HIGHWAY RESEARCH BOARD

Special Report 11-A

Shopper Attitudes

HIGHWAY RESEARCH BOARD

Officers and Members of the Executive Committee

1955

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Special Report 11-A

Shopper Attitudes

A SUPPLEMENT TO SPECIAL REPORT 11

"PARKING AS A FACTOR IN BUSINESS"

1955

Washington, D. C.

Study of Parking and Its Relationships to Business

Advisory Committee

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Preface

· Much has been said about parking as a factor in business. It is often asserted that shifts in retailing activities and land values are the direct result of insufficient parking. By the same token, it is said that availability of ample parking facilities is a major asset to business. However, in the past there has been little fundamental research in this field to evaluate the real impact of parking on business operations.

In recognition of the lack of such information, the automotive and petroleum industries made funds available to the Automotive Safety Foundation for such research. The Highway Research Board was requested to direct this work. The Board in turn established an advisory committee representing business, property owners, government, and transportation to provide practical guidance and counsel to the project. To expedite the program, a project engineer was loaned by the Bureau of Public Roads.

The initial phases of the research involved analyses of attitudes of shoppers and merchants, changes in property values, shifts in retail activities, and trends in urban transportation. These findings were reported in detail in *Special Report 11: Parking as a Factor in Business*. Since then additional studies have been made on the habits and attitudes of shoppers, the travel pattern to shopping areas, and the effect of customer parking facilities on shopping habits.

The present report includes findings of research on the attitudes of shoppers in Columbus, Ohio; Houston, Texas; and Seattle, Washington. Findings in Columbus were reported previously in Part 1 of *Special Report 11*. These findings have been expanded and analyzed herein in connection with those of Houston and Seattle. This report, then, gives the attitudes of consumers in three cities toward the effects of parking and related factors on their choice of a place to shop.

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Shopper Attitudes

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● THE PRESENT study seeks to test elsewhere the findings of an earlier study of consumer practices and attitudes conducted in Columbus, Ohio.[1] In that study motivating factors and the weights of these factors were determined through systematic interviews and statistical analysis of data so gathered. This research was particularly interested in determining the place and importance of parking in the web of interrelated motives associated with consumers' use of the shopping facilities of the central business district or of suburban shopping centers.

The phenomena being studied are an aspect of the larger process of urban decentralization and the resulting reorganization of structural and functional patterns of the urban community brought about largely by technological developments in transportation and communication. The great increase in suburban shopping centers around nearly all major American cities has given the consumer a choice as to where he can buy goods and services, and has stirred considerable apprehension in the minds of all whose fortunes and well-being depend on the integrity of the central business district. With so many involved who have so much at stake, the pressure to do something about the situation mounts steadily, but what to do depends on a correct appraisal of the fundamental problem and its causes.

The consumer himself is the final arbiter of the fortunes of the central business district and the suburban shopping centers, and he therefore holds the secret of their fate. It is the customer who weighs the advantages and disadvantages of shopping areas in terms of what he can get for what he has to pay in cost, time, and energy, and it is only through his eyes that such physical conditions as parking, traffic, and crowding become meaningful motivational factors. Thus the consumer's market behavior is essentially a compromise adaptation to attracting and repelling forces evaluated within the framework of his attitudes and values.

The first problem of the earlier research was to fashion instruments by which consumer motivations might be determined and evaluated. This purpose was accomplished by the development of valid and reliable scales which measured shopping attitudes and orientation, and by the application of these scales to random samples of consumers in selected areas of Columbus. Items for the scales were selected after intensive interviews, field trials, and statistical tests demonstrated their ability to discriminate between 'downtown' and 'suburban' shoppers.

Comparison of the central business district with suburban shopping centers in terms of factors associated with shopping satisfaction indicated that in Columbus the downtown area had definite advantages over the suburban centers, the most important being a larger selection of goods. The second most important advantage was that people thought that they could do several errands at one time, and the third that prices were cheaper downtown. The greater pull of the central business district apparently derives from these advantages, which for the majority must outweigh the disadvantages of that section. Of the disadvantages, the most important was difficult parking; next in importance was the crowded conditions found there; and the third traffic congestion.

For the suburban shopping center, the most important advantage was that it was nearer home, the next important was easy parking, and the third was that people considered that suburban stores kept more convenient hours. According to the respondents, the number one disadvantage of the suburban shopping centers was their lack of a large selection of goods, the second that not all kinds of businesses were represented there, and the third that prices were too high.

It was found that distance *under certain circumstances* was not a very important factor in determining shopping satisfaction with the downtown section of Columbus.

The attitude scales were used to determine what kind of relationships, if any, existed between shopping satisfaction and such individual and group factors as income, education, age, sex, and urban-rural backgrounds. The following trends were apparent: The higher educational classes, higher income groups, persons having urban or metropolitan backgrounds, and those who were females indicated higher satisfaction with downtown shopping than did persons of lower income, less education, or rural background, and of the male sex. After this series

[1] C.T. Jonassen, *Parking as a Factor in Business: Part I. Attitudes Toward Parking and Related Conditions in Columbus*. SPECIAL REPORT 11. Highway Research Board, National Research Council, National Academy of Sciences, Washington, D. C., 1953. Also published and copyrighted by The Ohio State University, Bureau of Business Research, as *Downtown vs. Suburban Shopping: Measurement of Consumer Practices and Attitudes in Columbus, Ohio*, 1953. In this report all references to the Columbus data will be taken from the Highway Research Board publication.

1

of analyses it was apparent that parking was important in determining shopping satisfaction, but, as might be expected, was only one of many attractive or repelling factors that decide shopping satisfaction and orientation.

At the conclusion of the Columbus research, several questions remained. Is it possible to generalize from the results obtained in this city? Do any or all of these results have general applicability, or are they unique for Columbus in that they result from a set of peculiar situations and conditions prevailing there? Will instruments and methodology prove valid and reliable in different situations? It was realized that the attitudes held by a person toward downtown or suburban shopping centers, and his ranking of advantages and disadvantages, result from the operation of a large number of factors within a given environmental matrix. If the environment changes from one city and one region to another, and if thereby the position of any one of the factors changes, will there be a significant change in the relative position of all factors in the hierarchy of a person's likes and dislikes, and in his total shopping orientation?

On the other hand, it may be that American culture has so standardized the urban environment that no appreciable differences are discernible from city to city. If such normative behavior and attitude patterns are really to be found, they would be valuable to know because they would permit wider generalization from the data and more extensive application of the results. The present research seeks the answers to these questions.

Method of Investigation

Since comparability was desired, and since the results of the Columbus study proved their adequacy, the theoretical framework and method of approach were carried over to the present study. Briefly, the method had consisted in the construction of a reliable schedule, through field testing in a pilot study, and the construction of valid and reliable scales for the measurement of shopping attitudes. The schedule and scales were then administered by trained interviewers to an areal random sample in each of six pre-selected tracts of Columbus, and the data acquired were analyzed statistically.[2]

It was thought desirable to revise the scales somewhat for the present study, and because experience suggested that certain questions might be simplified, a review of the schedule was in order. Item analysis of data from a pilot study in Columbus provided the basis for the selection of items to be used in the revised scales; this phase of the study is described in detail in the next section.[3]

Like the earlier study the present research is designed to seek out basic social, cultural, ecological, and situational correlates of shopping satisfaction which, when known, may be used to analyze any city or part of a city. Experience indicated that research in small areas, where the possibilities of holding some variables constant are increased, is more fruitful than analysis of samples from large areas where the complexity of interacting factors makes it almost impossible to determine the effects of a number of variables operating together. For the purpose of this research, therefore, it was necessary to choose a sample, from cities and areas within cities, which would provide a range of situational factors large enough to permit the indicated analysis. A sample of 600 was used in each of two cities.[4]

THE SAMPLE: CITIES

It was decided to study Seattle, Washington, and Houston, Texas. The choice of these cities resulted from a number of considerations. It was thought desirable to have regional variation and to select cities with well-developed downtown and suburban shopping areas. The places were also selected because their characteristics suggested that the different situations necessary to test our hypothesis might be encountered there, and because the Highway Research Board desired to correlate the data from this study with data from other studies made or underway in these cities.

Columbus, Houston, and Seattle have in common that they are the centers of rapidly expanding metropolitan regions dominating the culture and economy of much larger areas than are contained within their political boundaries. The populations of Columbus, Seattle, and Houston in 1950 were, in that order, 375,901, 467,591, and 596,163; but the populations of their standard metropolitan areas were 503,410, 730,685, and 806,701 respectively. Economically they have in common that they are diversified cities, being centers of commerce, industry, transportation, and education. Seattle and Houston are great ports, whereas Columbus is a large railroad center and, unlike the others, is the capital of the state.

The cities differ in their regional location and their topography and ecology. Houston is built on a flat plain

[2] For a complete description of the methodology and theoretical framework, see C. T. Jonassen *op. cit.*
[3] See also Appendix A for a description of the changes made on the schedule and copies of the new schedule itself.
[4] For a statistical description of this sample see Appendix B.

without important natural or physical obstructions. It has therefore been free to develop in all directions. Probably for this reason it conforms more nearly to E. W. Burgess' classical urban pattern as described in his concentric zone theory. However, as elsewhere, there are some marked variations from this pattern, one being that the best areas of the city are located in the southwest quadrant of the city rather than in a continuous zone encircling the outskirts of the community. Houston, like Los Angeles, to a greater extent than most cities has had its greatest growth in the era of automobile transport, and like the California city it is a very good example of the 'urban sprawl.' This fact is shown by its low density of population, 3,726 per square mile, as compared with Los Angeles' density of 4,357, Seattle's of 6,604, Columbus' of 9,541 and Chicago's of 17,137.

Columbus, too, is built on a plain, but two rivers meet at its center and its topography is broken up by numerous deep ravines, and railroads radiating from the center in every direction.

Ecologically, Seattle is rather unique being located mainly on a narrow neck of land squeezed into an hourglass shape by Lake Washington on the east and Puget Sound on the west. Its topography is further broken up by other waterways, hills, and valleys. At the narrowest part is located the central business district.

Because of the many waterways which break up the land mass of Seattle, there may be found here certain situations not usually present in American cities. For example, east of the central business district and close to it on Lake Washington may be found some of the best residential areas of Seattle. The location of such high income areas so close to the center is rather rare in American cities. And the location of a low-income section such as Census Tract A-5 comparatively far from the center of the city provided an excellent opportunity to test some of the hypotheses suggested by the Columbus study.

THE SAMPLE: AREAS

Using United States Census statistics for census tracts and blocks, plus transportation maps and land use maps, it was possible to choose tentatively four areas in Houston and four areas in Seattle which would meet requirements.[5] Before a final selection was made the cities and the tentative areas were visited personally by the chief investigator.

The areas chosen in Seattle (see Figure 1) were as follows:

1. Census Tract No. KC-102 (Area No. 1), a high-income area located at the northwest extremity of the

[5] For additional data on these areas see Appendix C.

city and near the extremely large and modern Northgate shopping center. Of all the tracts in this sample this is the one farthest removed from the center of the city.

