, but providing benches and/or shelters will at least improve the waiting period involved. Older persons, in particular, are often more likely to rely on taxis for transportation to avoid waiting in inclement weather or having to stand for extended periods of time.

It also became apparent from the TTI survey that standing is problematic for some patrons once they are on the bus. Female and elderly segments indicated they would be more likely to use transit it they could be assured of a seat. It may be difficult to guarantee seating during peak hours, of course, but transit managers should consider posting signs near the front of the bus, reserving places for the elderly. Further, shoppers would benefit if package space could be provided either above their seats or near the exits on the bus.

In addition to these features, the only other element of comfort which has been found to significantly affect ridership is temperature control (Wachs, 1976; Olsen and Smith, 1974). Particularly in

the South, the presence of air conditioning is most often viewed as a necessity by transit patrons. Other improvements, such as carpeting, tinted glass, music, and leg room, do not seem to be major determinants of transit use and, therefore, are probably not worth spending money to include (Wachs, 1976). Along these same lines, information was obtained from the TTI sample to determine the effect of the following items on their decision to use transit:

- having more courteous and considerate drivers
- having to sit next to strangers
- having the passengers be more sociable

Lesko (1975) pointed out that every transit system employs a sizeable but usually overlooked sales force in the form of its drivers. Because of their unique proximity to the public, bus drivers are very closely involved with the decision to use transit. Some systems may want to set up programs for their drivers, emphasizing courtesy and friendliness, but in Waco and Beaumont, the conditions listed above were found to have no effect on the whole in the decision to use public transit. While it is probably a good idea in promotional campaigns to include mention of courteous drivers, comfortable seats, adequate personal space, and the opportunity to socialize, it appears that once an acceptable level of comfort and amenity is reached, additional improvements will not appreciably affect ridership.

STATUS OF TRANSPORTATION MODE AS A SERVICE REQUIREMENT

The fourth travel dimension worthy of serious consideration is status. It is a common stereotype that only lower class groups use buses and that, therefore, relying on transit is somehow socially unacceptable. It would be beneficial to upgrade the image of the transit user in smaller cities, especially, as well as the image of the transit system. To do this, promotional campaigns should stress the following type of message:

- transit riders are wisely saving money (no parking, maintenance, or gasoline expenses)
- transit riders are helping relieve traffic congestion
- transit riders are helping reduce air pollution
- transit riders are concerned about the energy crisis

In other words, transit users should be portrayed as concerned citizens who are doing their part to conserve energy, reduce pollution, and relieve congestion. They are effectively reducing their own expenses, but they should not necessarily be categorized as lower class residents who ride the bus simply because they have no choice. When asked if they would be likely to ride the bus if their friends and neighbors were using the transit system, older persons and working females, on the average, responded positively. So again, it is recommended that some effort be made to promote a better social image of the transit rider.

OTHER SERVICE REQUIREMENTS

The image of the transit system can be improved by stressing the modernity of the coaches. The majority of nonusers have probably not been on or near a bus in some time and, therefore, are not aware of the recent improvements in structure, cleanliness, and comfort. The TTI sample evaluated bus modernity as slightly positive, but this rating could be notably improved if promotional efforts were geared to educating the public on the improvements in the interiors of buses and other innovations in the newer bus fleets.

As mentioned earlier, there are service improvements which are considered important by the general public, but which simply are not feasible. For instance, many studies have shown that the most important characteristic influencing the decision to use transit appears to be travel time, which includes travel time reliability as well as elapsed travel time (Wachs, 1976). Moreover, it has been found that those portions of travel time devoted to waiting, walking, and transferring are greater deterrents to using transit than the same length of time actually spent in the bus (Wachs, 1976; Holland, 1974).

> In Chicago, Lisco (1968) found that commuters would pay approximately 2.8 times as much money to avoid walking time as to avoid riding time. The Regional Plan Association of New York deduced a perceptual weight for walking time of 3.2 times the perception of riding time (Pushkarev and Zupan, 1971). Within the Port Authority Bus Terminal in New York, passengers appeared to weight walking time about twice as heavily as riding time (Henderson and Billheimer, 1972). (Wachs, 1976:98)

Along these same lines, Beaumont and Waco residents were questioned regarding the dimension of bus speed to determine the importance of elapsed travel time on their decision to use transit. When asked if they would be likely to ride the bus if the trip took the same amount of time as an automobile trip, all segments except the white collar males responded positively. All market segments, however, indicated they would be likely to use transit if the trip took less time than an automobile trip. This information is included to substantiate previous research findings on the importance of travel time to patrons, but the data are provided with the awareness that these service improvements would be virtually impossible for smaller systems to undertake.

Finally, it is significant that when respondents' evaluations of the travel characteristics of buses and automobiles were compared (see Figure 5), buses were viewed more positively on two dimensions:

1. Safety
2. Cost

The average rankings for bus safety ranged from 2.18 to 3.09, where 2 = quite positive and 3 = slightly positive (as shown earlier in Figure 6a). The elderly and female segments did show some concern for safety, however, when they indicated they would be more likely to use transit if the buses were safer to wait for or to ride on. Working males, on the other hand, did not feel this made a difference in their decision to use transit.

In general, there is some disagreement as to the importance of safety in determining modal choice. One study found that nonusers of transit who were over 60 years old expressed more concern for health risk situations than did transit users in the same age group,

indicating that differences do exist between users and nonusers (Olsen and Smith, 1974). It was recommended, therefore, that public educational programs be considered to offset this nonuser bias or fear.

Wachs suggests that a fear of bodily harm does not typically influence the decision to use transit, unless such danger suddenly becomes apparent. "Recently, for example, a crime wave on particular bus routes in Los Angeles brought about a dramatic though temporary decline in ridership" (1976:101).

Nevertheless, the dimension of safety does not need to be promoted since the public already views this aspect of transit favorably. Transit managers and city officials should concentrate on promoting those features which are not viewed positively, but are possible to accurately promote (i.e., convenience, simplicity, enjoyability, and status) in order to attract nonriders to the system.

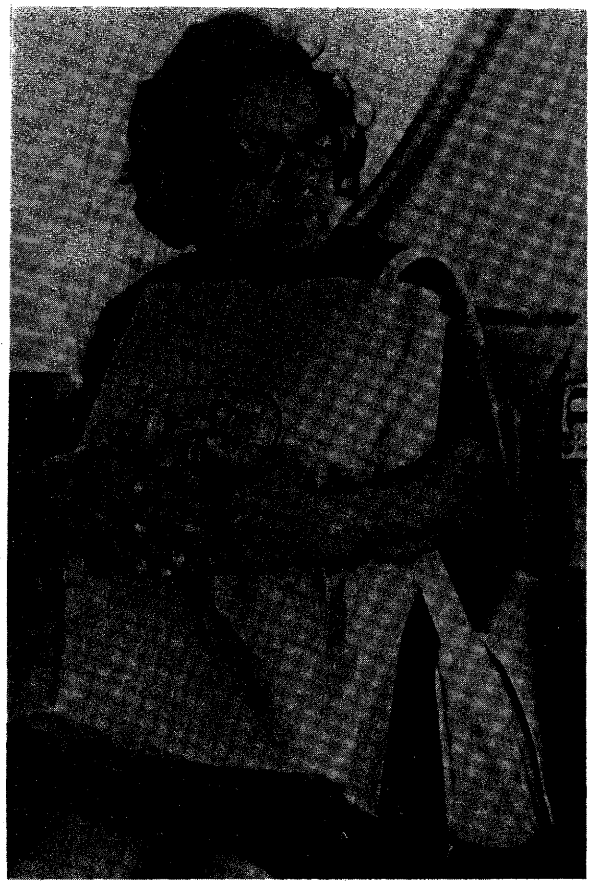
Cost is another factor over which there is some disagreement. Some studies have found that the cost of transit is fairly unimportant in modal choice decisions (Lesko, 1975; Wallin and Wright, 1974), but the concensus of opinion seems to be that while cost is a consideration for transit customers, it is not as salient a factor in modal choice as travel time, schedule reliability, and flexibility (Wachs, 1976). According to Lansing and Hendricks (1967), this may be due, in part, to the fact that the majority of drivers never try to figure out the cost of their automobile trips. These drivers are much more aware of daily out-of-pocket costs like parking fees and tolls, but in many small cities, parking may be provided free in the downtown area. Research into this aspect has found that parking fees would have to increase to well over $1.00 per day to effect a substantial shift to transit by commuters (Wachs, 1976).

Previous studies have also shown that cost is more apt to affect the elderly than other population segments (Wachs, 1976; Holland, 1974). Holland notes that low fares are apparently more important for the elderly than for low-income persons, in general, with those under 20 evaluating low fares as even less important (1974). Yet even for the elderly, other service improvements (e.g., guaranteed seating and no

transfers) were more important to them than low fares.

The TTI findings in Beaumont and Waco indicate that lower fares are a more important consideration for the blue collar and white collar females than the other population segments, but all segments indicated a greater likelihood to use transit if fares did not exceed 25¢ per trip. It was expected that cost would be an important factor for the working class females, as was found, but in view of previous studies, a greater concern for low fares on the part of the elderly was anticipated. It may be that the captive riding status of many older persons resigns them to bus use regardless of the price of fares.

The final recommendation, however, is that cost need not receive major attention from transit managers at this time. The findings in Waco and Beaumont indicate that the public currently evaluates the costs associated with buses more favorably than automobile expenses, thus this dimension need not be emphasized. Instead, efforts should be made to improve and promote the dimensions of bus convenience, simplicity, enjoyability, and status (i.e., those features of buses which are currently ranked well below the corresponding evaluations of the automobile). Other areas, such as speed, reliability, flexibility, and punctuality, although important to the public, simply cannot be emphasized; the obvious costs involved with rerouting and rescheduling make such improvements--or their promotion--impossible for smaller transit systems. Finally, the dimensions of safety and cost, because they already are viewed favorably by market segments, need not receive major consideration during promotional campaigns.



There exists in the population today a minority known as the "transportation disadvantaged" who represent a key potential market to the mass transit system because they must rely on some transportation mode other than the private automobile. The elderly are often included in this population subgroup.

The handicapped often do not possess the physical capabilities necessary to operate a vehicle, though many can use conventional transit.

CHAPTER V

TRANSPORTATION NEEDS

A strong link exists between transportation needs and the service requirements sought by specific market segments. It has been said, for example, that the elimination of unnecessary physical and psychological impediments to travel will most probably result in improved levels of service for all transit patrons (Olsen and Smith, 1974).

> An appropriate concern, therefore, of those responsible for the planning and evaluation of transportation systems should be the identification and consideration of the activity needs, economic capacity, physical capabilities, and psychological reactions of population subgroups . . . (Olsen and Smith, 1974:9).

Any discussion of transportation needs should attempt to include both

- activity-related (i.e., physical) transportation needs (e.g., the availability of some form of transportation and the constraints on the options of the traveler) (Burkhardt and Eby, 1973); and
- psychological transportation needs.

PHYSICAL TRANSPORTATION NEEDS

The concept of transportation need has been difficult for transit planners to define, and most attempts to distinguish need from travel demand have been ambiguous and arbitrary (Burkhardt and Eby, 1973). There appears to be some agreement, however, that a useful definition of need must include

- a definition of *which trips* are required;
- an estimate of the *number of people* requiring additional transportation; and
- an estimate of the *number of trips* required (Burkhardt and Eby, 1973:35).

Defining necessary trips usually involves an analysis of the trip purposes of specific population segments. "If the trip purposes are interpreted to represent the importance of one activity relative to another, then one may rank the trip purposes in order of importance to the

trip-maker in a manner that is proportional to their frequency" (Falcocchio, et al., 1972:11). Major trip purposes for adults are broken down into the following classifications: work, shopping, social-recreational, and medical-dental. This information, combined with the transportation modes used to satisfy the various travel needs, is extremely useful to transportation planners. Falcocchio, et al. (1972) for example, found that within the New York City SMSA, transit was the most commonly-used mode of transportation for shopping purposes across all income segments. Low-income households also used transit most often for their social-recreational trips, but middle- and high-income families used automobiles most often for this purpose. Such findings indicate that the mode of transportation selected is related to both the purpose of a particular trip and the need associated with it.

Estimating the number of people requiring additional transportation as well as the number of trips required involves consideration of two things:

1. The availability of transportation services to the household; and
2. The constraints (particularly physical and financial) on the options of the household members (Burkhardt and Eby, 1973).

It is a well-recognized fact that transportation has developed over the years into an essential lifeline to jobs, education, and public services in American cities (Haar, 1967). Yet the transportation system does not provide adequate service to many citizens, thereby creating a subpopulation of "transportation disadvantaged." Most often this minority includes:

- the elderly who cannot or choose not to drive;
- the young who are not of age or do not have access to private transportation;
- the poor who cannot afford an automobile; and
- the handicapped who do not possess the physical capabilities necessary to operate a vehicle (Koutsopoulos and Schmidt, 1976:69).

This group, because it must rely on some transportation mode other than the private automobile, represents a key potential market to the mass transit system. Despite the obvious differences along social, economic, and physical characteristics, members of this group do possess

common mobility problems. In an attempt to identify the major constraints impeding mobility in this carless population, Koutsopoulos and Schmidt (1976) developed two major categories of constraints:

1. Trip-making, and
2. Environmental

Trip-making constraints include those based on physical, psychological, informational, and socioeconomic barriers (see Figure 7). These limitations relate to the group's inability to generate a vehicular trip, by prohibiting automobile ownership or operation and restricting the use of mass transportation services.

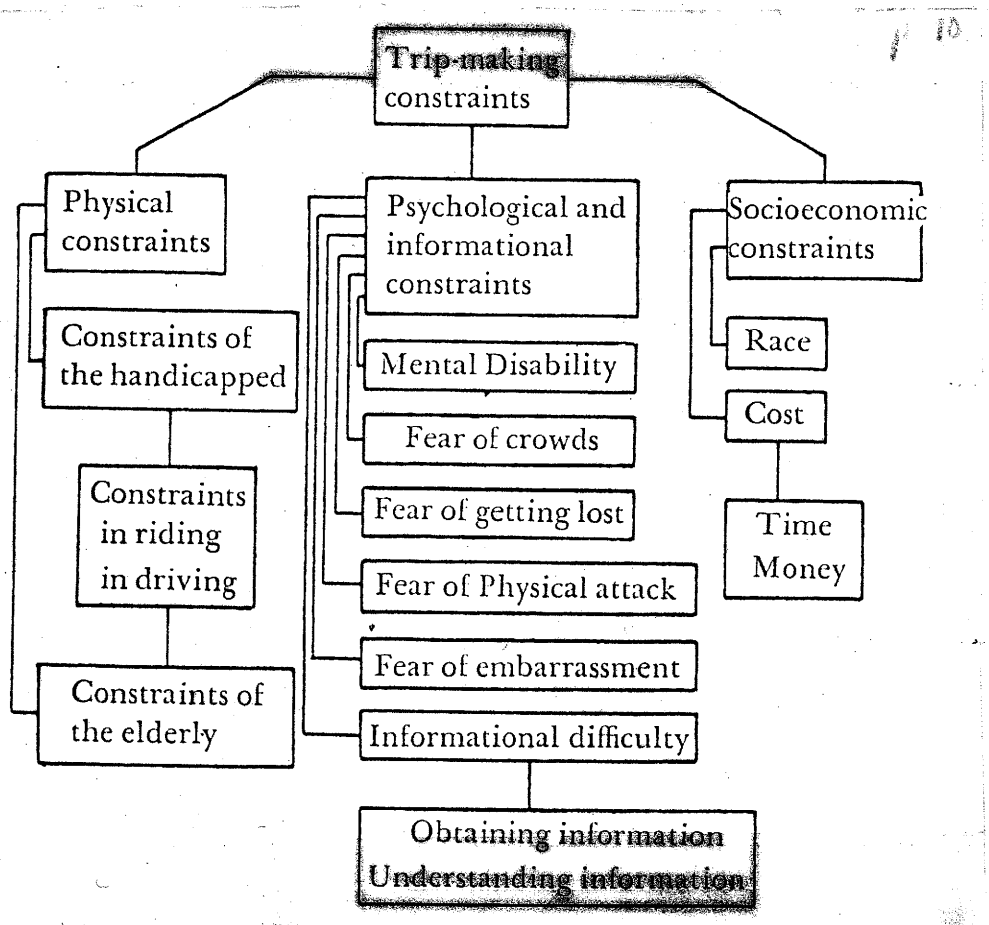


Figure 7. Trip-making constraints for the carless

Source: K. C. Koutsopoulos, and C. G. Schmidt (1976). "Mobility of the Carless," Traffic Quarterly 30:77.