2. Census Tract No. A-5 (Area No. 2), a low-income area located near the northwest outskirts of the community and near the Northgate shopping center.

3. Census Tract E-1 (Area No. 3), a medium-income section located directly north from the center of the city at a point approximately midway between Northgate and downtown.

4. Census Tract J-2 (Area No. 4), a predominantly high-income area, but containing both middle and lower incomes, located very near the central business district and due east of it.

Public transportation is available in these areas and they are all connected to downtown and suburban shopping centers by good roads.

In Houston (see Figure 2) the following areas were chosen:

1. Census Tract No. 69 (Area No. 1), a high-income area in the extreme southwest portion of the city and having at its border a very adequate shopping center, 'The Village'.

2. Census Tract No. 45 (Area No. 2), a predominantly medium-income section, but containing both fairly high and very low income groups, located at approximately the midpoint between the downtown area and the Village shopping center. However it is contiguous to an adequate string shopping center on Main Street.

3. Census Tract No. 28 (Area No. 3), a mixed area from the point of view of status and income, located near the central business district and having within it a modern shopping center, 'River Oaks'.

4. Census Tract No. 3 (Area No. 4), a low-income area located to the northwest about as far from the central business district as Census Tract No. 69 and having adjacent to it the adequate 'Heights' shopping center and a large modern Sears Roebuck store.

All these areas are accessible to suburban shopping centers and downtown by main highways and public transportation.

By selecting the described areas located at different distances from downtown and suburban shopping centers and characterized by populations that differ with respect to such factors as education, social status, occupation, and cultural background, it was possible to vary or hold constant many of the factors which seem to be associated with attraction to one or another place, and in this way test conclusions from the Columbus study (see Figure 3).

NORTHGATE ■

KC-102

KC-101

GREEN LAKE

FORT LAWTON

②

③

U. OF WASH.

UNION BAY

LAKE UNION

LAKE WASHINGTON

④

CENTRAL BUSINESS DISTRICT

ELLIOTT BAY

JEFFERSON PARK

SCALE OF MILES

0   1   2

ADAPTED FROM:
BASE MAP PREPAR-
ED BY OFFICE OF
POPULATION RE-
SEARCH.
UNIV. OF WASH.
SEATTLE
JAN. 10, 1952

KEY

▦ AREAS SAMPLED	▨ CEMETERIES, PARKS AND OTHER PUBLIC PROPERTY	▦ VACANT PROPERTY	
■ SHOPPING AREAS	--- CONCENTRIC CIRCLES DRAWN FROM POINT OF HIGHEST LAND VALUE AT ONE-MILE INTERVALS	— TRACT LINES	
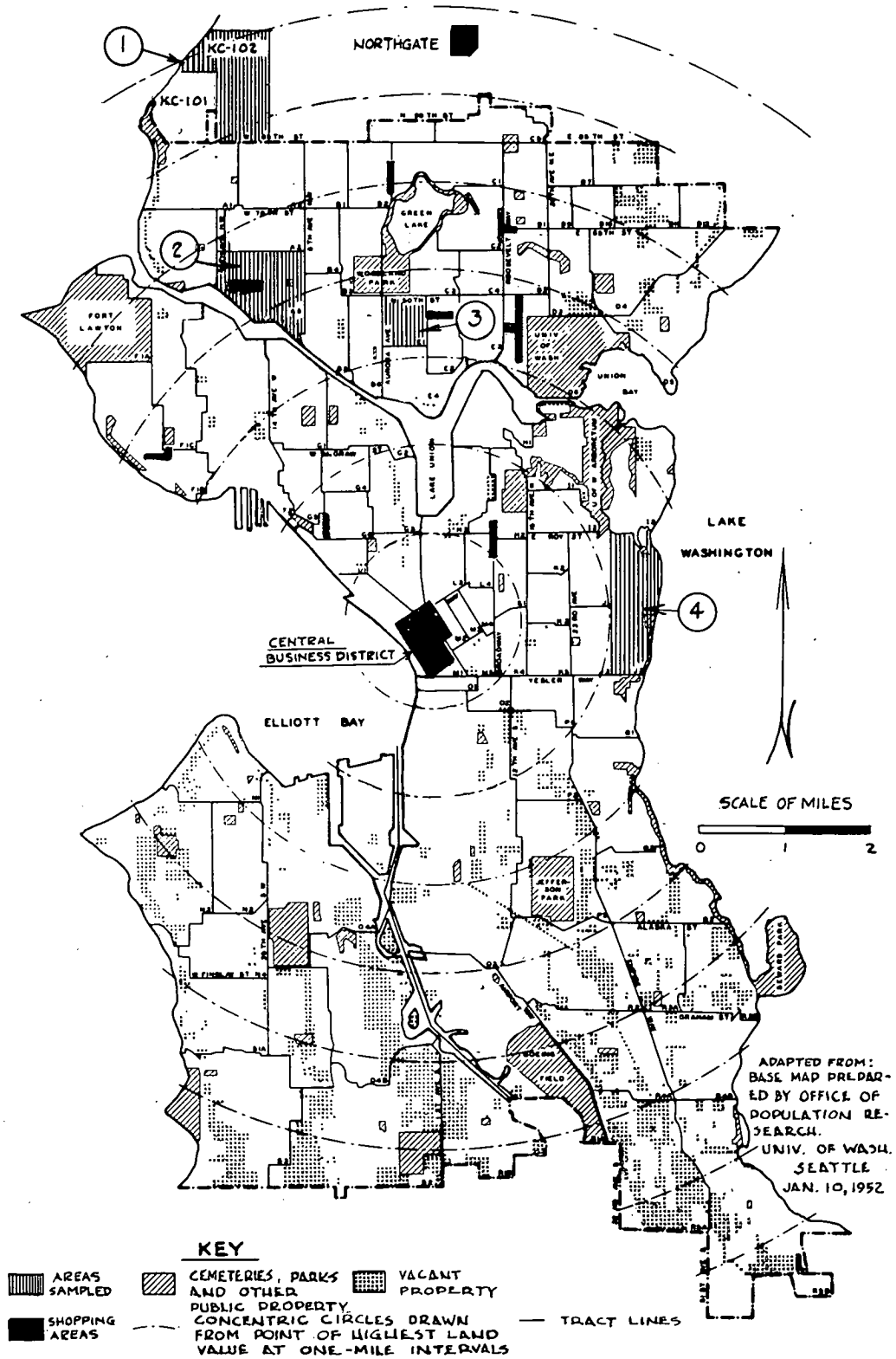
Figure 1. Seattle, Washington, 1953.
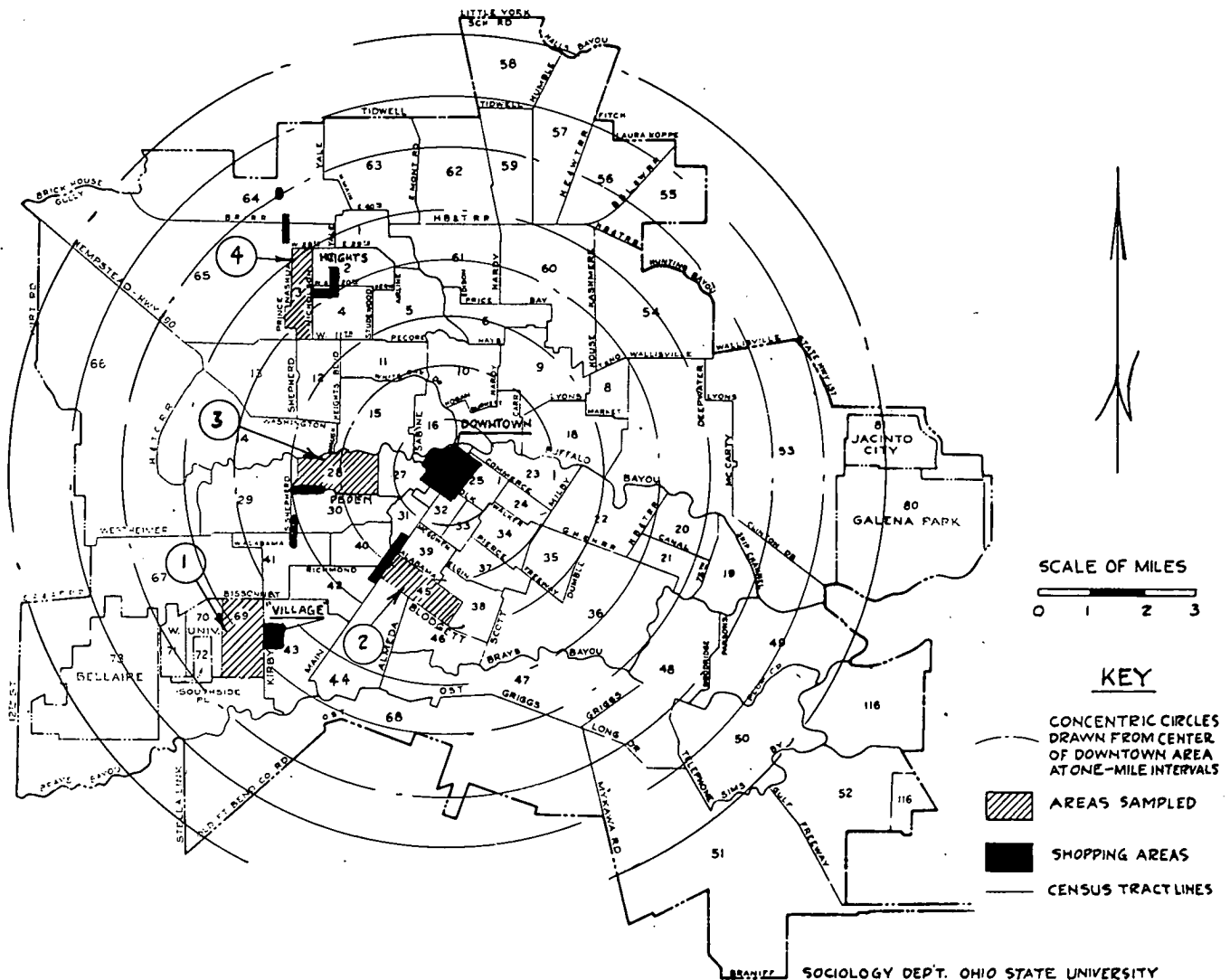
Figure 2. Houston, Texas, 1953.

These areas were then sampled by the areal sampling technique. The census tracts were divided into numbered blocks, and the blocks to be sampled were chosen by using a table of random numbers. Since the chances of getting a representative sample are increased by choosing widely scattered blocks rather than a concentration of blocks, 25 blocks were chosen at random in each area. Six respondents were selected in each block at regular intervals starting in the first block with the second house from the northwest corner and taking the next nth house and so on around the block. The next block was started at the third house from the northwest corner, and so on. By going around the blocks in this manner, the corner homes were given their normal representation, without being over-represented.

THE SAMPLE: PEOPLE

The composition of the sample is also to be considered in terms of the respondent's sex, age, marital status, education, home ownership, occupational rating on the North-Hatt Scale, and major occupational group, the income of his family unit, and his cultural background as represented by the population of the community in which the respondent spent most of his life.[6]

The majority, 83 percent in Houston and 84 percent in Seattle, of the respondents were female. It was felt that this was about the right sex proportion, since in our culture shopping is primarily a female function. Various studies estimate that women do about 85 percent of the family shopping. Many shopping studies

[6] Tables showing these data may be found in Appendix B.

concentrate on women only, but this study, since it sought to determine male-female differentials, included males.

Most of the respondents, 83 percent in each city, were married. About 57 percent of the Houston sample and 79 percent of the Seattle sample were home owners. The majority of the group in both cities, 62 percent in Houston and 54 percent in Seattle, fell in the age group 25–49. Both cities had a very high percentage of people

KEY

▨ AREAS SAMPLED

⑤ NUMBER OF SAMPLED AREA

▭ CENSUS TRACTS & CENSUS TRACT NOS

■ DOWNTOWN AND MODERN SUBURBAN SHOPPING CENTERS
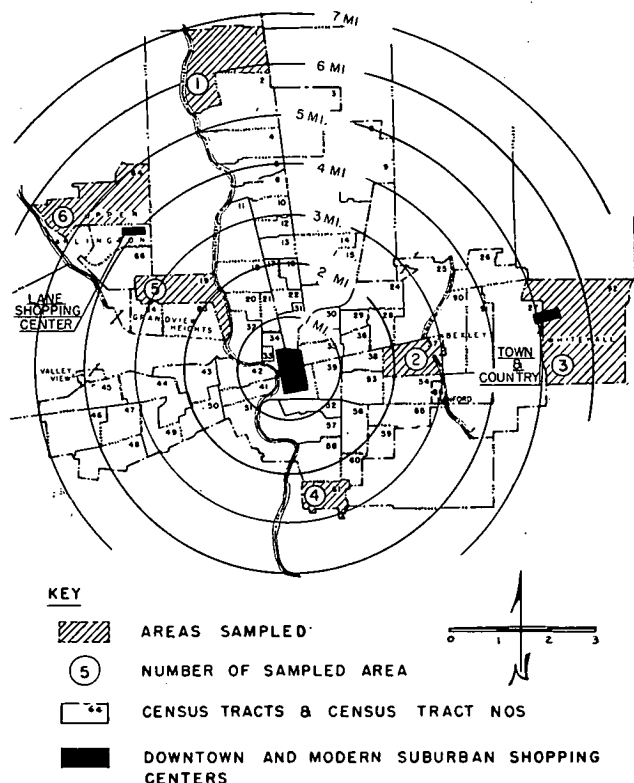
Figure 3. Columbus, Ohio, 1953.

with urban backgrounds. Their education and income were above average, 39 percent of the Houston respondents and 35 percent of the Seattle sample having completed high school. The two most common occupational categories in both cities were 'managers, proprietors and officials' and 'craftsmen, foremen, and kindred workers'. The majority of the family incomes fell in the $2,000–$5,999 bracket, with 56 percent of the Houston sample and 54 percent of the Seattle respondents falling in this category.

Families followed the usual urban small-size-family pattern with 91 percent of the families in both cities having two or fewer children per family.

The chief investigator visited Seattle and Houston to organize interviewing operations and select the sample. A supervisor and interviewers were engaged in each place, and directions given for carrying out the operation. The project supervisor of interviewing in Seattle was Mr. Donald Irish of the Sociology Department, University of Washington, and in Houston Mr. Alan D. Carey, Director of the Bureau of Business Research, University of Houston. Each interviewer was furnished a manual of instructions covering in detail rules, directions, and practices. The interviewers were given a period of training before the start of the operation, and group meetings were held periodically during interviewing to iron out any difficulties and to check on the strict observance of uniform procedures. The director of the project was in constant telephone and airmail communication with the field supervisors to insure control and uniformity of operations in both cities.

Each interview averaged 40 minutes. Counting travel time to and from the area of operation and call-backs, the amount of time required for each interview was 55 minutes.

As each completed schedule was returned to the local research office, it was thoroughly checked by the project supervisor in that city for omissions and mistakes. Records of all interviews made and completed were kept continuously; thus, the supervisors knew how many and which interviews had been completed at any given time.

PROCESSING OF COMPLETED SCHEDULES

As the majority of items were precoded, the coding operation was greatly facilitated. However, it was necessary to number each schedule, to add up totals and scores, and to code these. The schedules were then given a final check before the values were punched into tabulating cards.

CARD-PUNCHING OPERATION

The data were taken from the schedules and punched into two master data cards, filling 66 columns of one card and 61 of another. The punching operation and 100 percent verification consumed 60 man-hours. Dummy tables were then prepared, and with these as guides two detail or working cards were machine-punched with the data arranged in combinations to permit the different types of statistical analyses considered necessary.

Shopping Habit and Shopping Attitude Scales

An individual's attitudes and behavior result from a great number of interacting rational and emotional motivations. If the effects of parking and other elements on the use of shopping facilities are to be determined, it first becomes necessary to define 'downtown shoppers' and 'suburban shoppers' quantitatively. This problem may be solved by constructing a habit scale which measures the shopping orientation of consumers in terms of pertinent and discriminating items. Similarly, if a number of attitude items which have demonstrated their ability to discriminate between downtown and suburban shoppers can be discovered, it will be possible to combine these in a scale and derive scores which will express in a single number the cumulative and residual effect of various motivational factors. On the basis of such scores it will be possible to place the individual group and area on the shopping orientation continuum. If scales are reliable, valid, and sensitive enough, it will be possible to analyze the effects of numerous variables on the shopping habits, attitudes, and orientation of various consumer groups.

On the basis of experience with the scales in the previous study, it was recognized that improvements with respect to certain aspects might be realized. In the first place, it would be desirable to raise the reliability of the scales, since, if this were achieved, additional significant relationships might be adduced.

Secondly, a lengthening of *Scales I* (Shopping Habit Scale) and *IIC* (Downtown Shopping Satisfaction Scale) would probably give a wider range, increase their ability to discriminate among the large number of cases that cluster in the middle of the distribution, and also enhance the possibilities of establishing higher reliability.

Thirdly, *Scale IIB*, (Shopping Satisfaction Scale) which is applicable to all respondents, proved to be somewhat insensitive. It would be desirable to retain the sensitivity of Scale IIC while broadening its applicability to all respondents. If the same or better results could be obtained with one instead of two attitude scales, interviewing and analysis of data would be facilitated.

To achieve these revisions a schedule was constructed containing the old items plus additional items. It will be seen that items for Part II are for the most part items from the old Scale IIB converted into the form used in Scale IIC of the Columbus study.[7] This schedule was then administered in a Pilot Study to a Columbus sample of 100 respondents.

[7] See also Appendix A.

REVISED SHOPPING-HABIT SCALE

Using the data from the Columbus Pilot Study, item analysis by means of the critical ratio technique, employing the total shopping habit score as a criterion, was performed on all items of the tentative shopping habit scale. Further analysis using the Guttman technique indicated that the weights of some items should be changed. These calculations showed that it was possible to evolve a shopping habit scale composed of discriminating items. This conclusion was again confirmed when critical ratios were calculated for these items using Houston and Seattle samples. The results are presented in Table 1, below.[8]

TABLE 1
CALCULATED CRITICAL RATIOS OF ITEMS IN THE
REVISED SHOPPING-HABIT SCALE I, USING
HOUSTON AND SEATTLE SAMPLES

Schedule Item No.*	Critical Ratios	
	Houston	Seattle
18	19.88	19.24
19	52.88	22.57
20	63.50	24.01
21	25.55	22.79
22	8.31	7.52
25	13.33	9.81
28	10.57	6.87
29	8.97	8.90
30	21.60	18.70
31	18.33	11.20

* For description of items see Appendix A.

The items of this scale are numbered 18, 19, 20, 21, 22, 25, 28, 29, 30, and 31 in the final schedule, which appears in Appendix A.[9]

The corrected split-half coefficient of correlation of this scale was .68 with an estimated standard error of .05 for the sample of the Columbus Pilot Study.

A high score on Scale I indicates that a person uses downtown facilities primarily, while a low score shows that the respondent is oriented toward suburban shopping centers in his facility-use pattern. Measures of central tendency and variability achieved when using this scale in Houston and Seattle are shown in Table 2.

SHOPPING ATTITUDE SCALE II

Responses to the items of Part IIB of the schedule were given arbitrary weights ranging from 1 to 5, a weight of 1 indicating strong attraction to suburban

[8] See also Appendix D.
[9] It should be noted that the form indicated on the schedule was used to facilitate recording, coding, and card punching. The interviewer was instructed as to how to ask the questions, e.g., for Item 19 the interviewer would ask, "Where did you last buy clothing costing over $5?"

shopping centers and a weight of 5 strong attraction to downtown. Item analysis by means of the critical ratio technique, using Scale I as a criterion scale, was performed to establish which of the converted items in Part II would discriminate between downtown shoppers and suburban shoppers and therefore make good items for a revised attitude scale. Calculations on the Colum-

TABLE 2

MEASURES OF CENTRAL TENDENCY AND VARIABILITY OF HOUSTON AND SEATTLE SAMPLES ON SHOPPING HABIT SCALE I AND SHOPPING ATTITUDE SCALE II

N = 600

Scale and City	Median	Mean	S.D.	Range	Q_1	Q_3
Scale I:						
Seattle.......	35.46	35.42	8.02	12–50	28.38	41.02
Houston......	34.22	33.46	9.24	14–50	24.92	40.42
Scale II:						
Seattle.......	59.88	59.38	8.62	33–81	53.20	65.12
Houston......	57.39	56.82	9.43	29–79	50.00	63.50

TABLE 3

CALCULATED CRITICAL RATIOS OF ITEMS ON SHOPPING ATTITUDE SCALE II USING TOTAL SCORES OF SCALE I AS A CRITERION; HOUSTON AND SEATTLE SAMPLES

Schedule Item No.	Critical Ratios	
	Houston	Seattle
46	7.90	7.50
47	8.10	8.70
48	11.55	9.43
49	6.32	6.40
50	11.16	6.90
51	7.91	5.05
52	10.36	9.60
53	17.80	19.10
54	12.42	8.48
55	9.20	7.81
56	8.64	8.29
57	16.32	13.47
58	9.18	10.61
59	28.54	23.30
60	18.47	23.47
61	27.98	24.42
62	35.50	34.40
63	16.86	15.83

bus sample using this technique indicated that Items 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, and 63 had critical ratios which indicated that they had discriminative value. The attitude scale derived from these items was called the 'Shopping Attitude Scale II'. A high score on this scale indicates satisfaction with downtown and a low score attraction to suburban shopping centers. The possible range of this scale was from 18 to 90; the range for the pilot study sample was from 33 to 83. Measures of central tendency and variability of scores on Scale II for the

Houston and Seattle samples are shown in Table 2, above.