Environmental constraints, on the other hand, are restrictions imposed upon the carless population by the physical and social environment in which they live (see Figure 8).

"Urban transportation systems should provide all city residents with adequate mobility or access, not only to employments sites, but also to shopping, health, and recreational facilities" (Koutsopoulos and Schmidt, 1976).

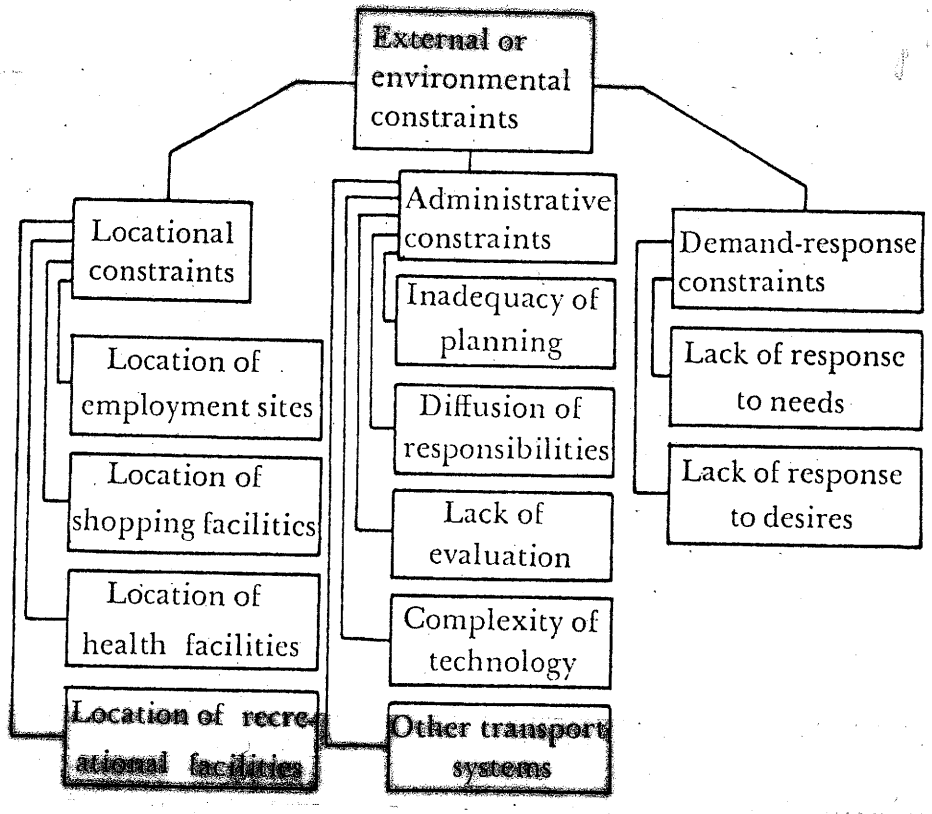


Figure 8 . Environmental constraints for the carless

Source: K. C. Koutsopoulos, and C. G. Schmidt (1976). "Mobility Constraints of the Carless," Traffic Quarterly 30:77.

PSYCHOLOGICAL TRANSPORTATION NEEDS

In the past, most transit systems have been almost totally concerned with an individual's needs for point-to-point movement. It is now being suggested that systems consider the *psychological* needs of current and potential riders to maximize their appeal to the public. Marketing strategies, for example, should go beyond the basic concerns of providing comfort, convenience, and safety, and focus on the psychological needs listed below:

- affiliation
- esteem of others
- self-identity
- autonomy
- security
- conformity
- rejection
- space

Affiliation. Mass transit has much to offer in the way of meeting new people and forming new friendships, but this dimension is thought to conflict with other psychological needs, such as *security* and *rejection*. There is no definite way to establish which of these needs is most important to the population in general. Therefore, it was suggested that two types of seating arrangements be provided in a transit vehicle: ". . . one would allow for face to face contact (facilitating conversation to satisfy the affiliation need) and the other would allow a passenger to remain isolated from other passengers, thus satisfying the security need" (Tehan and Wachs, 1975:42).

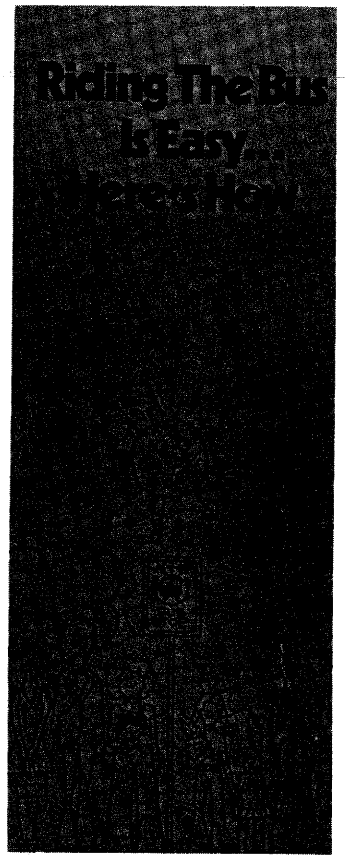
Esteem of others and *self-identity* are very often affected by the transportation mode one chooses. Therefore, it is imperative that mass transit improve its image so that individuals are positively reinforced for using the service. This relates, also, to the need to *conform* to the expectations of others. If one's peers believe that transit is a socially unacceptable transportation mode, one will be much less apt to ride the bus.

These needs are said to be fundamental to all individuals, but the transportation disadvantaged often suffer even greater psychological and

perceptual barriers which inhibit their use of public transportation. "Anxiety, apprehension, fear--these emotions act as constraints on mass transit use and cause many carless persons to avoid travel altogether" (Koutsopoulos and Schmidt, 1976:73).

The handicapped, for example, may be especially fearful of crowds because they would be forced to function faster than their normal rate. The fear of getting lost is also a serious constraint for the handicapped, as well as the young and the elderly. These kinds of problems have a much greater effect on transit usage than many people realize. Thus, transit planners must try to gain a fuller appreciation of the psychological constraints as well as needs of potential patrons if they are to effectively plan and promote their operations.

There is obviously much more than can be discussed concerning transportation needs, particularly for the carless individuals who comprise the transportation-disadvantaged population. Because of the interrelationship between needs and potential demand, however, the reader is referred to Volume II, Critical Factors Influencing the Demand for Transit, for a more detailed explanation of the topic and presentation of research findings in this area.



One of the most basic promotional strategies is increasing public awareness of the system. Decision-makers must realize that no matter how good their transit services may be, no one will be attracted to the system without a basic knowledge and understanding of its operation.

SHOP BY BUS
RIDE HOME FREE

ASK THE DRIVER FOR YOUR
PURCHASE EXCHANGE TICKET
THEN...

RIDE 'N SHOP
St. Petersburg Transit

LOOK FOR AND SHOP WHERE YOU SEE
THE RIDE 'N SHOP EMBLEM

Once target markets and their respective service requirements have been identified through market research, systems can gear their promotional activities to specific segments, to maximize the effectiveness of the campaign. This Shoppers' Special, for example, will have strong appeal for the housewives and the elderly, as well as the working females in certain cases.

CHAPTER VI

PROMOTIONAL STRATEGIES AND TECHNIQUES

An obvious lack of transit awareness among the general public has led to the development of intensive promotional campaigns as a part of larger marketing efforts by concerned transit systems. In general, the promotional strategies adopted by these transit systems can be classified in the following categories:

1. To increase public awareness of the system;
2. To reinforce the positive attitudes of current riders and to prevent further loss of revenues and ridership;
3. To encourage a modal switch away from the automobile; and
4. To promote new services, facilities, and conveniences that are directed toward target markets (Battle, 1973:24-25).

INCREASING PUBLIC AWARENESS OF THE SYSTEM

The comparatively small percentage of noncaptive riders (i.e., those persons who have other modes of transportation available to them) indicates, at least in part, that the potential market has insufficient knowledge to use the existing transit system (Wilson and Kendall, 1974). The critical importance of providing information to the public was discussed earlier in this report, as well as possible dissemination techniques. There are, nevertheless, several additional findings which should be beneficial to transit marketing personnel.

A 1976 TTI survey found that slightly over one-half of the transit systems in Texas allocated less than one percent of their total expenditures to marketing. The remaining systems allocated in the range of one to five percent of their expenditures to marketing activities. Nationwide budgets for promotion reportedly ranged from a high of only 3.4 percent to a low of 0.1 percent of operating expenditures in 1973, yet those systems engaging in promotional activities believed the programs were helping reverse the decrease in transit ridership (Battle, 1973).

Awareness of Previous Promotional Efforts

Members of the TTI sample were asked if advertising the bus system would encourage them to ride buses more often, and the majority of each segment answered positively (see Table 5). The percentage of each segment which indicated an awareness of promotional activities by the transit system, however, was quite small as shown in Table 6. By asking respondents to name any specific promotional activities they could recall, an estimation of the effectiveness of previous promotioal efforts was obtained.

Table 5. "Do You Think Advertising the Bus System Would Encourage You to Ride Buses More Often?" (in percentages)

	Always	Almost Always	Sometimes	Never
Older Persons	15.8	42.1	26.3	15.8
Housewives	15.7	46.5	15.0	22.8
White Collar Males	9.2	62.2	10.2	18.4
White Collar Females	13.7	45.0	13.7	27.5
Blue Collar Males	10.5	47.4	15.8	26.3
Blue Collar Females	24.6	30.8	16.9	27.7

Note: Shaded areas indicate category where largest percentage of each segment fell.

New buses apparently made some impact upon the market in general, and particularly upon the blue collar females. Because of their captive riding status, it is not too surprising that these females would remember the purchase of new coaches. This improvement should enhance transit's image in terms of comfort, modernity, and status, and, at the

Table 6. Promotional Activities Recalled by Segments (in percentages)

	New Buses	Shopping Trips	Reduced Fare	Energy & Parking Problem	Air Conditioning
Older Persons (37.1)*	9.1	27.3	9.1	0.0	0.0
Housewives (28.6)	28.1	15.6	25.0	0.0	3.1
White Collar Males (22.3)	18.7	31.2	0.0	0.0	0.0
White Collar Females (20.5)	17.6	23.5	29.4	0.0	0.0
Blue Collar Males (17.2)	33.3	27.8	11.1	0.0	5.6
Blue Collar Females (12.7)	80.0	0.0	0.0	20.0	0.0

*Percentages under segment names indicate awareness of any promotional activities by the transit system

Note: Shaded areas are top 2 promotional activities.

very least, the public's awareness of the new buses can be interpreted as an indication of interest in the transit system.

The promotional strategy of reduced fare was remembered most often by white collar females and housewives. Surprisingly, no blue collar females recalled such an activity, and less than 10 percent of the older persons in our sample could remember such a reduction in fares. It has been hypothesized that these segments are perhaps the most sensitive to cost-related items (Wachs, 1976; Holland, 1974), so it

was expected that these groups would remember fare-reducing promotional strategies.

For example,

> " . . . it was recently found that the price elasticity for bus riders worked such that there was a 6.7 percent decline in passengers for every 10 percent increase in fare" (Reed, 1973:33).

Presumably, the lower incomes of many captive transit riders makes it necessary for them to find alternatives to transit when fares are increased. Reed points out, however, that it is difficult to imagine other services which get as severely impacted by price changes of a nickel or less. The fact that the older persons and blue collar females in Beaumont and Waco did not remember a reduction in fares does not necessarily contradict the hypothesis previously mentioned, however. It may simply indicate that the change in fare was not sufficiently advertised to the public.

Another surprising finding was that more white collar and blue collar males recalled shopping trip specials than did the female market segments. In fact, none of the blue collar females recalled such a promotional activity. Yet, overall, the percentages indicated that this strategy was fairly well remembered by the public and is, therefore, a good activity to consider for promoting transit.

According to some, the recent concern about air pollution and energy consumption has provided the opportunity for transit systems to promote conservation (Battle, 1973). In other words, systems can emphasize that using transit vehicles reduces pollution as well as decreases the number of vehicles on the streets. The TTI findings, however, indicate that only a small number of one segment, the blue collar females, recalled mention of energy and congestion problems in the transit system's promotional campaigns.

All of the Waco and Beaumont market segments agreed with the statement, "If more people used buses, the freeways and roads would be less crowded for those who use automobiles."[6] Additionally, older persons

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[6]Mean scores ranged from 1.86 to 2.19 for the six market segments, where 1 = strongly agree and 2 = agree somewhat.

and the three female segments indicated they would be likely to ride the bus " . . . if community leaders stressed the need to use buses for environmental reasons."[7] These findings indicate that potential transit users are conscious of environmental problems and may be encouraged to use transit for conservation purposes. Therefore, although it is known that pollution, traffic congestion, and parking problems usually are not critical in smaller Texas cities, it would be beneficial to promote energy conservation and reduced pollution as positive transit features.

Suggested Improvements for Information Dissemination

Additionally, respondents were queried as to ways information might best be provided to facilitate bus riding (see Table 7). All segments indicated that schedules at bus stops and improved printed maps and timetables would be beneficial. Of the five choices, a telephone information service was ranked less helpful on the average, but other systems in Texas are instigating this type of service. Dallas, for example, has telephone information available 24 hours a day, and Ft. Worth plans to include a similar operation, with an answering service taking over during the night hours and on Sundays. One definite advantage of the telephone information service is that interested persons can obtain route and schedule information from their homes at whatever time they find it necessary or convenient. Schedules and maps posted at bus stops are not as readily available, and thus are less attractive, particularly for current nonusers of the system.

One additional method of providing factual information is person-to-person selling, where a transit representative meets with interested individuals or groups to promote transit service. This activity is the most personal and responsive, but it is fairly expensive and reaches relatively few people. The major advantage is that the sales representative can effectively deal with the specific questions an individual

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[7] Mean scores ranged from 2.62 to 2.69 for these four market segments, where 2 = likely to ride the bus and 3 = no difference.