The discriminating power of the individual items of the attitude scale was determined initially by calculating the critical ratios between means of high and low scorers, separated by using the Shopping Habit Scale as a criterion, using data from a Columbus sample. The encouraging results from the Columbus Pilot Study were borne out by subsequent item analysis using Houston and Seattle samples. The results are presented in Table 3.[10]

The items of Shopping Attitude Scale II are shown in Appendix A. Calculation of reliability for this scale yielded a corrected split-half coefficient of correlation of .89 and an estimated standard error of .01 when using the sample from the Columbus Pilot Study.

VALIDITY OF THE SCALES

A scale that measures what it claims to measure is valid. It was felt that the respondents' report of the shopping center used on the last trip for various items and their indication of the intensity of facility use indicated the true orientation of the respondents and therefore constituted 'face validity' or logical validation of Shopping Habit Scale I. That high and low scorers on this scale differ significantly and in the expected direction is indicated by the critical ratios of the item analysis. The total score means of the high and low groups are equal to the sum of the means of the individual items which have been demonstrated to be significantly different for high and low groups.

Scale II was validated by the technique of an 'independent criterion'. The actual shopping habits as reported by the respondents on the first page of the schedule and as measured by the Shopping Habit Scale were assumed to be a good criterion independent of the attitude test itself.

The respondents from each city were divided into two groups on the basis of their shopping habit score: into a high scoring category, those who reported that they actually used downtown facilities frequently, intensively, and for many purposes (the Downtown Shoppers); and a low scoring group of persons who had indicated that they used suburban facilities predominantly (the Suburban Shoppers). The means of high and low scorers on the Shopping Attitude Scale II were calculated and the critical ratios of the differences of the means determined. If the scale to measure attitudes could be related to the actual use of downtown or suburban facilities, evidences of its validity would be avail-

[10] See also Appendix D.

able. The results of the critical ratio analysis are presented in Table 4 below.

TABLE 4

CRITICAL RATIOS OF THE DIFFERENCES BETWEEN MEANS OF HIGH AND LOW SCORES ON SHOPPING ATTITUDE SCALE II

City	Downtown Shoppers (high scorers)		Suburban Shoppers (low scorers)		Critical Ratios of Differences Between Means
	No.	Mean	No.	Mean	
Houston	98	64.3	96	46.6	19.81
Seattle	125	66.1	109	50.9	17.12

The critical ratios of the differences between means are statistically very significant for samples from both cities, and it can be accepted with confidence that the differences between means are not due to chance. Since these groups were originally separated on the basis of the Shopping Habit Scale, the critical ratios indicate that the attitude scale can effectively differentiate respondents on the same basis as the criterion scale that measures reported shopping habits. The conclusion is therefore that the scales are valid in both cities, since they measure what they purport to measure.

Further evidence of the validity of the scales is provided by analysis of schedule items bearing on this problem. Respondents were asked whether they considered themselves definitely downtown shoppers, probably downtown shoppers, undecided, usually a suburban shopper, or definitely a suburban shopper. Thus, five groups were available and it was possible to test whether the scales differentiated among these groups and in the expected direction. The means of the various groups were calculated for both cities and the results are shown in Tables 5 and 6.

TABLE 5

MEAN SCORES ON SHOPPING HABIT AND SHOPPING ATTITUDE SCALES OF SELF-DESIGNATED DOWNTOWN OR SUBURBAN SHOPPERS IN HOUSTON, ITEM 62

Designation	Scale I			Scale II		
	No.	Mean	S.D.	No.	Mean	S.D.
(5) Definitely DT	95	41.96	4.90	95	66.08	5.79
(4) Probably DT	199	39.22	5.71	199	62.06	5.05
(3) Undecided	72	33.19	6.39	72	58.75	5.09
(2) Probably SSC	177	26.23	6.64	177	49.63	6.25
(1) Definitely SSC	57	22.04	4.69	57	42.79	6.47

It will be seen that in both Seattle and Houston, the scales behaved precisely as expected with the scores of both Scale I and Scale II rising from a low score for the category who said they were definitely suburban shop-

TABLE 6

MEAN SCORES ON SHOPPING HABIT AND SHOPPING ATTITUDE SCALES OF SELF-DESIGNATED DOWNTOWN OR SUBURBAN SHOPPERS IN SEATTLE

Designation	Scale I			Scale II		
	No.	Mean	S.D.	No.	Mean	S.D.
(5) Definitely D.T	159	42.04	4.62	159	67.24	4.85
(4) Probably D.T	154	37.81	5.91	154	62.19	4.74
(3) Undecided	99	35.33	6.31	99	59.21	5.15
(2) Probably SSC	150	28.44	6.06	150	51.97	6.09
(1) Definitely SSC	88	25.89	6.38	38	44.74	7.21

TABLE 7

CRITICAL RATIOS OF DIFFERENCES BETWEEN MEANS OF BEHAVIOR AND ATTITUDE SCORES OF INDICATED SELF-DESIGNATED CATEGORIES OF SHOPPERS IN HOUSTON AND SEATTLE

Categories Compared	Houston		Seattle	
	Scale I	Scale II	Scale I	Scale II
Definitely DT and Definitely SSC	24.90	22.39	14.68	18.29
Probably DT and Probably SSC	20.30	21.72	13.58	16.22
Definitely DT and Probably DT	4.28	5.83	7.05	9.18
Definitely DT and Undecided	9.64	15.35	9.19	11.30
Definitely SSC and Undecided	11.38	8.73	7.80	12.35

pers to a high one for those who indicated that they were definitely downtown shoppers.

To determine whether these differences were statistically significant, critical ratios of the differences between means of self-designated groups of shoppers were calculated. Table 7 indicates that these differences are statistically significant.

The likelihood of obtaining such large critical ratios merely by chance is extremely remote; the differences consequently may be attributed to other factors, presumably the differential operation of attractive and repulsive factors on each group of respondents.

Besides giving added proof of the validity of the scales, the results indicated above show the scales to be sensitive, being able to discriminate between groups of close proximity on the shopping orientation continuum.

RELIABILITY OF THE SCALES

A reliable scale is one that gives scores sufficiently reproducible that successive measurements of the same universe of phenomena under like conditions will yield approximately the same values. Since conditions would be changed in applying the present instruments to different cities, it must be determined if the scales would meet statistical criteria of reliability in Houston and Seattle as well as in Columbus. This purpose might have been achieved by various methods, but the one

which seemed most suitable in this situation was the split-half correlation method. For this purpose 100 cases were selected at random from the total samples of each city, and both scales were then tested for reliability. Using the Pearsonian or product-moment coefficient of correlation (r) for ungrouped data, split-half correlations were calculated for each scale and then corrected for attenuation by the Spearman-Brown formula. The results are presented in Table 8 below.

TABLE 8
Measures of Reliability of Shopping Habit Scale I and Shopping Attitude Scale II in Houston and Seattle

Measure	Houston		Seattle	
	Scale I	Scale II	Scale I	Scale II
Uncorrected split-half correlation.	.65	.80	.63	.72
Standard error..................	.058	.036	.060	.047
Corrected split-half correlation...	.79	.89	.77	.84
Estimated standard error.........	.043	.022	.045	.032

The data from this table as well as the result from the Columbus study indicate that the scales are reliable enough for group comparison in these cities. These results are encouraging enough to suggest that the reliability of the scales would hold up in other cities as well.

INTERCORRELATION OF SCALES

The intercorrelations of the two scales were then computed using the total applicable samples from each

city.[11] The result was as follows: Shopping Habit Scale I correlated with Shopping Attitude Scale II in Houston, .67, .023 standard error; in Seattle, .63, .025 standard error.

These correlations are substantial, and both are statistically significant and confirm what the critical ratio analysis indicated above, namely, that there is a close relationship between shopping habits and shopping attitudes. In other words, if a person is favorably disposed toward a given shopping area he will go there and use it more intensively than he will an alternate facility. It should also be pointed out that the relationship between attitudes and behavior does not vary appreciably even though the environmental context within which the attitudes and behavior operate is altered considerably by applying the scales in two cities that vary in many respects such as regional location and ecological structure.

From the above discussion and analysis it will be seen that the goals sought in the revision of the scales were achieved, in that the reliability of behavior and attitude scales was raised, range and sensitivity were increased, and the attitude scale was made applicable to all respondents. The conclusion that shopping attitudes and shopping habits can be measured is reaffirmed. The instruments are available and further analysis may be undertaken with greater confidence.

[11] N = 570 in each city.

Shopping Patterns and Orientation

The movement of shoppers within the urban area to satisfy their needs does not form a vagrant scrawl but rather well-defined spatial and temporal patterns. Movement is initiated from certain points and proceeds by available types of locomotion. This section will be concerned with a consideration of the spatial patterns, tempo, mode, origin, and general orientation of shoppers sampled in the three cities.

SPATIAL PATTERN

Where do urban shoppers satisfy different needs? The answer to that question for the Columbus, Houston, and Seattle samples is indicated in Table 9 and Chart 1.

It is clear from the data on all three cities[12] that food shopping is done in suburban shopping centers by 98 to 100 percent of the respondents. Visiting a doctor and going to the movies are also very predominantly sub-

[12] See also Appendix Table B-11.

TABLE 9
Where Respondents Last Bought Indicated Items in Columbus, Houston, and Seattle

City and Location[a]	Food		Movies		Medical Care		Furniture		Clothing	
	No.[c]	Per-cent	No.	Per-cent	No.	Per-cent	No.	Per-cent	No.	Per-cent
Columbus										
DT............	10	1.6	136	27.4	170	29.1	371	66.7	433	73.1
SSC + other[b]...	589	98.4	361	72.6	416	70.9	185	33.3	159	26.9
Houston										
DT............	1	0.2	139	23.3	165	27.5	292	48.7	358	59.7
SSC + other....	599	99.8	458	76.7	435	72.5	308	51.3	242	40.3
Seattle										
DT............	9	1.5	214	38.8	274	46.2	354	59.0	423	70.5
SSC + other....	588	98.5	338	61.2	319	53.8	246	41.0	177	29.5

[a] DT = Downtown; SSC = Suburban Shopping Center.
[b] The 'other' category includes retail or service units which could not be considered part of a group of stores constituting a 'shopping center'.
[c] N's for cities differ because the 'no data' category was eliminated from this table. For complete data see Appendix Table B-11.