Table 7. Ways Information May Best be Provided to Facilitate Bus Riding by Segments (in percentages)

	Improved route signs on buses	Improved printed maps and timetables	Information booths at shopping centers	Schedules at bus stops	Better telephone information service
Older Persons	29.6	40.7	29.6	55.6	22.2
Housewives	25.0	38.4	33.0	51.8	13.4
White Collar Males	25.3	47.4	23.1	42.3	14.1
White Collar Females	28.9	44.7	35.5	50.0	14.5
Blue Collar Males	38.2	36.8	26.3	56.6	17.1
Blue Collar Females	30.6	33.9	29.5	57.4	18.0

Note: Top 2 ways of providing information to each segment are shaded.

may have concerning the transit operation and the services being offered. San Antonio is attempting a similar activity in which "district representatives" are selected to serve as ombudsmen for geographic sectors in the community. These individuals assess the needs and service improvements sought by members of the sector they represent and make recommendations and suggestions to the transit system based on their knowledge of the particular situation. This type of service benefits the members of the community because their needs and preferences are conveyed directly to transit personnel, but it also facilitates the planning of feasible service improvements and promotional activities for the transit system. Hence, programs of this nature are strongly recommended for smaller transit operations.

Quite often, systems will want to combine various promotional techniques to maximize the effectiveness of a campaign. For example, to promote a special service such as reduced fares for older persons, the system may want to:

- distribute brochures that explain the program to the target group;
- develop media announcements; and/or
- publicize interviews with members of the elderly community (Battle, 1973:37).

Furthermore, transit systems can use a number of promotional gimmicks in addition to distributing factual information to increase awareness of the system. Special sales such as senior citizen passes, ticket books, school tokens, and shoppers' specials have been used successfully in the past (Lesko, 1975), as well as give-away materials such as lapel buttons, balloons, sturdy shopping bags, and pocket calendars (Battle, 1973). (Promotional strategies and tools are discussed in greater detail in volume three, Promoting Transit: A Marketing Handbook.) These give-away items do not reach large audiences, but they do help create an interest in the system which, as mentioned previously, is a key factor in any promotional campaign.

REINFORCEMENT OF POSITIVE ATTITUDES OF CURRENT RIDERS

It is generally believed that promoting ridership among occasional users and captive riders is fairly simple because it means encouraging the continuation of past behavior patterns. There are, however, certain factors which influence the decision to use transit for these people, and transit managers should not take their patronage for granted.

One of the most important variables affecting transit use is the number of automobiles per family. Previous transportation surveys indicate that 30 to 50 percent of the riders on the transit system come from households which do not own an automobile (Reed, 1973:29). Yet, even the person from the no-car household can find alternatives to public transit. A survey by Lansing and Hendricks (1967) showed that only 41 percent of those who did not own an automobile always commuted to work by bus. Twenty-four percent of the people without automobiles always traveled by car to work, and 23 percent either walked or took taxis. The remaining 12 percent used both public transportation and

private automobiles for the home-to-work trip. These findings support a 1956 Detroit survey which showed that

> " . . . while 60 percent of all trips made by no-car households are made by public transit, 33 percent of the people ride as passengers in another's car, and 2 percent of the trips are made as drivers of borrowed cars" (Reed, 1973:22).

The point is simply that many people without cars are turning to modes other than public buses for their daily transportation needs. Walking has also become a popular alternative for individuals without automobiles. A San Francisco Bay Area Transportation Study found that transit provided less than eight percent of all trips in the area, whereas over twice that many trips were made by foot, taxi, or some other means than automobiles or transit. A similar survey in Sacramento showed that more commuters walked to work than took transit, and national figures indicate that 7.9 percent of the trips to work are made on foot (Reed, 1973).

A significant fact for transit systems is that lower income individuals are much more apt to walk than others. The national work journey figures, for example, show that for people whose family income is less than $3,000, 20 percent walk to work while only 17 percent take public transit. People with greater incomes tend to walk to work only about five percent of the time (Reed, 1973).

Finally, it should be pointed out that many individuals in no-car families simply avoid making trips. Although transit systems generally consider these people to be captive riders, they may face difficulties which restrict their use of transit. For example, because they often have lower incomes and many are older or younger than the age range of normal employment, carless individuals may find their choice to travel by public transportation seriously affected by both fare increases and their physical ability to travel at all (Reed, 1973:30). Thus, it is necessary for transit systems to encourage transit use among carless individuals as a viable and convenient alternative to walking or simply avoiding trips. Because of their sensitivity to cost-related items, transit systems may find it advantageous to provide a certain number of free passes to attract members of lower income segments to the system. Such a promotional activity has been

found to be a fairly inexpensive, yet very effective, means of increasing ridership (Wilson, et al., 1974).

In addition to individuals from no-car families, the adults from car-owning families in which there is no car available represent another category of captive transit riders. TTI data indicate that 42 percent of the individuals who never have personal use of an automobile are occasional users of transit, and over 37 percent of this group are regular transit patrons. Reed (1973) estimated that this group represents as much as 30 percent of the current transit market. Yet he points out that

> " . . . their total transit trips are limited by the fact that the family automobile(s) are at other times available, and often by the decision to acquire another automobile" (Reed, 1973:36).

Thus, the continuing growth of multi-car households is at least partially responsible for the decline in transit ridership. TTI data, in fact, indicate that approximately 30 percent of the individuals who never have personal use of a car take transit to work. Seven percent of the people who occasionally have access to a private automobile use transit for their work trips, and less than one percent of the individuals with constant access to an automobile ride transit to work. Furthermore, TTI surveys indicate that transit use for purposes other than strictly the home-to-work trip also is affected by the individual's access to the private automobile (see Table 8).

Unfortunately, those who simply do not have a car available at certain times will quite often delay their trips until they have access to the car, or borrow a friend's or neighbor's vehicle when necessary. For the commuter without access to the family automobile, carpooling is often the most likely alternative. In effect, transit systems must encourage a modal switch away from the private automobile for these members of one-car families, even though they can at times be classified as captive riders.

Finally, captive riders include those persons who, for various reasons, are simply unable to drive automobiles. Many handicapped persons would fall into this category, but the most substantial seg-

Table 8. The Relationship Between Access to a Private Automobile and Current Transit Use (in percentages)

	Frequent Access to Car	Occasional Access to Car	No Access to Car
Regular Transit User	0.53	22.22	41.67
Occasional Transit User	12.10	17.78	37.50
Non-User	87.37	60.00	20.83

ment is school-age children. Several studies have reported on the relatively high percentages of children who use transit for home-to-school trips. For example,

> "The Bay Area Transportation Study reported that 37.4 percent of all transit trips in the region are persons traveling to and from school. This exceeds the 35.4 percent making 'work' trips" (Reed, 1973:33).

Similarly, a survey in Pittsburg indicated that one-third of all transit trips were school trips, even though over 90 percent of the school riders came from homes with at least one automobile (Reed, 1973:34). In Beaumont, 8 percent of the children less than 18 years of age in the sample rode city buses to school, and in Waco, approximately 17 percent used transit for their school trips. Nevertheless, in both cities, these percentages were smaller than those indicating use of a private automobile for school purposes.

Thus, transit systems need to promote their service to both the children and their parents in order to tap an even greater proportion of this potential market. Educational programs designed for the children can be easily provided. In Dallas, for example,

bus riding clinics were organized in which a city bus was stationed in the school parking lot and the bus driver instructed the children on the skills needed to take the bus to school. Similar educational programs have been undertaken in Austin with the "Ambassador Bus." Appropriate passenger behavior, fare collection, boarding procedures, and route information can be included in the program so that the children become familiar with all aspects of a typical trip. More detailed information concerning routes and schedules can be distributed to the parents so that they can select the appropriate bus for their children and help them arrive at the bus stop on time. In addition to such clinics, there are several transit games currently available which are designed to stimulate interest in the transit system as well as increase knowledge of how the system operates. These games could be rotated throughout the various schools to insure the greatest possible exposure among the children.

Young persons (ages 6-16) also can use buses for purposes other than school trips (see Table 9). As mentioned earlier in this

Table 9. Use of Transit for Various Trip Purposes by School-Age Children (in percentages)

	Beaumont	Waco
School	8.07	16.67
Shopping	5.78	3.48
Visiting Friends	2.31	2.24
Recreation	-	-

report, transit enables children to be less dependent on their parents for their transportation needs.

> The typical suburban youngsters below driving age have little independent mobility, but must rely on their parents to chauffer them. In the one-car family they must wait until father is home from work so that he or mother

> can chauffer them. This is by no means an idle observation but a fact that has become ingrained in the suburban travel patterns. The 1969 transportation study of the Northern Middlesex area, one of Boston's surburban sectors, observed that auto passenger traffic peaked in the evening between 7 and 8 P.M. During this hour auto passenger traffic was 16 per cent higher than during the morning rush hour. Much of this evening auto passenger traffic was generated by the 5- to 15-year age group (Schaeffer and Sclar, 1975:107-108).

Furthermore, for families without automobiles, transit provides an essential service to young persons who, otherwise, would be unable to travel throughout the community. The small percentages of children actually using transit, however, emphasized the need for stronger promotional appeals and educational programs to encourage transit ridership. Children aged 6-16 can ride buses effectively and safely in smaller cities, yet transit management has not capitalized on this market segment. The promotional activities previously mentioned (i.e., bus riding clinics and transit games to be circulated throughout the school system) would require only marginal expenditures and are, therefore, highly recommended.

To summarize this section regarding the promotion of transit to current patrons, most transportation surveys indicate that between 30 and 50 percent of the current transit riders are from households without automobiles. Of the remaining riders, most are <u>not</u> using transit by choice; either the family car is temporarily unavailable, or they are not licensed to drive for various reasons.

> "The choice rider who took transit, though he could have traveled in his own car, thus represents a minority of the users of a transit system. Perhaps 15-35 percent of a large city's transit ridership represent choice riders. In a smaller system, the choice riders comprise only 10 percent" (Reed, 1973:29).

Obviously, then, transit systems need to work to maintain their current riders by implementing the feasible changes these segments require and by developing promotional campaigns to reinforce the transit-riding behavior exhibited by these persons in the past.

ENCOURAGING A MODAL SWITCH AWAY FROM THE AUTOMOBILE

> Encouraging travelers who have the choice to use the existing mass transit system in lieu of the private automobile for peak-hour home-to-work travel or for other trips during the day, is far more difficult and requires a different marketing approach (Rosenbloom and Miller, 1973:36).

As shown earlier in Table 8, when the availability of an automobile for personal use increases, the use of transit sharply decreases. This is especially true for commuters who are able to drive their private cars to work every day. In general, peak-hour travel is work-oriented and, therefore, much more sensitive to time and reliability factors. Unfortunately, these are the areas where transit is weakest, as was found when respondents were asked to evaluate buses and automobiles on twelve travel dimensions (see Figure 6).

There have been a number of studies designed to investigate the factors related to modal choice decisions. Most of these studies, including the TTI findings, agree on the importance of travel time, convenience, reliability, and flexibility in the decision to use a particular transportation mode. Therefore, to encourage a modal shift, transit would have to be able to compete with private automobiles along these important travel dimensions. In most cases, this requirement is simply unrealistic. Larger systems, however, do have certain advantages over smaller systems when it comes to promoting a modal shift to transit. Heavy rush-hour traffic, increasing pollution, and exorbitant daily parking fees in the central business districts of large cities are often major incentives for commuters to switch to public transportation. Also, large transit systems may have the funds needed to begin park-and-ride facilities, express lanes for buses, and other services which would improve transit's speed, convenience, and reliability.

Small systems, on the other hand, do not have budgets which can cover such expensive operations, and congestion and parking problems in non-metropolitan areas are not usually severe enough to deter individuals from driving their automobiles. The best

strategy for these small systems, then, is to work on improving and promoting the dimensions of convenience, simplicity, enjoyability, and status since these were found to be important factors in the potential market's decision to use transit. In addition, cost and safety features could be reinforced because transit clearly has the advantage over private automobiles along these dimensions (see Figure 5).

Apparently, what is needed to encourage the patronage of automobile owners is a combination of marketing techniques, regulatory devices (such as bans on downtown parking), increased transit service, and long-term planning efforts (Rosenbloom and Miller, 1973:36). Rosenbloom and Miller point out that a transit route instituted in a new residential area prior to the arrival of new residents and the formation of their daily transportation habits will be used much more than an equivalent line instituted into a previously established residential community. The best plan for transit managers, therefore, would be to develop promotional activities in conjunction with the development of the residential area. For example,

> " . . . residential developers can be required to advertise the availability of transit in detail, and promotional aids such as free trips, etc., can be used in conjunction with the movement of residents into a subdivision. Additionally, promotional campaigns can be started at existing or planned factories and places of concentrated employment, encouraging the use of existing transit facilities or developing new lines of service to fit the needs of workers" (Rosenbloom and Miller, 1973:37).

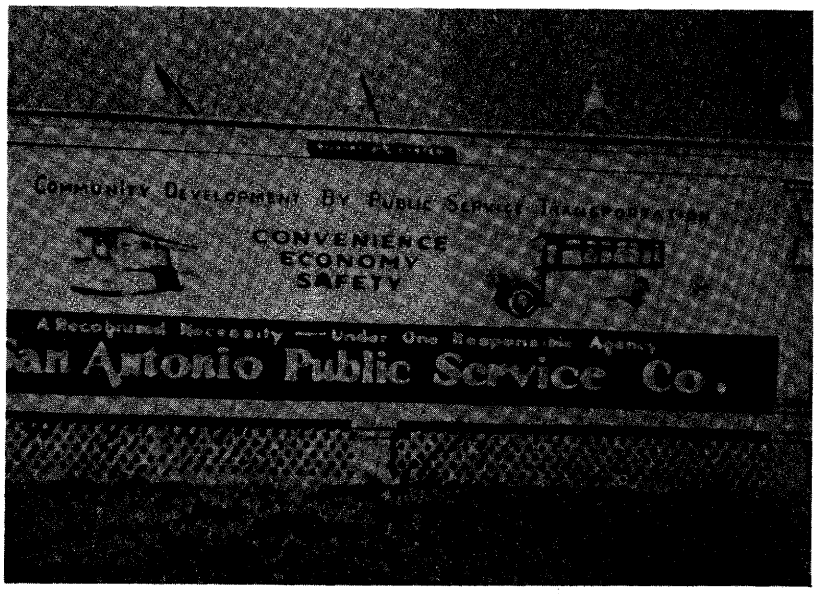
The implication is that promotional efforts to encourage a modal shift from automobiles to transit are not as apt to be successful once the travel behavior of the individuals has been established. The working males in Waco and Beaumont are evidence of this conclusion; their reliance on private automobiles is so complete that they have practically eliminated public transit as a viable alternative. "The key group in promoting choice ridership, however, is the current non-users who lack information and experience but have not ruled out the mode entirely" (Wilson, et al., 1974:54). Based upon the TTI survey data, it has been assessed that

this group includes a large number of housewives and white collar females, as well as the predominant current users--blue collar females and older persons. Not all of these people will become regular transit users, but managers should promote occasional use by these segments, including other than temporary captive situations.