FOOD

COLUMBUS — Downtown 16%, Suburban Shopping Center 98.4%

HOUSTON — .2%, 99.8%

SEATTLE — 1.5%, 98.5%

MOVIES

COLUMBUS — 27.4%, 72.6%

HOUSTON — 23.3%, 76.7%

SEATTLE — 38.8%, 61.2%

MEDICAL CARE

COLUMBUS — 29.1%, 70.9%

HOUSTON — 27.5%, 72.5%

SEATTLE — 46.2%, 53.8%

FURNITURE

COLUMBUS — 33.3%, 66.7%

HOUSTON — 48.7%, 51.3%

SEATTLE — 41.0%, 59.0%

CLOTHING

COLUMBUS — 26.9%, 73.1%

HOUSTON — 40.3%, 59.7%

SEATTLE — 29.5%, 70.5%

Source Table 9 | Suburban Shopping Center → ← Downtown
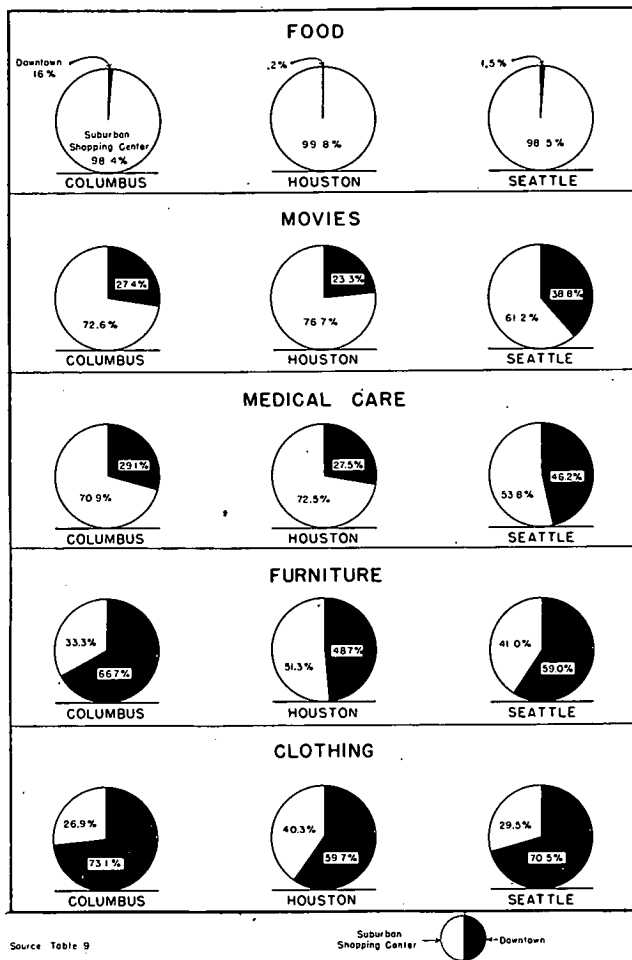
Chart 1. Locations where respondents last bought various goods and services.

TABLE 10
WHEN CONVENIENCE AND SHOPPING GOODS WERE LAST BOUGHT IN SUBURBAN SHOPPING CENTER BY RESPONDENTS IN HOUSTON AND SEATTLE

N = 600 in each city. Data expressed as percentages

When	Houston		Seattle	
	Convenience goods (food)	Shopping goods (clothing, furniture)	Convenience goods (food)	Shopping goods (clothing, furniture)
Within the last week..........	95.7	20.5	94.7	5.0
Over 1 wk. ago but less than 1 mo. ago....................	3.3	33.7	2.0	24.0
Over 1 mo. ago..............	0.0	30.3	1.8	47.2
Never......................	1.0	15.5	1.5	23.8
No data....................	0.0	0.0	0.0	0.0
Total.....................	100.0	100.0	100.0	100.0

TABLE 11
WHEN CONVENIENCE AND SHOPPING GOODS WERE LAST BOUGHT DOWNTOWN BY RESPONDENTS IN HOUSTON AND SEATTLE

N = 600 in each city. Data expressed as percentages

When	Houston		Seattle	
	Convenience goods (foods)	Shopping goods (clothing, furniture)	Convenience goods (food)	Shopping goods (clothing, furniture)
Within the last week..........	2.0	23.1	8.1	10.5
Over 1 wk. ago but less than 1 mo. ago....................	2.7	30.9	10.9	34.2
Over 1 mo. ago but within a year......................	7.3	46.0	45.0	55.3
Never......................	88.0	0.0	36.0	0.0
No data....................	0.0	0.0	0.0	0.0
Total.....................	100.0	100.0	100.0	100.0

urban activities. On the other hand, the buying of clothing, shoes, and house furnishings is done downtown by the largest proportion of respondents in the three cities. In Columbus and Seattle furniture was procured in the downtown section by the majority of respondents, and in Houston in the suburban area. Appliances were bought in the downtown section by the greater number in Houston, and in the suburban section in Seattle, although differences were not large.

It will be seen, if the three cities are analyzed for shopping orientation by comparing the percentages in each city purchasing each item in the central business district and in the suburban shopping centers, that Houston is more strongly oriented to suburban shopping than Seattle for all items except 'appliances'. Columbus seems to be more like Seattle than Houston in its greater use of downtown facilities. These tendencies, as will be seen subsequently, are confirmed by shopping behavior and shopping attitude scores.

TEMPO

When do people shop for various items? Tables 10 and 11 show when 'convenience goods' and 'shopping goods' were last bought in suburban and downtown shopping centers.

It is evident that convenience goods, as exemplified by food, were bought in suburban shopping centers by about 95 percent of both cities within the last week, while shopping goods, as would be expected, were bought there infrequently. Shopping goods are also bought less frequently in the downtown section, as can be seen from Table 11, most of the respondents having bought such goods "over one week ago." An interesting difference appears between Houston and Seattle, as 88 percent of Houston respondents indicated they had never shopped for food downtown, while only 36 percent of Seattle's respondents so indicated. This difference is probably due to the fact that Seattle has a superb

TABLE 12

MEAN SHOPPING HABIT AND SHOPPING ATTITUDE SCORES OF
CAR-USERS IN AREAS 1 AND 2 OF HOUSTON BY FREQUENCY
OF SHOPPING FOR SHOPPING GOODS IN THE DOWNTOWN
DISTRICT

Frequency of Travel	Area 1			Area 2		
	No.	Scale		No.	Scale	
		I	II		I	II
Within last week..........	30	37.80	62.07	31	42.00	60.26
One week to one month ago...................	43	32.19	56.93	33	37.94	61.42
Over one month ago.......	61	26.49	50.61	57	35.09	56.91
Total.................	134	30.85	55.20	121	36.69	59.00

TABLE 13

MEAN SHOPPING HABIT AND SHOPPING ATTITUDE SCORES OF
CAR-USERS IN AREAS 3 AND 4 OF HOUSTON BY FREQUENCY
OF SHOPPING FOR SHOPPING GOODS IN THE DOWNTOWN
DISTRICT

Frequency of Travel	Area 3			Area 4		
	No.	Scale		No.	Scale	
		I	II		I	II
Within last week..........	31	41.54	61.77	16	35.75	57.81
One week to one month ago...................	50	37.96	59.70	26	30.54	52.46
Over one month ago.......	32	33.19	56.75	67	24.61	51.37
Total.................	113	37.59	59.43	109	27.66	52.85

central market downtown, while Houston has developed
an extensive system of mammoth suburban super-
markets.

The relationship between the frequency of visits to
downtown by car users and the scores they achieved on
the Habit and Attitude Scales are revealed in Table 12
and Table 13.

It is clear that if location is kept constant those who
make more frequent visits to downtown have the higher
scores; and as location is varied within each frequency
category, area 2 and particularly area 3, located nearer
to downtown, have the highest scores.

MODE

What mode of transportation do people character-
istically use to shop for various items? It would appear
from tables 14 and 15 that the automobile is used con-
siderably more for suburban shopping than for down-
town shopping, and that Seattle respondents use this
form of conveyance for downtown trips much less than
Houston respondents do.

The use of public transportation for suburban
shopping is very small by comparison with the use of

TABLE 14

MODE OF TRANSPORTATION TO SUBURBAN SHOPPING
CENTER ON LAST TRIP FOR INDICATED ITEMS IN
HOUSTON AND SEATTLE

N = 600 in each city. Data expressed as percentages

Mode	Houston		Seattle	
	Convenience goods (food)	Shopping goods (clothing, furniture)	Convenience goods (food)	Shopping goods (clothing, furniture)
Auto................	76.1	68.3	55.2	54.9
Public..............	1.7	5.7	2.0	9.8
Walk...............	20.2	10.5	39.5	11.5
No purchase.........	1.0	15.5	1.5	23.8
No data.............	1.0	0.0	1.8	0.0
Total.............	100.0	100.0	100.0	100.0

TABLE 15

MODE OF TRANSPORTATION TO DOWNTOWN ON LAST
SHOPPING TRIP AND PERCENT PURCHASING
INDICATED ITEMS, HOUSTON AND SEATTLE

N = 600 in each city. Data expressed as percentages

Mode	Houston		Seattle	
	Convenience goods (foods)	Shopping goods (clothing, furniture)	Convenience goods (foods)	Shopping goods (clothing, furniture)
Auto................	5.8	55.6	23.7	39.6
Public..............	6.2	39.6	39.0	57.2
Walk...............	0.0	0.3	1.3	0.5
No purchase.........	88.0	0.0	36.0	0.0
No data.............	0.0	4.5	0.0	2.7
Total.............	100.0	100.0	100.0	100.0

automobiles, but public transportation is used much
more extensively for buying 'shopping goods' in the
downtown stores; in fact, this form of transportation
is used more extensively than automobiles for down-
town trips by Seattle respondents. Houston respondents
use automobiles to a greater extent than do those in
Seattle, while the latter depend to a greater extent on
public transportation for procuring both 'shopping
goods' and 'convenience goods' in either suburban
shopping centers or downtown.

Only 39.6 percent of the Seattle, 55.6 percent of the
Houston and 55.6 percent of the Columbus samples used
the automoble in their last trip downtown for shopping
goods. The comparatively low percentages of persons
who use the automobile for this purpose has an im-
portant bearing on the importance of parking and
traffic difficulties, since these problems should not be
expected to affect the large proportion of persons who
do not use cars.

ORIGIN

Where do shopping trips originate? Table 16 indi-
cates that the overwhelming percentage (about 94 per-
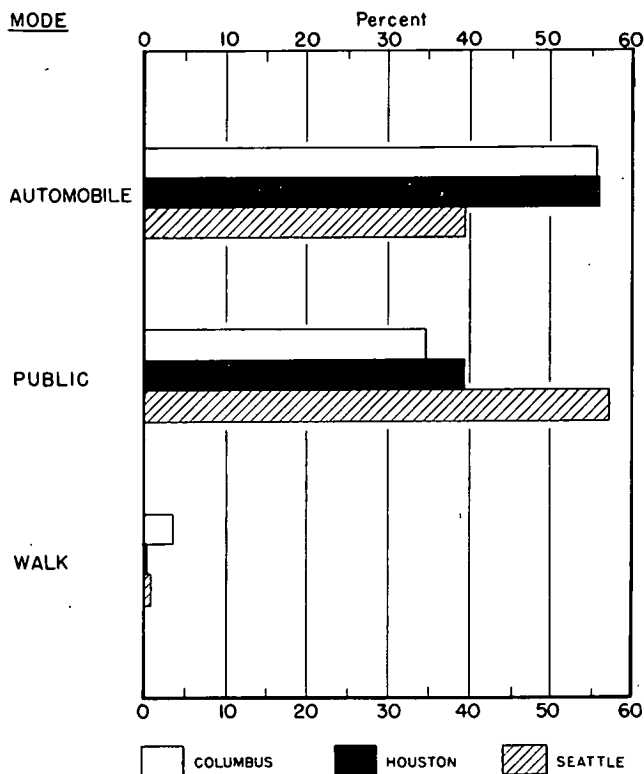
MODE

Source: Table 15 and Downtown Versus Suburban Shopping, Appendix Table 22.