PROMOTING NEW SERVICES, FACILITIES, AND CONVENIENCES THAT ARE DIRECTED TOWARD TARGET MARKETS

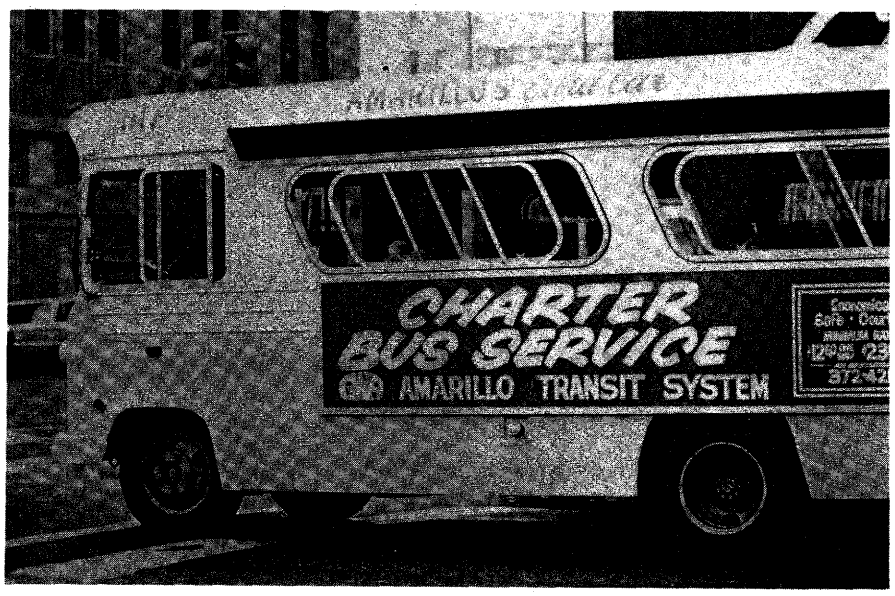
Essentially, this promotional strategy involves the technique of market segmentation and the identification of critical factors for each target market. Under the section of this report entitled "Service Requirements," the appropriate promotional themes and strategies which were related to the critical factors of six market segments were discussed and will not be repeated at this time.

The importance of using market segmentation when planning promotional campaigns, however, should be re-emphasized. Once the market has been divided into viable segments on the basis of service requirements, current or potential level of usage, evaluative/attitudinal criteria, or other meaningful bases of segmentation, the transit marketer can develop specialized promotional activities to appeal to each population grouping. This specialization increases the effectiveness of the campaign. Additionally, where overlapping between segments occurs, promotional efforts can effectively be aimed at segment clusters. Thus, each target market is approached with a promotional campaign based upon their particular transit needs and service requirements to encourage their use of the transit system.



Although billboards are less effective than television and radio advertisements and do not reach as large an audience, these signs can be useful if messages are kept quite short and to the point. Primarily, billboards serve to increase awareness of the system rather than to advertise specific activities or changes.

Perhaps the most convenient source of advertising for the transit system is the exteriors of the buses themselves. Large numbers of people will see the advertisements as the buses make their scheduled routes, and the system incurs no extra expense with the activity.



CHAPTER VII

ADVERTISING MEDIA

By definition, media are simply means of mass communication (i.e., devices by which messages are conveyed to the public). In the field of transit promotion, virtually all forms of communication media have been used to contact the market, but television, radio, newspapers, billboards, carcards, brochures, pamphlets, and mailed advertising are among the forms most frequently used by transit systems. Normally, a system should choose media that are most apt to be effective in reaching their target markets, taking into account such things as the cost per exposure, media effectiveness, and media overlap. In addition, the basis for the selection of time slots and newspaper sections, for example, should be based on the maximization of the number of target customers reached per advertising dollar (Alpert and Davies, 1975:15).

As we mentioned earlier in this report, the task of providing information to the public should receive major emphasis in all transit marketing programs. However, it is not always sufficient to put information such as route maps and schedules only at bus stops, although this method is beneficial for transit passengers. According to Beier (1972:544-545):

> What is needed is a regular, long-term purchase decision or commitment by people currently driving. Such decisions are made in the home prior to taking any regular trips. Hence, information concerning the availability of service must also be in the home.

To facilitate the task of presenting information to the public, extensive data were collected from the TTI sample concerning their preferences for various information sources. Knowledge of popular media forms, time slots, and program types for each market segment will enable transit marketing personnel to channel their promotional advertising to the various market segments with maximum efficiency.

INFORMATION SOURCES

Television, Radio, and Newspapers

Not surprisingly, television was found to be the most popular information source among Waco and Beaumont respondents. Over 96 percent of each market segment indicated some time spent watching television (see Table 10). The newspaper and radio were the next most frequently utilized information sources, which again, was to be expected.

Radio has been used quite successfully in the past to promote transit. For example, radio spots are considered especially useful for carrying modal switch messages to motorists during peak travel times. This medium is also considered effective in communicating with particular target groups because advertisements can be broadcast by stations that attract specific audiences (Battle, 1973:39). And whereas paid television advertising is extremely costly, air time is more frequently made available to transit systems by local radio stations as a public service.

Newspapers, on the other hand, are often used to present periodic advertisements, to announce changes in the system, and to communicate with the entire community rather than specific target groups (Battle, 1973). An advantage of the newspaper is that it is flexible (i.e., advertisements can be inserted or removed with very little notice). Advertisements, however, need to be short and to-the-point to be most effective. Press releases, which can be more detailed, are the optimum means to obtain coverage in the newspaper, and also represent a source of free advertising for the bus system. Transit managers should definitely take advantage of the opportunity to publicize any and all service improvements, schedule and route changes, or other transit-related news items. Such transit improvements need to be publicized for practical as well as promotional reasons (Battle, 1973:35).

Table 10. Information Sources by Market Segments (in percentages)*

	Newspaper	Magazine	Radio	Television	Leaflet	Mailed Advertisement	Billboard
Older Persons	87.2	83.8	86.1	100.0	35.0	38.5	18.4
Housewives	95.3	85.1	89.0	98.4	34.9	45.0	28.9
White Collar Males	95.0	87.4	94.9	96.8	28.6	29.9	27.8
White Collar Females	89.9	87.2	97.4	98.7	37.5	38.7	42.5
Blue Collar Males	88.8	78.9	96.9	96.9	26.0	31.2	25.0
Blue Collar Females	93.6	77.8	85.5	98.4	37.3	51.5	42.4

*Percentages indicate respondents who answered "always" and "almost always" to the questionnaire items for leaflet, billboard, and mailed advertisement. Responses of "sometimes" and "never" were deleted for leaflet, billboard, and mailed advertisement. For remaining media, any response indicating some time spent watching, listening, or reading was included in total percentages.

Note: Television, radio, and newspaper were the top 3 choices for each segment, therefore, they are shaded; circles indicate the 4th and 5th information sources most often utilized by each segment.

Other Information Sources

As shown in Table 10, other media may not enjoy the same widespread utilization as television, radio, and newspapers, but transit managers may want to consider mailed advertisements or leaflets, either as substitutes for, or supplements to, paid space and time advertising.

The Waco and Beaumont data indicate that mailed advertising is fairly well received, particularly by the female segments. Another study, however, came to the conclusion that because a large quantity of mail is received by middle-income households, a packet of promotional material may elicit a junk-mail reaction (Wilson, et al., 1974). Yet mailed advertisements seem more personal than billboards or carcards and, thus, may be more appealing to the public. At the very least, mailings can be directed to more specific segments, whereas managers have little if any control over who is exposed to billboards. Furthermore, billboards are severely limited in terms of the amount of information that can be presented. The only real advantage to billboards, carcards, and posters is the low cost involved. Leaflets are also subject to fairly random delivery, but

some control is possible in terms of distribution locations. Pamphlets passed out at a grocery store in a high-income residential district, for example, are not apt to reach the low-income residents in another part of town. A major disadvantage of pamphlets, however, is that they must be periodically updated, which raises the costs involved.

Assuming that transit managers are interested in reaching the largest numbers of potential and current transit riders, more detailed information was obtained on the market's viewing, listening, and reading habits for television, radio, and newspapers.

TELEVISION VIEWING HABITS

Table 11, for example, identifies the most popular television time slots for the six market segments. In general, it appears that the late afternoon and evening hours capture the largest viewing audiences. Older persons, housewives, and blue collar females also watch television during the 12:00 - 4:00 p.m. time slot. Apparently, the blue collar females, who often fall into the domestic service occupational category, may have access to television sets during the day, as do housewives and older persons. White collar females and working males, on the other hand, have very few, if any, opportunities to view television during a normal work day. It may be assumed that the small percentages that indicate television viewing in the daytime hours, particularly for these working segments, reflect weekend viewing habits almost entirely. Based upon this information, it is recommended that advertising geared to the white collar females and working males be aired during late afternoon and early evening hours. For older persons and housewives, the afternoon (12:00 - 6:00 p.m.) and evening hours are the best time to schedule promotional advertising. And for blue collar females, advertising would be most effective from 9:00 a.m. - 4:00 p.m. and 6:00 - 10:00 p.m.

Because of the high cost involved with paid television advertising, the most efficient strategy would be to design promotional

Table 11. Most Popular Viewing Times for Television Stations by Market Segments (in percentages)

	7-9 am	9-12 am	12-4 pm	4-6 pm	6-10 pm	10— pm
Older Persons	10.24	10.11	21.31	16.18	33.33	6.80
Housewives	10.60	17.29	26.79	17.58	46.60	17.29
White Collar Males	4.03	3.67	4.67	17.24	58.41	18.35
White Collar Females	6.23	4.02	9.43	15.16	63.14	21.96
Blue Collar Males	4.60	9.57	11.89	18.77	54.77	14.55
Blue Collar Females	12.10	14.85	14.90	13.80	37.47	13.89

Note: Top 3 time slots are shaded for each segment.

advertising to appeal to the entire market and request that it be shown between 6:00 - 10:00 p.m. As mentioned previously, convenience, simplicity, enjoyability, and status are all potentially attractive transit features that should be emphasized to the market in general.

RADIO LISTENING HABITS

To facilitate the planning of promotional advertising for radio, information was gathered on both the most popular time slots and program types for the six market segments. As shown in Table 12, by far the most popular program listened to on the radio is General News. Again, it is recommended that transit managers make available information concerning changes in the bus system, the purchase of new buses, and all other news-related items which could be included in local news broadcasts. If promotional advertisements are submitted to the

Table 12. Radio Programs Listened to Most Often by Market Segments (in percentages)

	General News	Religion	Sports	Talk Shows	Top "40"	Country & Western	Classical Music	"Easy Listening"
Older Persons	90.3	48.4	35.5	25.8	12.9	32.3	12.9	19.3
Housewives	80.5	26.5	14.2	30.1	46.0	42.5	15.0	41.6
White Collar Males	69.1	11.7	50.0	20.2	34.0	45.7	23.4	50.0
White Collar Females	74.0	18.2	15.6	22.1	58.4	40.3	15.6	53.2
Blue Collar Males	70.6	18.5	43.5	16.3	50.0	42.4	6.5	34.8
Blue Collar Females	75.9	50.0	24.1	25.9	58.6	39.7	13.8	36.2

Note: Top 4 programs for each segment are shaded.

radio station, managers should request that they be played as close to news broadcasts as possible. The other category capturing a large listening audience from all six segments is Country and Western music. Some local stations may emphasize this style of music more than others, and it would appear beneficial to have promotional advertising broadcast by these stations.

Older persons and males apparently listen to sports programs quite often, while females and blue collar males frequently listen to Top 40 music. Religious programs appeal most strongly to older persons and blue collar females, while white collar females, housewives, and white collar males enjoy Easy Listening programs. Advertisements and informational aids aimed at specific market segments should be scheduled for broadcast with these listening habits in mind.

Turning now to the most popular listening times, Table 13 indicates that for AM radio stations, 7:00 - 9:00 a.m. and 4:00 - 6:00 p.m. appear to capture the largest audiences. It can be assumed that these hours include a great many commuters who are listening to their car radios on the way to or from work. Thus, these time slots could be utilized to emphasize the advantages of taking the bus for people who are currently driving during peak hours.

Table 13. Most Popular Listening Times for AM Radio Stations by Market Segments (in percentages)

	7-9 am	9-12 am	12-4 pm	4-6 pm	6-10 pm	10— pm
Older Persons	11.11	3.55	4.10	3.50	5.26	3.52
Housewives	9.70	6.03	5.09	5.49	3.52	2.36
White Collar Males	12.41	4.62	3.55	6.70	4.22	1.11
White Collar Females	13.28	6.41	6.83	7.02	4.11	3.53
Blue Collar Males	9.13	6.31	5.97	7.72	3.65	4.38
Blue Collar Females	9.80	4.64	5.90	6.96	2.87	3.36

Note: Top 3 time slots are shaded for each segment.

In a promotional campaign in Los Angeles, the bus was conceptualized as an extra car (Battle, 1973). This type of message is ideal for one-car families; housewives who may currently be left at home without a car will be encouraged to consider using the bus for shopping trips and other non-work purposes. For working females and males, a modal switch away from private automobiles for home-to-work trips is encouraged by stressing that the use of transit by commuters in one-car families will free the private automobile for the spouse or other family members during the day.

Aside from these time periods, listening audiences are quite small, particularly during the evening hours. It is suggested, therefore, that requests be made to have radio advertisements aired during peak travel times whenever possible, and avoid or minimize any broadcasts after 6:00 p.m.

For FM radio stations, the listening audience is, again, quite small. Those that do listen are most apt to do so during the morning (7:00 - 12:00 a.m.) and evening (6:00 - 10:00 p.m.) hours (see

Table 14). Because of the relatively small numbers who report FM listening habits, spending money to broadcast announcements on these stations is not recommended. If free advertising is possible, it should be broadcast during previously mentioned time slots, as they are the most favored by the six market segments.

Table 14. Most Popular Listening Times for FM Radio Stations by Market Segments (in percentages)

	7-9 am	9-12 am	12-4 pm	4-6 pm	6-10 pm	10— pm
Older Persons	1.59	1.28	0	0	1.59	.79
Housewives	4.07	4.45	2.96	2.60	2.41	1.89
White Collar Males	8.33	5.83	4.05	5.59	7.91	3.58
White Collar Females	3.41	1.60	2.41	2.92	3.46	4.12
Blue Collar Males	4.43	2.50	3.33	2.50	5.00	5.56
Blue Collar Females	2.35	3.08	1.57	1.19	4.69	3.13

Note: Top 3 time slots are shaded for each segment.

NEWSPAPER READING HABITS

Finally, the Beaumont and Waco respondents were queried as to the newspaper sections they usually read. Of nine possible categories, respondents were asked to indicate their four favorites. As shown in Table 15, the overwhelming favorite for all six segments was General News. Previously emphasized were the methods by which managers can effectively place transit items among general news stories in the form of press releases. Since so many people will be exposed to the information, these promotional stories have the potential to successfully create interest in the transit system.

Table 15. Newspaper Sections Read Most Often by Market Segments (in percentages)

	General News	Comics	Sports	Women's Section	Business	Want Ads	"Dear Abby"	Advertise-ments	Entertain-ment
Older Persons	97.4	28.9	42.1	47.4	36.8	21.0	42.1	23.7	42.1
Housewives	93.6	31.7	24.6	68.2	18.2	35.7	63.5	27.8	54.7
White Collar Males	95.9	44.9	71.1	4.1	40.2	32.0	39.8	25.8	28.9
White Collar Females	88.9	40.7	16.0	59.3	24.7	32.1	55.6	34.6	49.4
Blue Collar Males	90.3	47.3	71.0	6.5	28.3	50.0	31.5	31.5	54.9
Blue Collar Females	92.4	37.9	25.8	47.0	24.2	48.5	56.1	33.3	66.1

Note: Top 4 newspaper sections for each segment are shaded.

The Entertainment section is also widely read, according to the TTI findings. Advertisements placed on or near this page, for example, could stress bus routes that run to shopping malls and movie theaters, as well as charter services for special group functions. These advertisements could, again, emphasize convenience and enjoyability, but they should be designed to enhance transit's appeal for purposes other than the typical home-to-work trip. Simplicity of bus riding should also be reasserted for young people who could use transit to get to and from their leisure activities, rather than relying on parents to chauffer them in the family car.

OPTIMUM PROMOTIONAL THEMES AND ADVERTISING MEDIA FOR EACH MARKET SEGMENT

To summarize, it should be pointed out that in discussing service requirements, promotional themes, and advertising media, market segments have been grouped together whenever possible. These segment "clusters" indicate common viewing, listening, or reading habits among segments, as well as shared critical factors. Transit systems

can effectively use this information regarding overlapping needs and interests to plan their promotional activities for more than one segment at a time. Thus, by capitalizing on similarities, systems can substantially reduce their advertising costs, without reducing the effectiveness of the promotional campaigns. Figures 9 - 14 represent a fairly condensed summary of information for each market segment regarding media preferences and appropriate promotional themes, based on service requirements. The three promotional themes shown for each segment are presented in order of ranked importance, but not all of these dimensions can be improved or promoted by small transit systems. Only the starred themes are currently within the scope of smaller operations. For example, the dimensions of convenience and status need to be improved and subsequently promoted for white collar females. Flexibility, although it was ranked first in importance by this group of females in Beaumont and Waco, cannot be improved by small transit systems and should not be included in promotional campaigns. In addition, each figure identifies other market segments which can be attracted by the same promotional themes or reached via similar advertising media. (Such segments are designated by circles in each case.) Because they identify both the medium and the message which can be used to attract potential riders to the system, these summaries should be useful guidelines for anyone interested in promoting transit to the public.

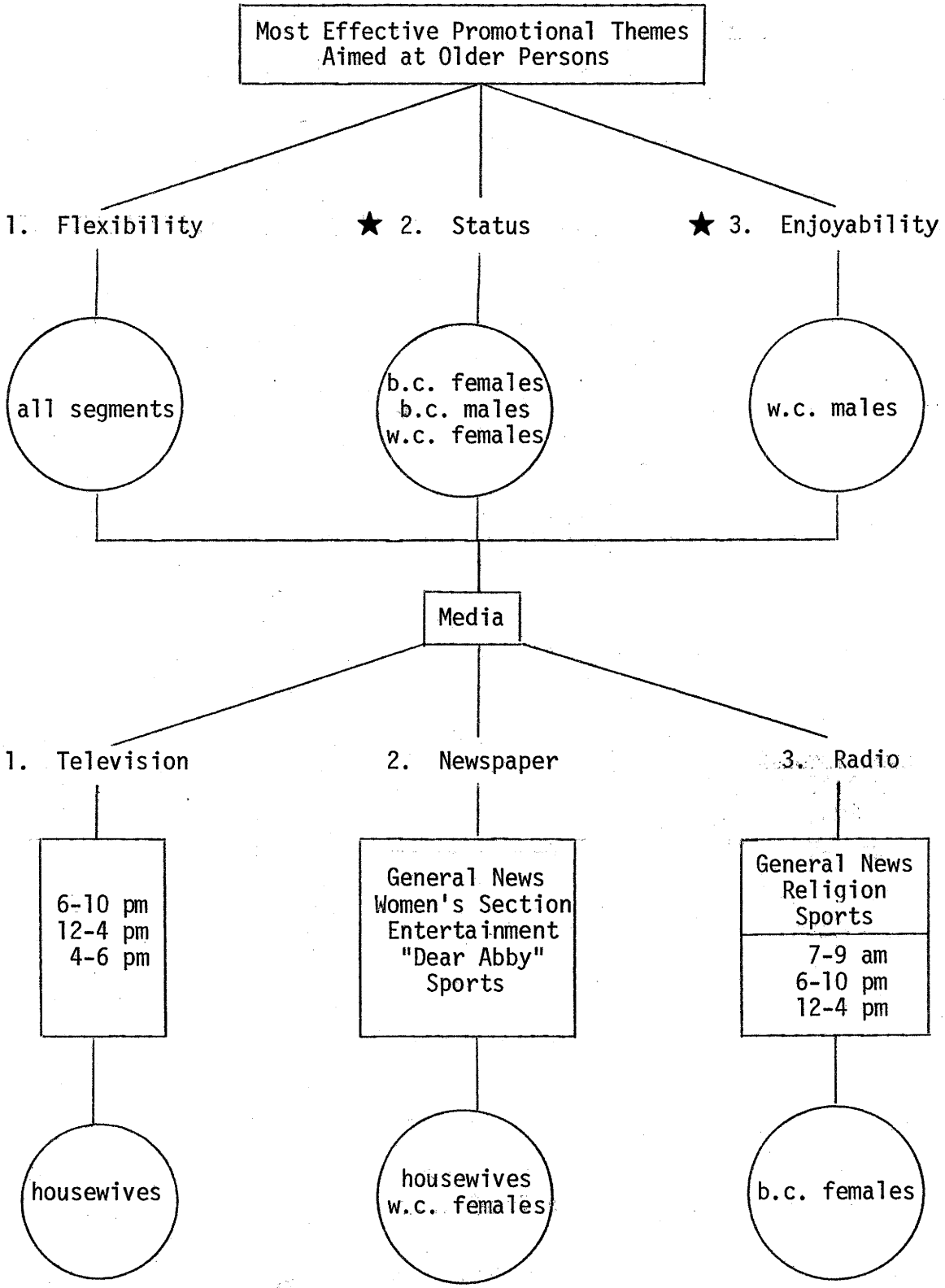


Figure 9. Optimum Promotional Themes and Advertising Media for Older Persons

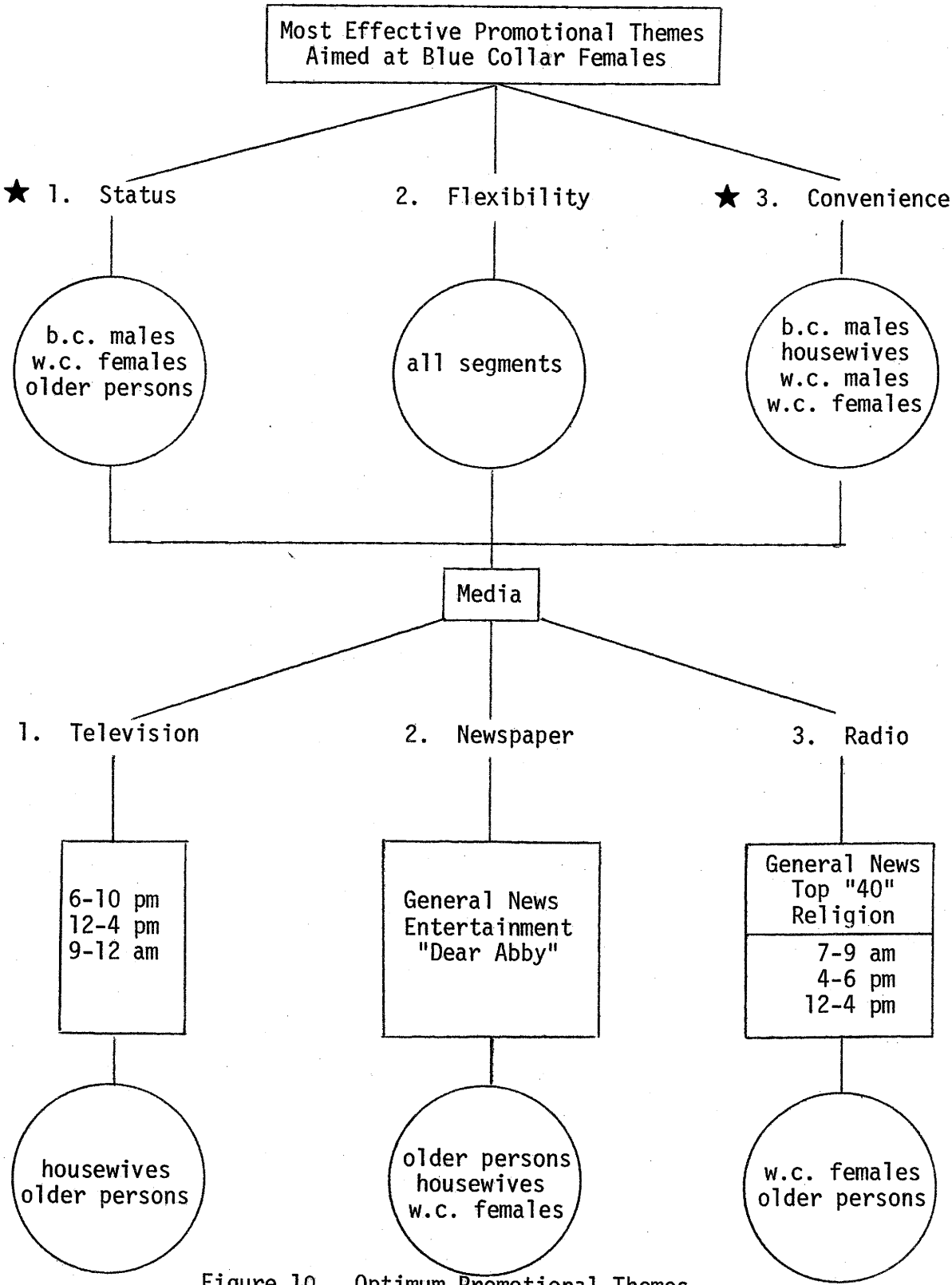


Figure 10. Optimum Promotional Themes and Advertising Media for Blue Collar Females

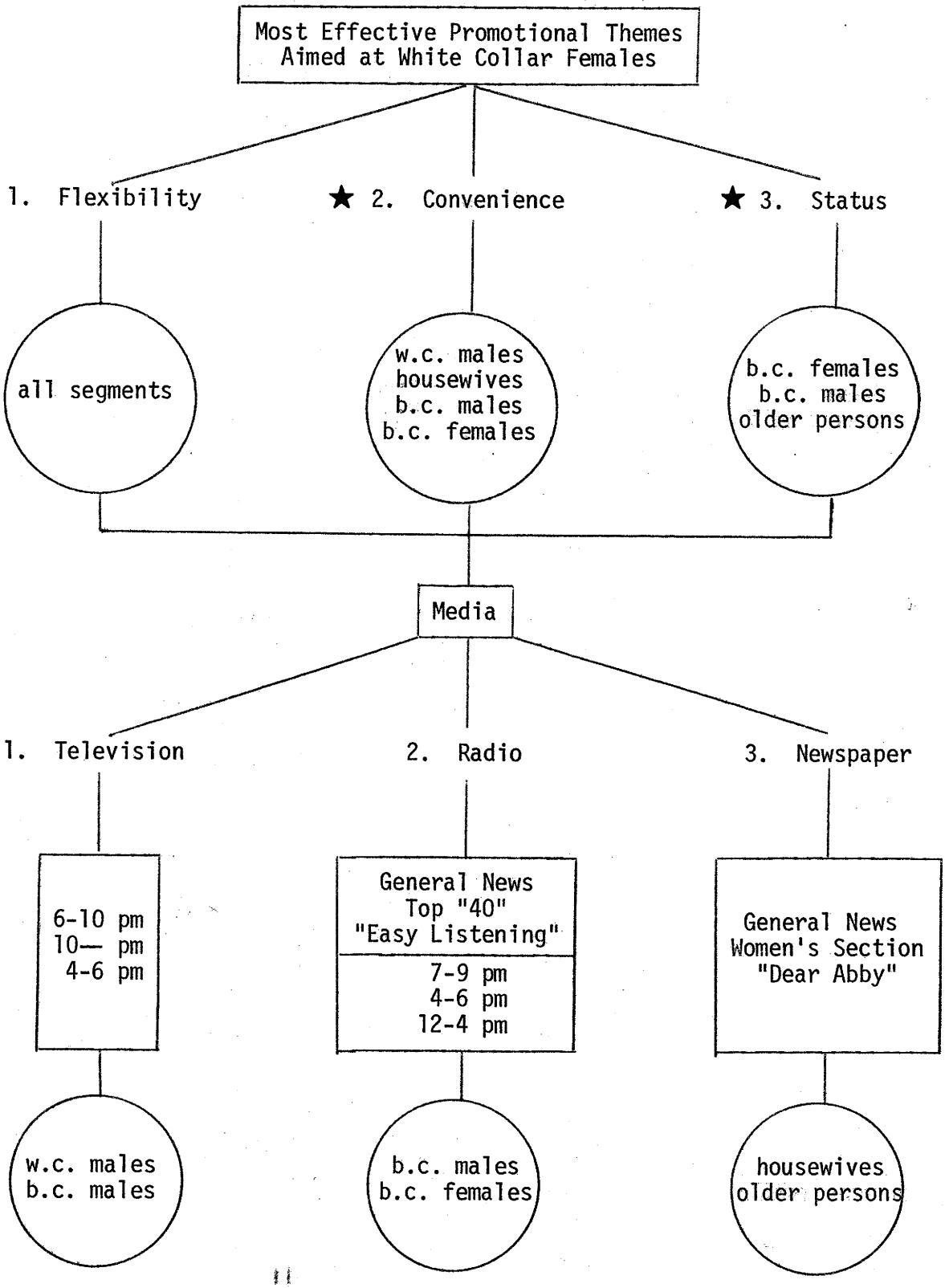


Figure 11. Optimum Promotional Themes and Advertising Media for White Collar Females