Chart 2. Mode of travel to downtown for shopping goods by respondents.

TABLE 16

ORIGIN OF LAST TRIP TO SUBURBAN SHOPPING
CENTER FOR INDICATED ITEMS IN HOUSTON
AND SEATTLE

N = 600. Data expressed as percentages

Point of Origin	Houston		Seattle	
	Convenience goods (food)	Shopping goods (clothing, furniture)	Convenience goods (food)	Shopping goods (clothing, furniture)
Home...............	94.5	68.3	94.0	75.2
Work...............	2.5	5.7	2.5	1.0
Other..............	1.0	10.5	1.0	0.0
No purchase.........	1.0	15.5	1.5	23.8
No data............	1.0	0.0	1.0	0.0
Total..............	100.0	100.0	100.0	100.0

TABLE 17

ORIGIN OF LAST TRIP TO DOWNTOWN FOR INDICATED
ITEMS IN HOUSTON AND SEATTLE

N = 600. Data expressed as percentages

Point of Origin	Houston		Seattle	
	Convenience goods (food)	Shopping goods (clothing, furniture)	Convenience goods (food)	Shopping goods (clothing, furniture)
Home...............	9.8	91.8	59.2	94.0
Work...............	2.2	3.5	4.8	3.5
Other..............	0.0	0.0	0.0	0.0
No purchase.........	88.0	0.0	36.0	0.0
No data............	0.0	4.7	0.0	2.5
Total..............	100.0	100.0	100.0	100.0

TABLE 18

SHOPPING HABIT SCALE I AND SHOPPING ATTITUDE SCALE II
SCORES BY INDICATED CATEGORIES AND VARIABLES
IN AREA 1 OF HOUSTON AND AREA 1 OF
SEATTLE

Variable*	Scale I			Scale II		
	Means		C.R.	Means		C.R.
	Houston	Seattle		Houston	Seattle	
Education:						
Grammar School......	24.57	36.33	—	49.00	57.44	1.71
High School...	30.77	34.06	2.14	54.49	57.79	1.73
College........	31.63	34.55	2.28	56.56	61.16	3.07
Income:						
$3,999 and under.......	29.58	36.10	2.96	53.84	55.35	.57
$4,000-$5,999...	28.87	33.19	2.12	52.65	58.79	2.07
$6,000 and over.	31.74	34.97	2.65	56.48	60.43	2.81
Age:						
18-34..........	30.53	31.71	.69	54.59	56.75	1.05
35-49..........	30.65	35.53	3.51	55.94	60.97	3.07
50-64..........	31.58	36.29	2.52	56.73	59.71	1.16
Sex:						
Male..........	30.13	34.42	1.98	56.77	57.17	.16
Female........	31.34	34.65	3.23	55.24	59.77	3.15
Rural-Urban Background:						
City..........	30.51	34.97	4.60	55.10	59.68	3.80
Major Occupational Group:						
Unskilled......	26.80	35.13	3.29	51.40	54.00	.62
Skilled........	26.92	30.36	1.12	49.92	56.73	1.45
White collar...	31.32	35.37	3.73	56.00	60.39	3.85

* The source data for this table are in Appendix G.

cent in each city) of respondents start their food shopping trips from home.

Comparison of Tables 16 and 17 shows that trips for shopping goods are started from home by the majority in both cities, whether the shopping is done in suburban shopping centers or downtown.

However, part of this result may be due to the inter-

viewing procedure. Most of the questioning was done at home during the day, when those who work in the central business district (and might be expected to start their shopping trips from work more frequently) were not available as respondents.[13]

[13] Other studies have indicated that a certain proportion of shopping trips are related to work trips. See Robert B. Mitchell and Chester Rapkin, *Urban Traffic—A Function of Land Use*, Columbia Univ. Press, New York, 1954. Table 2.

The general urban pattern would therefore seem to be for convenience-goods shopping to be done in suburban shopping centers, and shopping-goods buying downtown. However, some variations among cities appear with regard to the degree to which particular items are bought in one place or another and with regard to the total shopping orientation of consumers *vis a vis* downtown and suburban shopping areas. The *Shopping Habit Scale* and the *Shopping Attitude Scale* measure by means of a single number the orientation of local and other groups and categories of people. Thus the stronger downtown orientation of Seattle is indicated by a mean score of 35.42 on the Shopping Habit Scale I and one of 59.38 on the Shopping Attitude Scale II, as compared with the corresponding Houston mean scores of 33.46 and 56.82. The Houston scores are significantly lower, the critical ratio of the difference between means of Houston and Seattle being 3.93 for Scale I and 4.90 for Scale II.

It would be interesting to see how different subgroups of Seattle compare with their counterparts in Houston as to shopping orientation. For this purpose an area in Houston was compared to an area in Seattle very similar to it with regard to location and socio-economic status. Within these areas such variables as location, education, income, age, sex, rural-urban background, and major occupational group were controlled.

Every subgroup in Seattle scores higher than the similar group in Houston, and the differences between means are in most cases statistically significant, as may be seen from the values of the critical ratios of the differences between means.

The normative patterns indicated, the differences apparent between cities, and variations in total shopping orientation presumably arise because various ecological, situational, and psychological factors operate within a total environmental matrix to produce a given mobility pattern. The earlier study of Columbus indicated what these factors were and how they operated to produce the observable effects. Subsequent sections of the present report consider whether those findings are corroborated, modified, or contradicted by the Houston and Seattle data.

Relative Attraction of Downtown and Suburban Shopping Centers in Terms of Factors Affecting Shopping Satisfaction

It was realized that other factors besides traffic congestion and parking problems act as repelling and attracting forces affecting people's decisions to shop downtown or in the suburban shopping center. Consequently, the motivating factors had to be discovered, their comparative weights determined, and their effects on different categories and groups of people ascertained.

It would be ideal for the purposes of this research if all possible factors which might determine an individual's facility-use pattern could be included in the analysis and those not associated with determining shopping orientation excluded from the shopping behavior equation. Initially the questions and items to be included in the schedule were drawn from the suggestions indicated by the literature, intensive case studies, and statements made by respondents in a preliminary sample. But in order to approach the ideal indicated above as closely as possible the items of the scales were subjected to a long series of field tests and statistical analyses which culminated in the results indicated in the earlier section on Shopping Habit and Attitude Scales.

It would seem that the behavior pattern emerges from a matrix of motivational factors associated with procuring goods and services downtown or in the suburban shopping center. As can be seen by an examination of the schedule, these factors include elements associated with cost of procuring goods and services, the cost of the goods and services themselves, and the cost in money, time, and energy of traveling to the point where the desiderata may be obtained. Other items are concerned with service, situations, and conditions which the shopper meets as he uses different facilities. Thus, after extensive research on consumer attitudes and practices in three cities and fourteen areas within these cities, it is possible to accept with confidence that these specific factors are important in determining the shopping orientation of consumers in American cities.

The development of suburban shopping centers surrounding most of our cities has given the consumer a choice as to where he will go to procure shopping goods and services. Which of these retail areas do the majority of people prefer? What is the basis for this preference in terms of shopping satisfaction factors?

WHICH IS PREFERRED—DOWNTOWN OR SUBURBAN SHOPPING CENTERS

It would be desirable to determine the cumulative effect of a large number of these significant factors on the shopping orientation of respondents in the three cities. Part II D of the schedule permits a direct com-

parison of downtown and suburban shopping centers in terms of such shopping factors as service, character of goods, and prices, and in terms of conditions which

TABLE 19

PERCENTAGES OF CHOICES INDICATING ADVANTAGE FOR DOWNTOWN OR SUBURBAN SHOPPING CENTERS ON TWENTY-THREE SHOPPING SATISFACTION ITEMS, BY COLUMBUS, HOUSTON, AND SEATTLE RESPONDENTS

N = 13,800 choices of 600 persons in each city

Response	Columbus	Houston	Seattle
Downtown (DT)....................	38.7	40.7	39.7
Suburban Shopping Centers (SSC)....	25.9	28.3	20.9
Undecided (UN)...................	23.7	23.0	30.1
No concern (NC)..................	11.6	7.7	9.2
No data..........................	0.1	0.3	0.1
Total...........................	100.0	100.0	100.0

TABLE 20

PERCENTAGES OF SAMPLES INDICATING SUPERIORITY OF DOWNTOWN OR SUBURBAN SHOPPING CENTERS WITH REGARD TO TWENTY-THREE SHOPPING SATISFACTION FACTORS—COLUMBUS, HOUSTON, SEATTLE

N = 600 per item in each city.

Shopping Satisfaction Factors	Columbus		Houston		Seattle	
	DT*	SSC*	DT	SSC	DT	SSC
DT Advantages:						
Greater variety of styles and sizes....	86.3	2.3	87.6	4.0	90.0	1.3
Greater variety and range of prices and quality......................	81.1	1.7	83.1	5.0	84.6	2.6
More bargain sales....................	65.5	2.7	70.8	6.7	68.4	1.5
Best place to meet friends from other parts of the city for a shopping trip together.........................	66.9	11.5	65.1	16.0	66.4	12.4
Better places to eat lunch...........	61.3	7.9	49.0	26.7	68.3	8.6
Better place to establish a credit rating............................	38.5	4.8	50.2	8.4	29.5	4.8
More convenient to public transportation............................	52.5	14.2	44.4	17.8	61.3	6.8
Better delivery service...............	37.2	5.4	44.5	8.0	37.5	3.2
Cheaper prices......................	46.6	7.9	51.5	8.6	49.0	3.8
Goods more attractively displayed..	44.1	16.3	67.9	6.5	51.6	4.8
Better place to combine different kinds of shopping and other things one may want to do...............	56.3	29.7	72.3	20.6	71.6	16.8
Easier to return and exchange goods bought...........................	39.5	13.3	31.0	37.7	29.3	12.3
Easier to establish a charge account..	30.1	5.2	33.5	7.3	27.2	3.5
More dependable guarantees of goods.	34.2	10.0	32.8	14.4	27.5	4.3
Better quality of goods...............	27.3	15.0	42.0	7.7	49.0	3.8
It's the better place for a little outing away from home...................	38.5	33.2	50.2	28.5	42.4	35.6
SSC Advantages:						
The right people shop here...........	10.3	21.5	15.3	15.5	2.1	7.3
Cost of transportation less...........	15.7	59.3	4.0	72.4	10.0	53.1
Keep open more convenient hours...	16.3	62.6	9.1	51.6	8.3	44.9
Less walking required................	16.3	69.9	13.6	72.4	14.0	67.8
Easier to take children shopping.....	2.5	47.6	1.6	60.9	2.1	47.4
Less tiring..........................	9.3	75.0	9.0	75.4	9.5	70.8
Takes less time to get there..........	12.3	78.9	9.6	78.8	25.3	65.1

*DT = Downtown; SSC = Suburban Shopping Center.