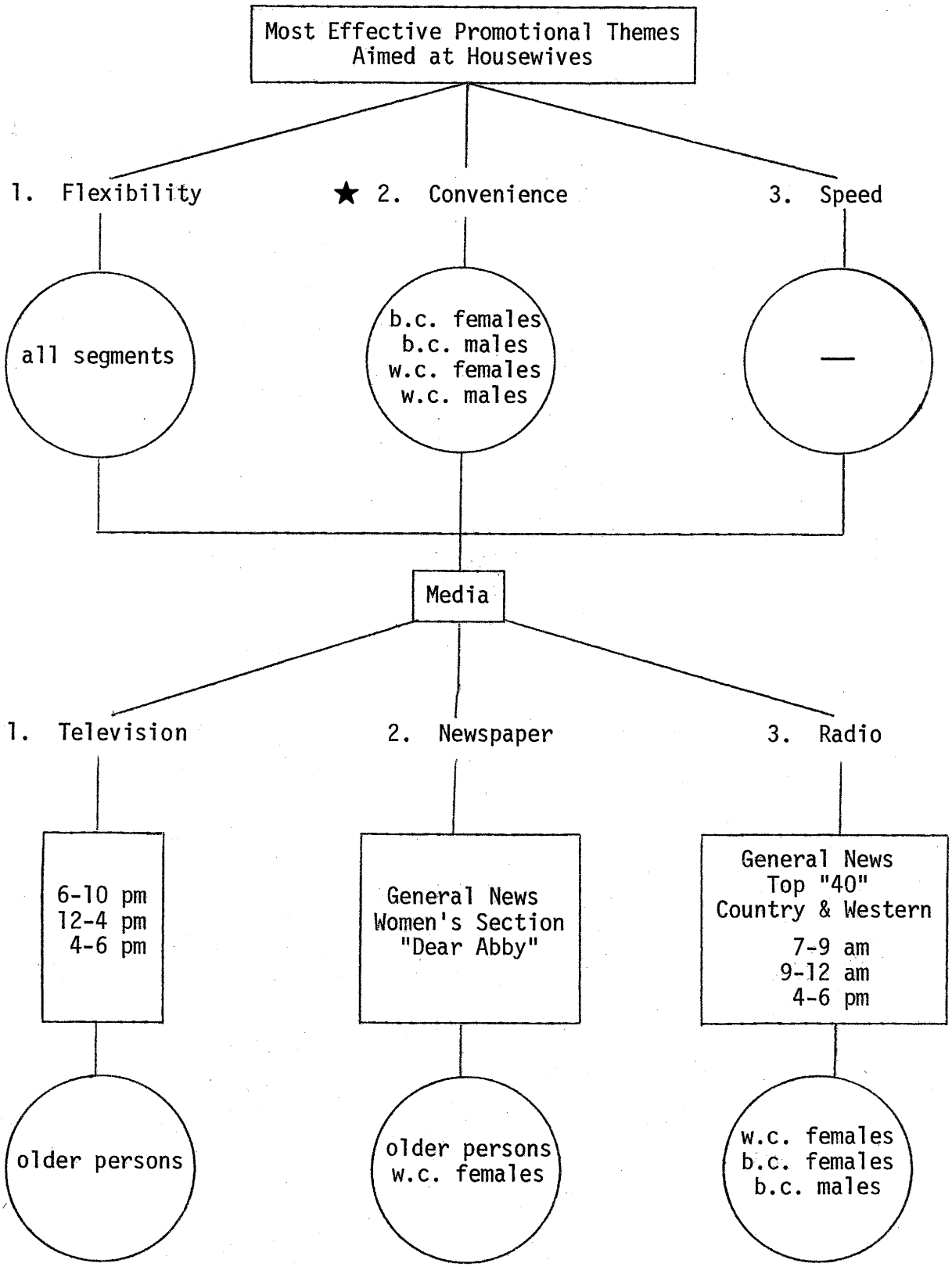


Figure 12. Optimum Promotional Themes and Advertising Media for Housewives

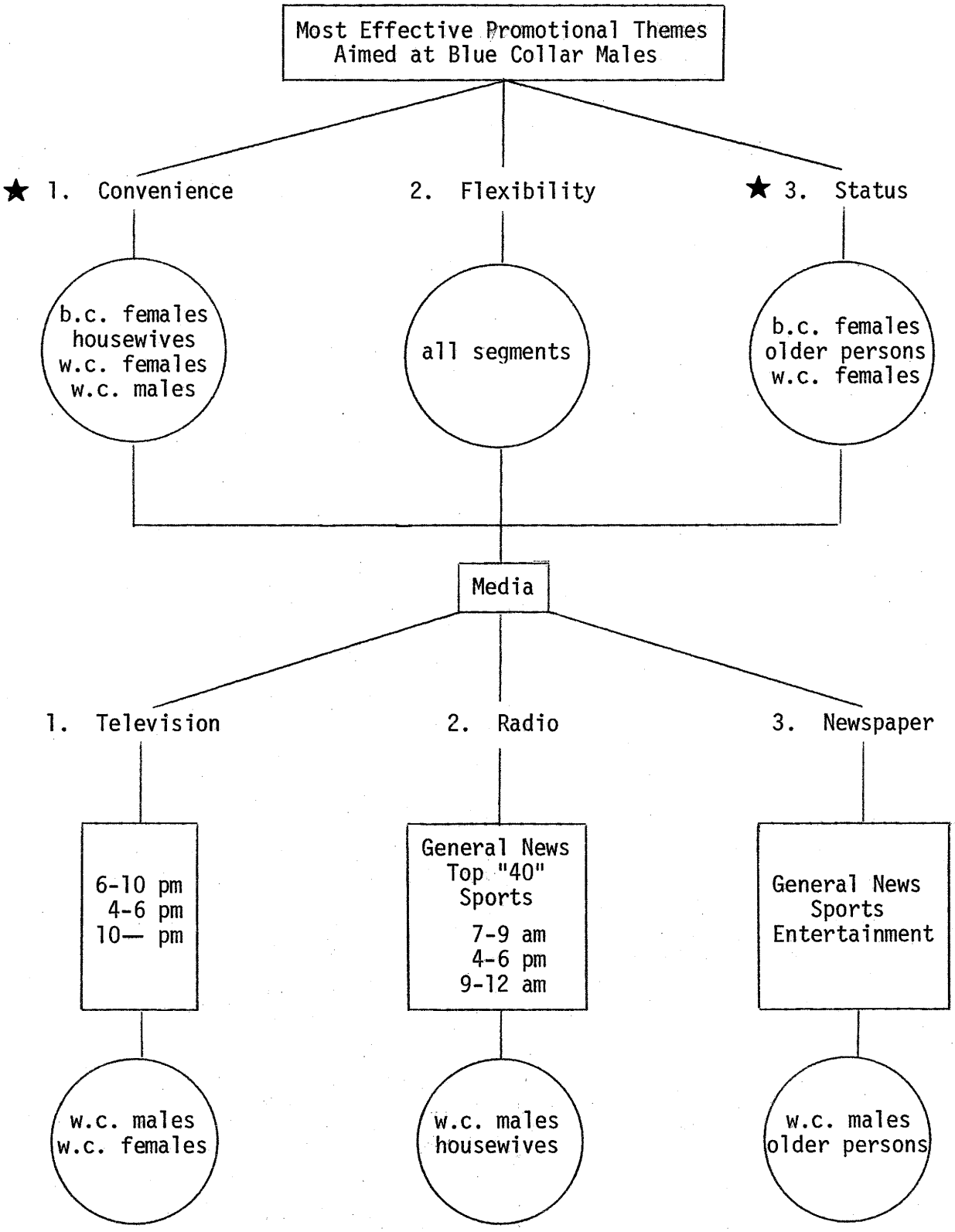


Figure 13. Optimum Promotional Themes and Advertising Media for Blue Collar Males

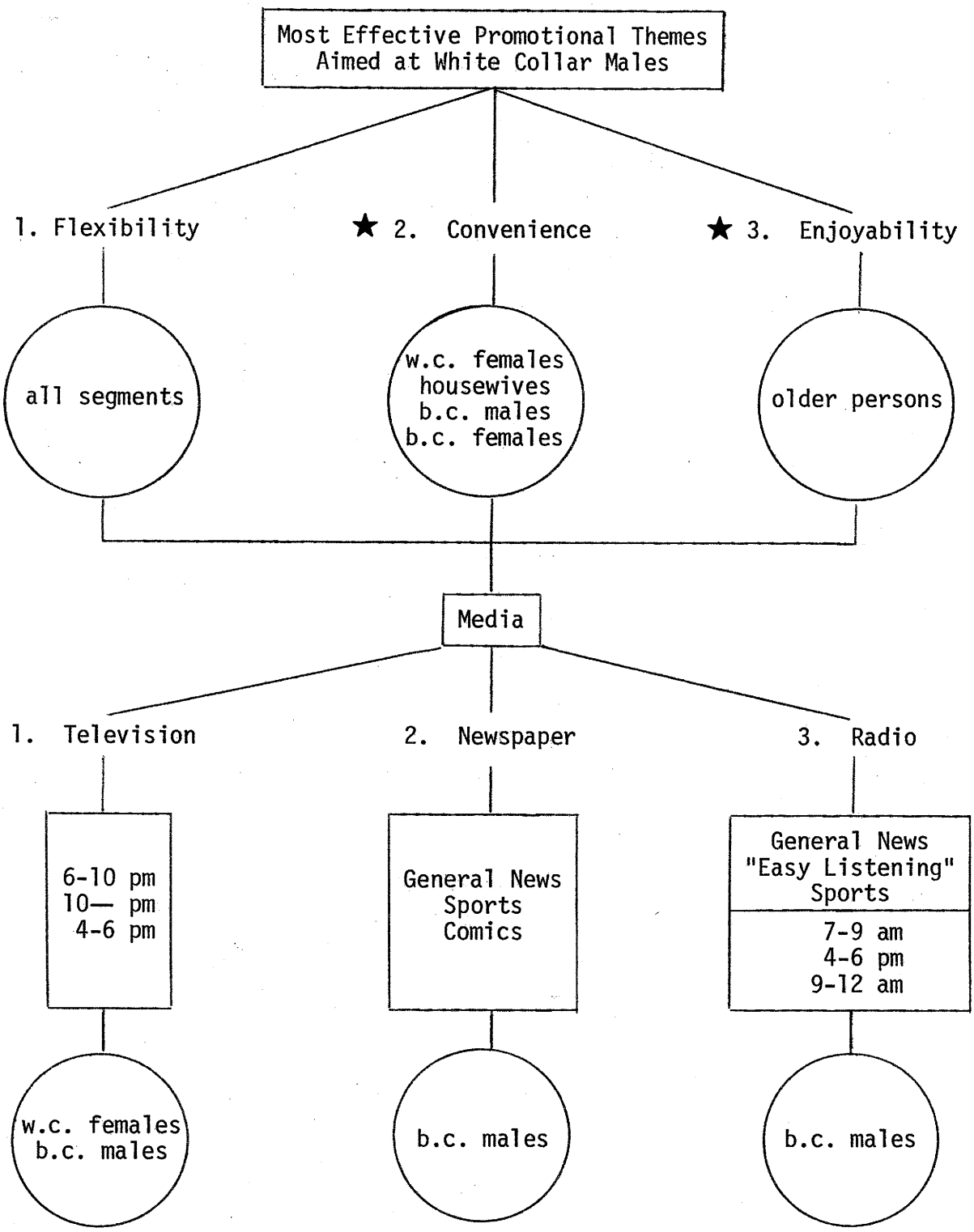


Figure 14. Optimum Promotional Themes and Advertising Media for White Collar Males

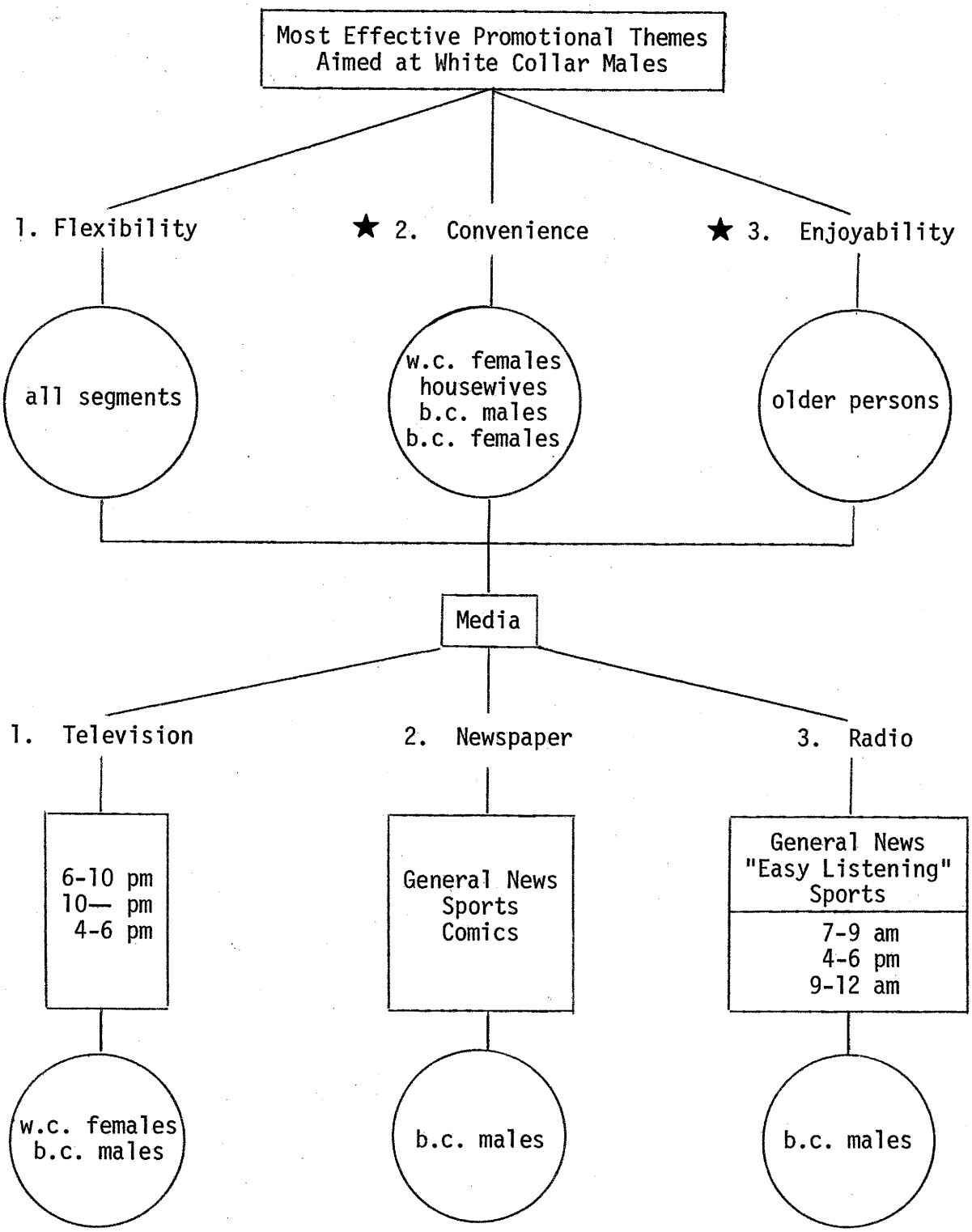
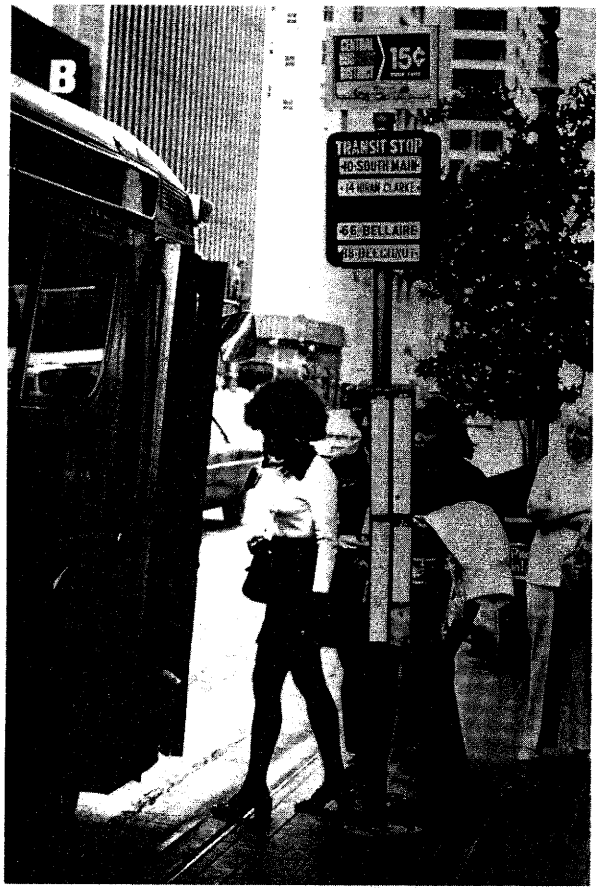


Figure 14. Optimum Promotional Themes and Advertising Media for White Collar Males



It is believed that smaller transit systems in Texas can benefit most through utilization of a concentrated marketing approach which focuses on a few selected target markets. Gearing service developments and promotional campaigns to the needs and preferences of these potential markets will maximize the system's chances for increasing ridership as well as overall revenues.