NOTE: Percentages for each city do not equal 100 percent since two other choices, 'undecided' (UN), and 'no concern' (NC), were involved; thus, DT + SSC + UN + NC = 100 percent. For the complete breakdown see Appendix Tables E-1, E-2, and E-3.

the shopper encounters when he goes shopping. The respondent was requested to compare downtown and suburban shopping centers by indicating where he found the better condition with regard to the items listed in Part II D. Respondents were asked to indicate

which place in their opinion had the advantage, for each of the 23 items, by making one of four replies: 'downtown', 'suburban shopping center', 'undecided', or 'the item is of no concern to me'. A summary of the 13,800 possible choices for each 600 respondents in each city is shown in Table 19. The tabulated differences between downtown and suburban shopping centers are statistically significant in the three cities.

WHICH TYPE OF RETAIL AREA HAS THE ADVANTAGE WITH REGARD TO WHAT SHOPPING SATISFACTION FACTORS?

In Table 20 are listed the several shopping satisfaction factors and the percentages of respondents in the three cities who indicated downtown or suburban shopping center superiority for each factor. In this summary table the 'undecided' and 'no concern' responses have been left out, and the items are ordered so that those on which the downtown area has the most decided advantage are at the top and those with regard to which the suburban shopping centers have the advantage are at the bottom. This order was determined by calculating the differences in percentage between those choosing DT, those choosing SSC and ordering on the Columbus sample. Thus, as one proceeds from top to bottom, there is a gradual change in the shopping satisfaction spectrum from situations and conditions that are found most favorable in the central business districts to those where respondents felt that suburban shopping centers have a decided advantage, and these factor groupings have been indicated in the table.

These relationships are also presented in graphic form in Charts 3 and 4. Examination of the table and charts shows the respondents felt that the suburban shopping centers had the advantage in only seven out of twenty-three items. In two of the cities, Seattle and Columbus, these items were identical and were as follows: 'takes less time to get there,' 'less walking required,' 'less tiring,' 'cost of transportation less,' 'easier to take children shopping,' 'the right people shop there,' and 'keep open more convenient hours.'[14] To these advantages should be added an eighth advantage, 'easier parking', with regard to which the suburban centers have an obvious advantage. The only difference between Houston and the other cities was one substitution of one item for another as being of advantage for the suburban shopping centers. The majority of the Houston respondents felt that it was "easier to return and exchange goods bought" at a suburban shopping center, but that "the right people shop downtown." Thus it will be seen that when people go shopping for 'shopping

[14] See also Appendix Table E.

Chart 3

PERCENTAGE INDICATING ADVANTAGE FOR SUBURBAN SHOPPING CENTER — ITEM DESCRIPTION — PERCENTAGE INDICATING ADVANTAGE FOR DOWNTOWN

Item descriptions:
- Greater variety of styles and sizes
- Greater variety and range of prices and quality
- More bargain sales
- Best place to meet friends from other parts of the city for a shopping trip together
- Better places to eat lunch
- Better place to establish a credit rating
- More convenient to public transportation
- Better delivery service
- Cheaper prices
- Goods more attractively displayed
- Better place to combine different kinds of shopping and other things one may want to do
- Easier to return and exchange goods bought
- Easier to establish a charge account
- More dependable guarantees of goods
- Better quality of goods
- It's the better place for a little outing away from home

70 60 50 40 30 20 10 0   0 10 20 30 40 50 60 70 80 90

COLUMBUS   HOUSTON   SEATTLE

Source Table 20   + Percentages for each city do not equal 100 per cent since two other choices, "undecided" (UN) and "no concern" (NC), were involved; thus, DT + SSC + UN + NC = 100 per cent.

Chart 3. Shopping satisfaction factors with regard to which downtown has the advantage according to respondents.

Chart 4

+ PERCENTAGE INDICATING ADVANTAGE FOR SUBURBAN SHOPPING CENTER — ITEM DESCRIPTION — PERCENTAGE INDICATING ADVANTAGE FOR DOWNTOWN

Item descriptions:
- The right people shop here
- Cost of transportation less
- Keep open more convenient hours
- Less walking required
- Easier to take children shopping
- Less tiring
- Takes less time to get there

90 80 70 60 50 40 30 20 10 0   0 10 20 30 40 50

COLUMBUS   HOUSTON   SEATTLE

Source Table 20   + Percentages for each city do not equal 100 per cent since two other choices, "undecided" (UN), and "no concern" (NC), were involved, thus, DT + SSC + UN + NC = 100 per cent

Chart 4. Shopping satisfaction factors with regard to which the suburban shopping center has the advantage according to respondents.

goods', the downtown section is preferred to suburban shopping centers with regard to the greater majority of shopping satisfaction factors on this list in all three cities.

It would seem that those aspects of shopping situations where the suburban shopping centers have the advantage are concerned with 'convenience' factors and that the central business district is preferred with respect to all factors concerning variety of goods, prices and styles, quality of goods, and service. Thus, in the opinion of respondents, the suburban center attracts persons because of what can be avoided—'inconveniences' of downtown—while the downtown area attracts consumers because of what they feel they can get there, the widest range of goods at the lowest price.

ABOUT WHAT FACTORS ARE CONSUMERS UNDECIDED?

In Table 21 are listed the shopping satisfaction factors together with the percentages of respondents who were undecided as to whether the suburban centers or the downtown area had the advantage.

The items at the top of the list are those which the consumers are most undecided about, and the ones at the bottom are those that the majority have decided opinions about, the specific order being based on the Columbus sample but the general trend being applicable to all three cities. It would seem, therefore, that advertising and merchandising effort would be most effective if directed to the areas indicated by the factors at the top of the list. Attitudes toward the factors reflected in the items toward the bottom of the list are, however, so widely held that they would require a major effort to change. In addition, some of the situations described in items near the bottom of the list derive their nature from the spatial structure of the city, the culture of the society, and the economics of merchandising, and are therefore very resistant to change.

WHICH FACTORS ARE OF GREATER AND LESSER CONCERN TO CONSUMERS?

Policies for the amelioration or change of a situation demand proper allocation of resources so as to get the greatest results for the least effort, but this economy of effort can be achieved only if the extent and location of the problem are known. It is, therefore, important to

TABLE 21

PERCENTAGES OF RESPONDENTS IN COLUMBUS, HOUSTON, AND SEATTLE WHO INDICATED THEY WERE UNDECIDED ABOUT WHETHER DOWNTOWN OR SUBURBAN SHOPPING CENTERS HAD THE ADVANTAGE WITH REGARD TO SHOPPING SATISFACTION FACTORS

N = 600 for each city

Shopping Satisfaction Factor	Columbus	Houston	Seattle
Better quality of goods	54.1	48.4	64.9
More dependable guarantees of goods	50.8	49.4	67.1
Cheaper prices	41.4	37.7	46.6
The right people shop there	41.2	28.7	35.2
Easier to establish a charge account	40.6	48.9	56.3
Better place to establish a credit rating	36.8	32.8	53.7
Better delivery service	36.2	36.4	50.7
Goods more attractively displayed	33.5	22.2	36.7
Easier to return and exchange goods bought	32.6	26.3	51.9
Cost of transportation less	17.3	19.7	31.5
More convenient to public transportation	16.8	23.5	23.8
Greater variety and range of prices and quality	15.5	11.4	12.4
Keep open more convenient hours	15.3	34.5	41.2
Better places to eat lunch	14.8	18.3	14.3
It's the better place for a little outing away from home	14.5	13.2	35.2
Less tiring	14.5	12.9	18.0
More bargain sales	14.3	19.2	19.8
Less walking required	12.0	11.5	16.5
Greater variety of styles and sizes	10.4	7.5	8.6
Better place to combine different kinds of shopping and other things one may want to do	10.0	5.5	11.3
Takes less time to get there	8.0	8.5	8.4
Best place to meet friends from other parts of the city for a shopping trip together	7.8	7.6	6.6
Easier to take children shopping	6.1	6.2	14.3

NOTE: The source of these percentages is Appendix Tables E-1, E-2, and E-3.

TABLE 22

PERCENTAGES OF COLUMBUS, HOUSTON, AND SEATTLE RESPONDENTS WHO REPLIED THAT INDICATED SHOPPING SATISFACTION FACTORS WERE OF NO CONCERN TO THEM

N = 600 for each city

Shopping Satisfaction Factor	Columbus	Houston	Seattle
Greater variety of styles and sizes	0.7	0.6	0.1
Takes less time to get there	0.8	2.8	1.1
Less tiring	1.2	3.3	1.6
Greater variety and range of prices and quality	1.5	0.5	0.3
Less walking required	1.8	0.5	0.3
Better quality of goods	3.3	1.8	0.1
Cheaper prices	3.8	2.1	0.6
Better place to combine different kinds of shopping and other things one may want to do	3.8	1.3	0.3
More dependable guarantees of goods	5.0	3.1	1.0
Keep open more convenient hours	5.8	4.8	5.6
Goods more attractively displayed	6.1	3.3	0.8
Cost of transportation less	7.4	3.1	5.3
Best place to meet friends from other parts of the city for a shopping trip together	13.3	11.3	14.6
It's the better place for a little outing away from home	13.5	8.0	12.3
Easier to return and exchange goods bought	14.4	4.7	6.5
Better places to eat lunch	16.0	6.0	8.8
More convenient to public transportation	16.2	14.2	8.1
More bargain sales	17.5	3.3	10.3
Better place to establish a credit rating	19.7	7.8	12.0
Better delivery service	21.2	11.1	8.6
Easier to establish a charge account	23.9	10.3	13.0
The right people shop there	26.8	39.4	55.4
Easier to take children shopping	43.8	31.2	43.0

NOTE: The source of these percentages is Appendix Tables E-1, E-2, and E-3.

know what proportion of persons is affected by certain conditions and situations which a shopper meets. In Table 22 are shown the percentages of persons in the three cities who felt that an indicated factor was of no concern to them. The items toward the top of the list are those which the smallest proportion of people felt were of *no* concern to them, and those at the bottom are those items about which a larger proportion felt *no* concern, with Columbus providing the specific order of the list. In other words, the items at the top are of concern to the greater number of persons. It should be noted first that the percentages who felt an item was of no concern are relatively small for all items. This fact strengthens our confidence that the long process of selection of items through field testing, interviewing, and statistical analysis was successful in creating a list of the most important shopping satisfaction items.

One of the only two items that were of *no* concern to a relatively large proportion of respondents was, 'the right people shop here.' It was evident from the interviewing that many persons felt that this item somehow

violated their democratic ideals. One lady said, 'I'm not stuck-up. Who are the 'right' people anyway? Besides anyone has a right to shop wherever they want to.' Nonetheless, to some customers it did seem important that they shop where the 'right' people shop. The other item with regard to which a fairly large percentage of respondents felt no concern was, 'easier to take children shopping.' This result, presumably, arises from the fact that relatively few of the respondents had children who would have to be taken on the shopping trip.

Where would the downtown parking factor fall in this list of items? Thirty-one percent of the Columbus respondents, thirty-eight percent of Seattle's, and twenty percent of Houston's respondents answered 'no' to the question, 'Have you ever used an automoboile for shopping downtown?' If to these persons who never used a car downtown for shopping are added some who have private parking places, the proportion of consumers for whom parking is of no concern would be comparatively high, and downtown parking thus would be found near the bottom of the list with the other two

items that are of concern to a *smaller* proportion of all respondents.