CHAPTER VIII

SUMMARY AND RECOMMENDATIONS

The special characteristics which differentiate small transit systems from those in metropolitan areas make it problematic to apply many previous market research findings to Texas cities with populations under 200,000. For this research effort, therefore, two small cities in Texas (Beaumont and Waco) were selected as study sites, and data obtained on the following marketing topics:

1. Segmentation of the transit market into viable subgroups;
2. Identification of service requirements sought by each segment;
3. Promotional strategies, based on service requirements, to effectively attract potential riders to the system; and
4. Popular information sources and media habits to identify optimum advertising media for use in promotional campaigns.

The findings of this research enable smaller transit systems to begin effective marketing efforts, if such programs have not been in operation previously. Systems that are already involved with a marketing program also will find the information useful, particularly for planning future promotional campaigns and for evaluating previous promotional efforts.

MARKET SEGMENTATION

With the understanding that transit in smaller cities will not attract, or be used by, a majority of the total population, transit representatives should direct service toward specific, target segments. These population groupings will be homogeneous along one or more meaningful dimensions, such as highly similar transit needs and comparable evaluation of transit, or correlated travel behavior patterns.

One of three broad marketing approaches is suggested for increasing ridership response in smaller cities -- concentrated marketing. With the limited resources and lower service levels evidenced in cities under 200,000, a concentrated approach aims at only a few targeted population groupings for (1) information dissemination, (2) promotional strategies, (3) customer services, and (4) most important, service improvements.

The alternative bases for transit market segmentation were depicted in Chapter III, revolving primarily around

- Demographic characteristics of individuals
- Travel behavior characteristics
- Attitudinal and evaluative characteristics
- Benefits sought from transit, or service requirements
- Situational characteristics

Before attempting to utilize marketing segmentation, four requirements must be met:

The first requirement is *measurability*, or the extent to which information can be obtained about individuals on the particular criteria of interest.

The second condition is *accessibility*, or the degree to which a transit system can focus on chosen segments (for example, bus routes may not currently be provided to a specific segment, such as suburban residents).

The third requirement is *substantiability*, or the degree to which it proves worthwhile to focus on chosen segments, based on their size and interest levels.

The fourth condition is *viability* or *stability*, that is, the extent to which the chosen segments are anticipated to evidence a demand for transit over time.

The TTI surveys in Waco and Beaumont uncovered six adult population segments through a set of discriminant analysis procedures, as follows:

1. Older Persons (population 65+)
2. Blue Collar Males (those who were craftsmen, operatives, laborers, and service workers)
3. Blue Collar Females (primarily private household or other service workers)
4. White Collar Males (those in professional, managerial, clerical or sales positions)
5. White Collar Females (primarily clerical and sales workers)
6. Housewives

It is not suggested, however, that smaller cities should attempt to provide service for all six segments. As was shown, concentrating on four of the six segments proves to be the most effective marketing strategy in cities with lower levels of service. These four adult segments include:

1. Older Persons, comprising approximately 13 to 18 percent of the adult population;

2. Blue Collar Females, including 7 to 9 percent of the adult residents;

3. Housewives, encompassing approximately 31 or 32 percent of smaller cities' population; and

4. White Collar Females, comprising 12 to 15 percent of the adult residents.

Younger persons, ages 6 - 16, not included in the two TTI surveys also provide an extremely important potential market for smaller systems. Especially in cities under 200,000, younger people can safely and effectively utilize transit. At this time, however, young people have not been primary target markets for smaller transit systems.

SERVICE REQUIREMENTS

It was found that the working males in the sample population (i.e., the white collar and blue collar males) could not be attracted to smaller transit systems by any feasible service improvements. Their reluctance to show even a marginal inclination to use transit led to the decision to exclude them from consideration as part of the potential transit market.

White collar females, blue collar females, housewives, and older persons, however, indicated a likelihood to use transit if service improvements or promotional efforts were directed at the following travel dimensions:

1. Convenience
2. Simplicity
3. Enjoyability
4. Status

These features, therefore, were selected as the optimum promotional themes to be utilized in future campaigns to increase ridership. Two other transit dimensions: safety and cost, were rated more favorably by the sample than the corresponding automobile dimensions. Therefore,

it was recommended that these features not receive major emphasis in forthcoming promotional activities because they are already viewed so positively. Other dimensions, which cannot feasibly be improved in smaller systems because of the costs involved with rerouting and rescheduling, should also be excluded from advertising and promotional campaigns. Examples of such features are flexibility, speed, reliability, and punctuality.

Again, the most important decision, based on the analysis of service requirements sought by each segment, was to exclude the working males from the potential transit market. Larger systems may be better equipped to attract these segments, but smaller cities stand very little chance of successfully encouraging a modal shift to transit by these individuals. Efforts and funds should, instead, by directed at those segments who have not ruled out the possibility of transit ridership completely.

TRANSIT NEEDS

A discussion of transit needs involves both the topic of physical needs and psychological needs. Physical transportation needs, by definition, include

- the designation of which trips are required,
- an estimation of the number of people requiring additional transportation, and
- an estimation of the number of trips required.

The designation of required trips most often involves an analysis of trip purposes, just as the selected mode of transportation is related to both trip purpose and the need associated with it. Estimation of the number of people requiring additional trips and the number of trips required is based on both

- availability of transportation services, and
- affordability, in terms of financial and physical constraints on the individual's options.

Additionally, psychological transportation needs are thought to be greater determinants of modal choice than previously realized. Therefore, it is extremely important that transit decision-makers begin to take these needs into account when planning either service improvements or promotional strategies.

Furthermore, there is a minority of individuals classified as "transportation disadvantaged" who are even more apt to be affected by psychological needs and perceptual barriers than other individuals. This group most often includes:

- the elderly,
- the young,
- the poor, and
- the handicapped

These people who cannot (or choose not) to drive private automobiles represent a key potential market for mass transit, but the transit system is not currently satisfying their transportation needs. This is, obviously, a major problem for transit to resolve.

(For a more complete discussion of transit needs and the presentation of research findings, the reader is referred to Volume II, Critical Factors Influencing the Demand for Transit.

PROMOTIONAL STRATEGIES

Promotional strategies adopted by transit systems are classified in the following four categories:

1. Increasing public awareness of the system;
2. Reinforcing the positive attitudes of current riders;
3. Encouraging a modal shift away from the automobile; and
4. Promoting new services, facilities, and conveniences that are directed toward target markets.

Increasing public awareness. Potential market segments indicated, on the average, that advertising would encourage them to ride buses more often. Previous promotional activities by the bus system, however, were not widely remembered, although

- new buses,
- reduced, and
- shopping trip specials

were recalled by certain segments with some regularity.

The need for factual information was evidenced by all segments, who indicated that schedules at bus stops and improved printed maps and timetables would be beneficial.

Reinforcing current ridership. One of the most detrimental variables to transit usage is the number of automobiles per family. Whereas 30 percent of the TTI sample who never have personal access to a car take transit to work, only 7 percent of those with occasional access to a private automobile use transit for work trips, and less than 1 percent of those who always have access to a car use transit for work purposes. Similarly, transit use for purposes other than home-to-work trips is also affected by the individual's access to the private automobile. In effect, transit systems must encourage a modal switch away from the private automobile for members of one-car families, even though these individuals may sometimes be classified as captive riders.

Another significant segment which may be viewed as captive riders, is school-age children. On the average, only 12 percent (8 percent in Beaumont; 17 percent in Waco) of the children in the TTI households sampled used transit for school trips. These percentages were smaller, in both cases, than those indicating use of a private automobile for school purposes. Furthermore, the percentage of children actually using transit for other purposes was even smaller, which further emphasizes the need for more extensive promotional campaigns to increase ridership among potential segments and reinforce the current patrons of the system.

Encouraging a modal switch. Despite the importance of factors such as travel time, reliability, and flexibility on modal choice decisions, small systems cannot effectively improve or promote these travel dimensions. Instead, small systems must work on the feasible service requirements mentioned previously (convenience, simplicity, enjoyability, and status) and reinforce the dimensions which are already viewed as positive transit features -- cost and safety. Although these factors alone are not enough to encourage many automobile owners, particularly the working males, to switch to public transit, the key group of choice riders is the current non-users who may lack information and experience but still indicate a willingness to use the system. This group was found to include large numbers of blue collar females, older persons, housewives, and white collar females in the TTI sample.

Promoting new services directed toward target markets. Because this strategy involves the technique of market segmentation and the identification of crucial factors sought for each target market, the reader was

referred to the section of this report entitled "Service Requirements" for a more complete discussion of the topic.

ADVERTISING MEDIA

Not surprisingly, the most popular information sources among the population surveyed, in order of importance, were:

1. Television
2. Radio
3. Newspapers

Transit systems are encouraged to utilize public service announcements and press releases to increase awareness of the system and to publicize service improvements, such as schedule and route changes, the purchase of new buses, or the addition of benches at bus stops.

Most popular television viewing times among the TTI respondents were found to be:

1. 6-10 p.m.
2. 4-6 p.m.
3. 12-4 p.m.

Because of the high costs involved with paid advertising, small systems will want to maximize the number of customers reached per advertisement. Therefore, advertising which emphasizes one of the recommended promotional themes should be broadcast during the 6-10 p.m. time slot if possible. Most important, public service announcements provided by transit management should be aired at this optimum evening time period.

The most popular radio program among the TTI sample was "General News", which re-emphasized the need for transit systems to develop press releases for inclusion in local news broadcasts. Other popular programs include:

- Country and Western music
- Top "40"
- Easy Listening

Programs aired during peak travel times (7-9 a.m. and 4-6 p.m.) capture the largest listening audiences, and systems should utilize these time periods to encourage a modal switch to transit.

The number of people indicating time spend listening to FM stations was quite small. Therefore, it was suggested that, except when free advertising is available, transit systems should not utilize this medium.

Finally, newspaper sections read most frequently by the TTI sample were:

1. General News
2. Entertainment

Small systems are encouraged to utilize press releases to obtain coverage in the General News section of their local newspaper. Also, advertisements designed to enhance transit's appeal for purposes other than work trips should be placed in or near the Entertainment section. Such advertisments could emphasize bus routes which run to recreational areas, movie theaters, shopping malls, and so forth.

TRANSIT MARKETING IN PERSPECTIVE

The underlying contention of this report is that small transit systems will benefit from utilization of a marketing approach. Identification of specific service requirements sought by the potential market enables small systems to more efficiently plan both the allocation of limited operational resources and the optimum promotional strategies to increase ridership. Because of their restricted budgets and a lack of automobile deterrents in smaller cities, transit management often finds it especially difficult to attract non-captive riders to the system. The technique of market segmentation, however, allows systems to design promotional activities and service improvements which are geared to the particular needs and preferences of specific target segments, thus maximizing the effectiveness of the overall transit service.

Although many systems think of marketing solely in terms of promotional activities, a successful marketing program actually includes the following five components, presented in order of importance:

- Market Research
- Service Development

- Information Dissemination
- Promotional Strategies
- Customer Services / Public Relations

The TTI research is a comprehensive effort which integrates all five marketing dimensions; the major emphasis, however, is on market research and service development -- the key components in any marketing program. What distinguishes the TTI research effort is that all recommendations and conclusions are based on objective criteria for ascertaining service alterations and improvements, as well as promotional strategies. Service requirements, for example, were identified for each market segment by asking the members of the sample what *they* felt was necessary and important, rather than relying on the subjective opinions of researchers, transit personnel, or others outside the particular transit market being analyzed. Thus, system managers are provided with an objective rationale for decision-making regarding service improvements, based on the actual transit needs and critical factors sought by the public.

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APPENDIX A

QUESTIONNAIRE USED IN BEAUMONT AND WACO

TRANSPORTATION SURVEY FOR
WACO RESIDENTS

I. NEEDED COMMUNITY IMPROVEMENTS

Below are a list of problems facing Waco. Which ONE do you think is the most urgent and pressing?
Which ONE, in your opinion, is the second largest problem?
(Please check the two appropriate boxes.)

	First Problem	Second Problem
Road and street repair	☐	☐
Air and water pollution	☐	☐
New industry and jobs	☐	☐
Cost of city government	☐	☐
Race relations	☐	☐
Public transportation/mass transit	☐	☐
Crime	☐	☐
Property taxes	☐	☐

II. TRAVEL IN YOUR HOUSEHOLD

1. How do you normally get to and from the following places?
(Please check the appropriate boxes.)

	Drive a Car/Truck	Passenger in a Car/Truck	Bus	Taxi	Walk	Bicycle	Motorcycle	Other	Not Applicable
a. Work	☐	☐	☐	☐	☐	☐	☐	☐	☐
b. School	☐	☐	☐	☐	☐	☐	☐	☐	☐
c. Grocery Shopping	☐	☐	☐	☐	☐	☐	☐	☐	☐
d. Nonfood shopping	☐	☐	☐	☐	☐	☐	☐	☐	☐
e. Visit friends	☐	☐	☐	☐	☐	☐	☐	☐	☐
f. Medical or dental visits	☐	☐	☐	☐	☐	☐	☐	☐	☐
g. Church activities	☐	☐	☐	☐	☐	☐	☐	☐	☐
h. Personal business or recreation	☐	☐	☐	☐	☐	☐	☐	☐	☐

2. For those purposes that you are not currently using buses, would you consider riding a bus for the following trips? (Please check the appropriate boxes.)

	Extremely Likely	Likely	Neutral	Not Very Likely	Extremely Unlikely	I Use a Bus Now
a. Work	☐	☐	☐	☐	☐	☐
b. School	☐	☐	☐	☐	☐	☐
c. Grocery shopping	☐	☐	☐	☐	☐	☐
d. Nonfood shopping	☐	☐	☐	☐	☐	☐
e. Visit friends	☐	☐	☐	☐	☐	☐
f. Medical or dental visits	☐	☐	☐	☐	☐	☐
g. Church activities	☐	☐	☐	☐	☐	☐
h. Personal business or recreation	☐	☐	☐	☐	☐	☐

3. If you have any children under the age of 18, how do they normally get to the following places? (Please check the appropriate boxes.)

	Drive a Car/Truck	Passenger in a Car/Truck	Bus	Taxi	Walk	Bicycle	Motorcycle	Other	Not Applicable
a. School	☐	☐	☐	☐	☐	☐	☐	☐	☐
b. Shopping	☐	☐	☐	☐	☐	☐	☐	☐	☐
c. Visit friends	☐	☐	☐	☐	☐	☐	☐	☐	☐
d. Recreation	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. Please check the one sentence which best describes you:

- ☐ I don't use public transportation and I never have in the past.
- ☐ I don't use public transportation at the present time, although I have used it in the past.
- ☐ I sometimes use public transportation, but only when I have to.
- ☐ I sometimes use public transportation by choice.
- ☐ I am a regular user of public transportation by choice.
- ☐ I am a regular user of public transportation because I have no alternatives.

5. Do you have a current driver's license?

☐ Yes ☐ No

6. How many persons, including yourself, live full-time in your household? (Please exclud anyone living away from home while at school or college.)

_____ persons aged 16 and over; _____ persons aged 6-15; _____ persons aged 0-5.

7. How many of each of the following types of vehicles, in working order, are operated by members of your household (including yourself)?

_____ cars (incl. campers, trucks); _____ motorcycles; _____ bicycles.

8. To what extent do you normally have personal use of a car available to you? (check one

☐ Always ☐ Most of the time ☐ Part of the time ☐ Occasionally ☐ Never.

9. How far is your residence from a bus stop? _____ blocks; _____ unsure.

10. If you work: a. How far is your work place from a bus stop?

_____ blocks, _____ unsure.

b. Is your car needed for your work? ☐ Yes ☐ No

c. Where is your work (address)? _____

11. What is the name of the bus company in Waco?

_____

III. YOUR OPINIONS ON TRANSPORTATION AND PERSONAL TRAVEL

Below are listed a number of statements relating to transportation facilities and personal travel; you will probably agree with some of them and disagree with others. Please answer by circling the letter which best represents your feeling about each of the statements, according to the following codes:

A means Strongly Agree
a means Agree Somewhat
o means Neither Agree nor Disagree
d means Disagree Somewhat
D means Strongly Disagree

I much prefer driving a car to being a passenger in one . . . . . A a o d D

I really can't see much of a future for public transportation . . . . . A a o d D

There should be greater emphasis on improving bus service and less on building freeways. . . . . A a o d D

Government investments in mass transit are a good way to help reduce air pollution . . . . . A a o d D

The idea of carpooling doesn't appeal to me . . . . . A a o d D

If more people used buses, the freeways and roads would be less crowded for those who use automobiles. . . . . A a o d D

A major advantage of buses is that children (ages 6 through 15) can be less dependent on their parents . . . . . A a o d D

Only the lower income groups will ever use buses. . . . . A a o d D

There is not an energy crisis now and there will not be one for the next five years . . . . . A a o d D

I might use buses more often if it were simpler to obtain information about routes and schedules. . . . . A a o d D

Traveling by bus is so much more relaxing than driving. . . . . A a o d D

The space available for parking should be reduced to discourage the use of cars in the downtown area . . . . . A a o d D

City tax money should be used to provide special transportation for people age 65 and older. . . . . A a o d D

I hate to be tied to fixed schedules for traveling . . . . . A a o d D

I've got bad memories of buses. . . . . A a o d D

Waco does not have traffic congestion . . . . . A a o d D

I've never really bothered to find out details about what city bus services are available around here . . . . . A a o d D

Waco Transit System should consider methods other than buses for moving riders in Waco . . . . . A a o d D

I'd much rather people saw me arriving at work by car than getting off a bus. . . . . A a o d D

I could manage without a car for a few months if I had to. . . . . A a o d D

City tax money should be used to provide special transportation for handicapped people in Waco. . . . . A a o d D

I should ride the bus more often, as it relieves congestion . . . . . A a o d D

A lot of my friends and acquaintances judge people by the type of car they drive . . . . . A a o d D

Everyone has a right to drive his car just as much as he wants . . . . . A a o d D

Special freeway lanes should be set aside for the use of high-speed, non-stop buses into and out of downtown Waco during rush hours. . . . . A a o d D

I'll never travel by city buses no matter how much they improve the service . . . . . A a o d D

Parents should not allow children (between the ages of 6 and 15) to ride buses by themselves . . . . . A a o d D

Bus service ought to be considered a public service like libraries, schools and parks. . . . . A a o d D

IV. TRANSIT FINANCING

How satisfactory are the following approaches to financing transit?

(Please circle the appropriate number according to the following codes.)

1 means Very Satisfactory
2 means Satisfactory
3 means Neutral
4 means Unsatisfactory
5 means Very Unsatisfactory

Increase property tax. 1 2 3 4 5

Increase local sales tax. 1 2 3 4 5

Increase state sales tax. 1 2 3 4 5

Increase taxes on gasoline 1 2 3 4 5

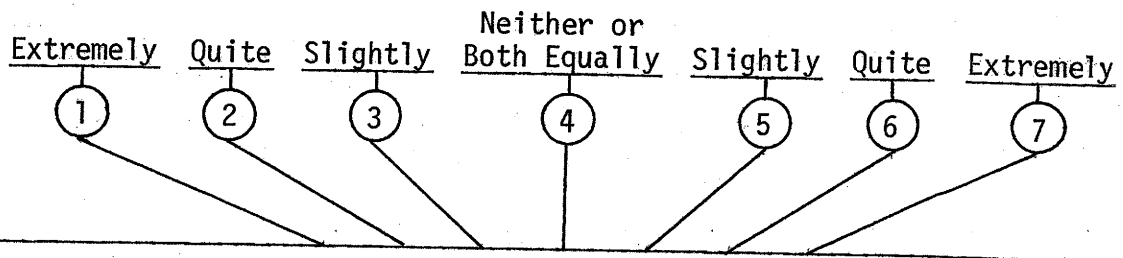
Increase transit fare. 1 2 3 4 5

Other (specify) _____ 1 2 3 4 5

V. YOUR OPINION OF CAR TRAVEL IN WACO

On the scales below, please give your general opinion of car travel in Waco from a user's viewpoint.

Circle a number for each "car travel characteristic" to describe the most appropriate description. For example, on the COST OF TRAVEL characteristic, if you think cars are extremely expensive, circle a "7"; however, if you think they are slightly inexpensive, circle a "3", and so forth.

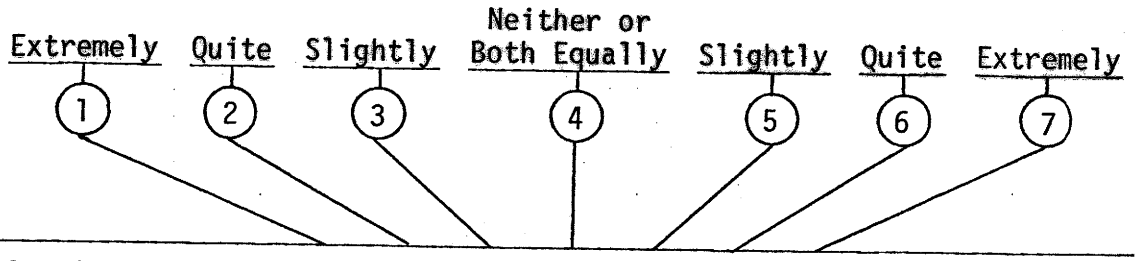


CAR TRAVEL CHARACTERISTICS									
PUNCTUALITY	On-Time Arrivals	1	2	3	4	5	6	7	Late Arrivals
SIMPLICITY	Simple to Use	1	2	3	4	5	6	7	Complicated to Use
SAFETY	Safe Form of Travel	1	2	3	4	5	6	7	Dangerous Form of Travel
MODERNITY	Modern Form of Travel	1	2	3	4	5	6	7	Old-Fashioned Form of Travel
COMFORT (Seats, Noise, Ride, etc.)	Comfortable	1	2	3	4	5	6	7	Uncomfortable
SPEED	Fast	1	2	3	4	5	6	7	Slow
STATUS	High Status Form of Travel	1	2	3	4	5	6	7	Low Status Form of Travel
CONVENIENCE	Convenient Form of Travel	1	2	3	4	5	6	7	Inconvenient Form of Travel
ENJOYABLENESS	Enjoyable Form of Travel	1	2	3	4	5	6	7	Unenjoyable Form of Travel
COST OF TRAVEL	Inexpensive	1	2	3	4	5	6	7	Expensive
RELIABILITY	Reliable Form of Travel	1	2	3	4	5	6	7	Unreliable Form of Travel
FLEXIBILITY	Flexible Form of Travel	1	2	3	4	5	6	7	Inflexible Form of Travel

VI. YOUR OPINION OF BUS TRAVEL IN WACO

On the scales below, please give your general opinion of bus travel in Waco. Base your opinion on what you know or have heard about the bus system, even if you have never ridden buses yourself.

Please circle the appropriate number for each "bus travel charcteristic" as you did in the previous question.



BUS TRAVEL CHARACTERISTICS									
PUNCTUALITY	On-Time Arrivals	1	2	3	4	5	6	7	Late Arrivals
SIMPLICITY	Simple to Use	1	2	3	4	5	6	7	Complicated to Use
SAFETY	Safe Form of Travel	1	2	3	4	5	6	7	Dangerous Form of Travel
MODERNITY	Modern Form of Travel	1	2	3	4	5	6	7	Old-Fashioned Form of Travel
COMFORT (Seats, Noise, Ride, etc.)	Comfortable	1	2	3	4	5	6	7	Uncomfortable
SPEED	Fast	1	2	3	4	5	6	7	Slow
STATUS	High Status Form of Travel	1	2	3	4	5	6	7	Low Status Form of Travel
CONVENIENCE	Convenient Form of Travel	1	2	3	4	5	6	7	Inconvenient Form of Travel
ENJOYABLENESS	Enjoyable Form of Travel	1	2	3	4	5	6	7	Unenjoyable Form of Travel
COST OF TRAVEL	Inexpensive	1	2	3	4	5	6	7	Expensive
RELIABILITY	Reliable Form of Travel	1	2	3	4	5	6	7	Unreliable Form of Travel
FLEXIBILITY	Flexible Form of Travel	1	2	3	4	5	6	7	Inflexible Form of Travel

VII. BUS REQUIREMENTS IN WACO

The following is a list of possible changes which could occur in the Waco bus system. Please answer by circling the number, according to the following codes, which best explains how likely you would be to ride the bus:

1 means Extremely Likely
2 means Likely
3 means No Difference
4 means Not Very Likely
5 means Extremely Unlikely

If the routes were closer to home, work or shopping. 1 2 3 4 5

If the bus ran more frequently on these routes 1 2 3 4 5

If the buses were safer to wait for or to ride on 1 2 3 4 5

If the trip did not require sitting next to strangers 1 2 3 4 5

If the drivers were more courteous and considerate 1 2 3 4 5

If the people on the bus were more sociable 1 2 3 4 5

If the bus picked you up and dropped you off at your front door. 1 2 3 4 5

If more information were provided about bus routes and schedules 1 2 3 4 5

If the trip took less time than an automobile trip 1 2 3 4 5

If the trip took the same amount of time as an auto trip 1 2 3 4 5

If the trip were as safe as an automobile trip 1 2 3 4 5

If the trip did not go through downtown Waco 1 2 3 4 5

If there were always a seat available 1 2 3 4 5

If the buses ran closer to the places you wanted to go. 1 2 3 4 5

If there was better night and weekend service. 1 2 3 4 5

If there was better bus service between shopping centers. 1 2 3 4 5

If there were shelters at bus stops 1 2 3 4 5

If you could drive to a nearby free and secure parking area and ride an express bus to downtown (i.e., park-and-ride) 1 2 3 4 5

If your friends and associates were also using the transit service. . . . 1 2 3 4 5

If the buses always arrived and departed at the scheduled time 1 2 3 4 5

If there were benches at bus stops 1 2 3 4 5

If community leaders stressed the need to use buses for environmental reasons 1 2 3 4 5

If low bus fares were maintained (not to exceed 25¢) 1 2 3 4 5

If it was not necessary to have correct change 1 2 3 4 5

If better telephone information service was available 1 2 3 4 5

If the trip did not require transfers 1 2 3 4 5

VIII. INFORMATION ABOUT TRANSIT

We would like to find out some good ways of informing people about changes and improvements in the transportation system for roads, safety, buses, etc. Please answer the following questions concerning your preferences in radio, TV, newspapers, and the like.

1. How much time, on the average, do you spend each day using a newspaper, the radio, etc

Reading the Newspaper

____ Don't read the newspaper
____ 1-30 minutes
____ 31-60 minutes
____ Over 1 hour

Reading Magazines

____ Don't read magazines
____ 1-30 minutes
____ 31-60 minutes
____ Over 1 hour

Listening to the Radio

____ Don't listen at all
____ 1-60 minutes
____ 1-3 hours
____ Over 3 hours

Watching Television

____ Don't watch at all
____ 1-60 minutes
____ 1-3 hours
____ Over 3 hours

2. Which newspaper(s) do you normally read at least 3 times per week?

___ None ____ Waco Herald ____ Waco Tribune
___ Waco Citizen ____ Other (which one? _____)

3. What sections of the newspaper do you usually read? (Please check your 4 favorites.)

_____ General news (first section)
_____ Comics
_____ Sports
_____ Women's Section
_____ Business Section
_____ Want Ads
_____ Ann Landers or Dear Abby
_____ Entertainment
_____ Advertisements
_____ Other (which? _____)

4. What radio stations do you usually listen to? Please check the one(s) you listen to at least 3 times per week, and ALSO check the time(s) you normally listen to each.

Station (radio station, by acronym and number on dial)		7-9a.m.	9a.m.-Noon	Noon-4p.m.	4-6p.m.	6-10p.m.	10p.m. on
☐	AM						
☐							
☐							
☐							
☐							
☐							
☐							
☐	FM						
☐							
☐							
☐							
☐							
☐							

5. What programs do you usually listen to (please rank your first 4 choices)?

_____ None	_____ "Top-40" Music
_____ News	_____ Country and Western Music
_____ Religious Programs	_____ Classical Music
_____ Sports Programs	_____ "Easy-Listening"
_____ Talk-Shows	_____ Other Programs

6. What T.V. stations do you usually watch? Please check the one(s) you watch at least 3 times per week, and ALSO check the time(s) you normally watch each.

Station (television station, by acronym and number on dial)	Channel	7-9a.m.	9a.m.-Noon	Noon-4p.m.	4-6p.m.	6-10p.m.	10p.m. on
☐							
☐							
☐							

7. Do you normally read leaflets left at the door of your residence?

_____ Always _____ Almost always _____ Sometimes _____ Never

8. Do you normally read advertisements that arrive in the mail?

_____ Always _____ Almost always _____ Sometimes _____ Never

9. Do you normally read billboards within the city limits?

_____ Always _____ Almost always _____ Sometimes _____ Never

10. Do you think that <u>advertising</u> the bus system would encourage <u>you</u> to ride buses more often?

_____ Yes _____ No _____ Sometimes _____ Unsure

11. How might information best be provided to make bus riding in Waco easier for you?

_____ Improved route signs on buses _____ Schedules at bus stops

_____ Improved printed maps and timetables _____ Better telephone information service

_____ Information booths at shopping centers _____ Other (specify) _____

_____

12. Are you aware of any promotional activities by Waco Transit System in the past year to encourage the use of their buses?

_____ Yes _____ No

If yes, which ones do you recall? _____

IX. INFORMATION ABOUT YOURSELF

1. Do you have a physical disability which makes it difficult to ride the bus?

_____ Yes _____ No _____ Don't know

(If your answer to the above was "no" or "don't know," please go to question #4.)

2. Which of the following most limits you, or a member of your household, from using the bus?

_____ Old age _____ Hard of hearing or deaf

_____ Paralysis or loss of limbs _____ Mental or nervous condition

_____ Heart condition _____ Respiratory disability

_____ Partially sighted or blind _____ Other (please specify: _____)

3. Would you (or the disabled household member) be more likely to use public transit if special services (pickup from your house on call) were provided in this area?

_____ More likely _____ Less likely _____ No difference _____ Don't know

4. How long have you lived at your present address?

_____ years

5. How long have you lived in Waco?

_____ years

6. What is your sex?

__ Male __ Female

7. What is your marital status?

__ Single __ Married __ Other

8. Please check your age group.

__ 18-24 __ 25-34 __ 35-44 __ 45-54 __ 55-64 __ 65+

9. What is the last year of school you completed?

__ 9th grade or less __ 10th or 11th grade __ High school graduate

__ Some college __ College graduate __ Some graduate school

10. What is your current occupation, in as specific terms as possible?

_____

_____

COMMENTS

Thank you for your cooperation.