It is clear from the preceding analysis that in the opinion of these respondents of three cities the downtown area has a decided advantage with regard to the majority of shopping satisfaction factors. Where a person goes to meet his needs depends on the 'pull' and 'push' of the alternate sources of satisfaction. It appears that the negative or 'pushing' elements in the downtown situation have become the principal pulling factors of suburban centers. The pull of downtown and the source of its strength lie apparently in that it can offer greater variety and quality of goods and better prices.

Comparison of advantages and disadvantages of downtown and suburban shopping centers in terms of shopping satisfaction factors permits analysis of the strengths and weaknesses of competing types of retail institutions in particular cities. While these results should be applied with some caution, since selected areas rather than all areas of the cities were sampled, the remarkable similarity of results in these three cities in different regions of the United States makes it highly probable that wider generalizations from the data are possible. These findings also suggest that the culture of our cities and the behavior of groups of people who live in them are becoming standardized to the point where the general variations are minimized so that the cities are more like each other than like the regions which contain them.

Comparative Importance of Different Factors Determining Shopping Satisfaction

Although various factors related to shopping satisfaction have been identified, their comparative weights in influencing people to buy at a particular place need further analysis. This might seem to be a simple problem, but it is really very difficult because the rank of a factor changes as other elements are added or changed within the framework of choice. To overcome the difficulty posed by the dynamics of choosing, the frame of reference within which the choice takes place was systematically varied so that different facets of the problem would be exposed to view.

RANK ORDER OF IMPORTANCE OF ADVANTAGES AND DISADVANTAGES OF DOWNTOWN AND SUBURBAN SHOPPING

In the questions described in the previous section, respondents were asked to choose within one frame of reference. The present section analyzes responses to the question: 'Which do you think are the most important advantages of shopping downtown, starting with the most important advantage first, the next most important next, and so on, numbering them '1', '2', '3' in the order of their importance?' This question was repeated for disadvantages of downtown and for advantages and disadvantages of the suburban shopping centers.

To determine the rank order of advantages and disadvantages, a composite rank was calculated for each factor by giving a weight of three for the first choice, two for second choice, and one for third choice. Percentages indicated for each item were then multiplied by the appropriate weight, the sums of the products of each item determining its rank in the list of advantages and disadvantages. Percentages and rank of all items were calculated for Columbus,[15] Houston, and Seattle.[16]

Summary tables of advantages and disadvantages as they were ranked by respondents in three cities are shown in the four following tables. Generally speaking, the responses from the three cities were very similar, with a few changes here and there in the rank position of advantages and disadvantages.

It will be seen from Table 23 that the disadvantage of downtown shopping deemed most important for all of the cities was difficult parking, next in importance for all cities was 'too crowded', and third, traffic congestion. The only difference in the ranking of these disadvantages in the three cities was that Seattle respondents put 'cost of transportation' in third place and congested traffic in fifth place.

Respondents from all three cities agreed (Table 24) that the advantages of downtown shopping were in the order of their importance, first, 'larger selection of goods', second, 'can do several errands at one time', and third, 'cheaper prices'.

Opinions about the advantages of suburban shopping centers (Table 25) were less uniform, although all did agree that their closeness to home was their chief attraction. Columbus and Seattle respondents indicated that easy parking was the second most important advantage, but Houston placed this fourth and not having to dress up in second place. Apparently Houston people are less concerned with parking and more with avoiding 'dressing up' for a shopping trip.

From Table 26 it will be seen that remarkable agreement exists in the three cities concerning the *dis-*

[15] See C. T. Jonassen *op. cit.*, Tables 6-10.
[16] See Appendix E, Tables E-4 to E-11.

TABLE 23

RANKING OF CERTAIN DISADVANTAGES OF DOWNTOWN
SHOPPING BY COLUMBUS, HOUSTON, AND SEATTLE
RESPONDENTS

N = 600 in each city

Disadvantage	Composite Ranking		
	Columbus	Houston	Seattle
Difficult parking...................	1	1	1
Too crowded......................	2	2	2
Congested traffic..................	3	3	5
Too far to go.....................	4	5	6
Takes too long to shop............	5	4	4
Poor public transportation........	6	6	7
Unfriendly service................	7	8	8
Cost of transportation too high....	8	7	3

TABLE 24

RANKING OF CERTAIN ADVANTAGES OF DOWNTOWN
SHOPPING BY COLUMBUS, HOUSTON, AND SEATTLE
RESPONDENTS

N = 600 in each city

Advantage	Composite Ranking		
	Columbus	Houston	Seattle
Larger selection of goods..........	1	1	1
Can do several errands at one time.	2	2	2
Cheaper prices....................	3	3	3
Convenient public transportation..	4	5	4
Stores closer together.............	5	4	5
Enjoyable place to shop...........	6	6	6
Better delivery service...........	7	7	7
Close to home....................	8	8	8

TABLE 25

RANKING OF CERTAIN ADVANTAGES OF SUBURBAN
SHOPPING CENTERS BY COLUMBUS, HOUSTON,
AND SEATTLE RESPONDENTS

N = 600 in each city

Advantage	Composite Ranking		
	Columbus	Houston	Seattle
Closer to home...................	1	1	1
Parking easy.....................	2	4	2
More convenient hours...........	3	5	5
Less crowded....................	4	3	4
Do not have to dress up..........	5	2	3
Friendly and courteous clerks.....	6	6	6
Less noise and confusion..........	7	7	7
Clean and modern stores..........	8	8	8

TABLE 26

RANKING OF CERTAIN DISADVANTAGES OF SURBURBAN
SHOPPING CENTERS BY COLUMBUS, HOUSTON, AND
SEATTLE RESPONDENTS

N = 600 in each city

Disadvantage	Composite Ranking		
	Columbus	Houston	Seattle
Lack of large selection............	1	1	1
Not all kinds of business represented.........................	2	2	2
Prices too high...................	3	3	3
Poor public transportation........	4	4	5
Poor delivery service.............	5	5	6
Too far to go.....................	6	6	4
Hard to get credit...............	7	8	8
Bus fare too high................	8	7	7

advantages of suburban shopping centers when they place 'lack of a large selection' as the number one disadvantage, 'not all kinds of business represented' in the second place, and 'prices too high' in the third position. 'Poor public transportation' was placed fourth in Columbus and Houston and fifth in Seattle.

Differences between cities as to the percentage of respondents placing one or another advantage or disadvantage in a given rank position are for the most part

small. This may be ascertained by examining the appropriate Appendix tables.[17]

In Houston, for example, 33 percent of the respondents named difficult parking as the most serious disadvantage for downtown, while in Seattle 32 percent, and in Columbus 44 percent indicated this disadvantage as the most serious.

'Large selection of goods' was selected by respondents of the three cities as being the number one advantage for downtown; the percentages are 51, 42, and 44 for Columbus, Houston, and Seattle respectively.

When judging the suburban shopping centers, 44.3 percent of the Columbus respondents, 50 percent of Houston's, and 49 percent of Seattle's felt that the lack of a large selection of goods was the chief deterrent for these shopping areas. The number one advantage of suburban shopping centers was 'close to home', according to 45.1 percent of Columbus respondents, 53.0 percent of Houston respondents, and 40.0 percent of Seattle respondents.

It should be noted that in all cities a comparatively larger proportion of the sample felt that there were no disadvantages in suburban shopping centers; 18.7 percent of the Columbus sample, 12.0 percent of the Seattle group, and 16.0 percent of the Houston sample so indicated, whereas the proportions of persons indicating no disadvantages for the downtown area were only 7.7, 6.0, and 9.0 percent in Columbus, Houston, and Seattle respectively. And, whereas 10.0 percent of Columbus respondents, 9.0 percent of Houston's, and 6.0 percent of Seattle's felt there were no advantages in downtown shopping, only 5.4 percent in Columbus, 3.0 percent in Houston, and 5.0 percent in Seattle felt the same way about suburban shopping centers.

These similarities among cities are significant in view of the fact that the interviews were made in areas adja-

[17] See Appendix Tables E-4 through E-11.

cent to one of the largest and most complete suburban shopping centers in the United States, Northgate in Seattle, and also in Houston where an adequate suburban shopping center system has existed long enough for new shopping patterns to be thoroughly established.

IMPORTANCE OF PARKING AND TRAFFIC CONDITIONS IN THREE CITIES

Do better parking and traffic conditions in suburban shopping centers together with the difficult parking and traffic situation downtown outweigh the other advantages which the downtown section seems to enjoy? First, the comparative importance of parking, cost of parking, and traffic difficulty will be analyzed by determining the intensity of reaction to parking and traffic conditions; secondly, an attempt will be made to discover if reaction to traffic and parking does indeed discourage the use of the downtown section.

Questions 74, 75, and 77 of the schedule made it possible to ascertain the intensity of attitudes toward certain shopping conditions. In these items respondents were asked to choose one out of five possible responses to a short statement. These alternative responses ranged from one assumed to indicate a high degree of satisfaction or agreement through an average or neutral

TABLE 27
ATTITUDE TOWARD PARKING IN THE CENTRAL BUSINESS DISTRICTS OF COLUMBUS, SEATTLE, AND HOUSTON

Item 74: When I go downtown by car, finding a place to park for me is:

Data expressed as percentages.

Response	Columbus (N = 379)	Seattle (N = 371)	Houston (N = 477)
Practically impossible or extremely difficult	63.3	48.8	30.2
Difficult	14.8	28.0	32.3
Fairly difficult or no trouble at all	21.3	23.2	37.5
No response	0.6	0.0	0.0
Total	100.0	100.0	100.0

TABLE 28
ATTITUDE TOWARD COST OF PARKING IN THE CENTRAL BUSINESS DISTRICTS OF COLUMBUS, SEATTLE, AND HOUSTON

Item 75: As far as I am concerned, the cost of parking downtown matters:

Data expressed as percentages.

Response	Columbus (N = 379)	Seattle (N = 371)	Houston (N = 477)
Very much or much	44.6	32.1	41.5
Some	26.4	26.8	25.6
A little or not at all	29.0	41.1	32.9
No response	0.0	0.0	0.0
Total	100.0	100.0	100.0

TABLE 29
ATTITUDE TOWARD TRAFFIC CONDITIONS IN COLUMBUS, SEATTLE, AND HOUSTON

Item 77: When I drive downtown, I find the traffic:

Data expressed as percentages.

Response	Columbus (N = 379)	Seattle (N = 371)	Houston (N = 477)
Practically impossible or extremely difficult	41.7	16.7	22.5
Difficult	20.0	37.2	35.6
Fairly difficult or no trouble at all	38.3	46.1	41.9
No response	0.0	0.0	0.0
Total	100.0	100.0	100.0

position to one assumed to indicate dissatisfaction. The five alternative responses were arbitrarily given values from 1 to 5, 1 indicating dissatisfaction and 5 satisfaction.

The tables 27, 28 and 29 indicate the intensity of reaction to parking, cost of parking, and traffic in the three cities.

In the first place, it should be observed that the most negative reaction is to parking. That it is practically impossible or extremely difficult to park was expressed by 63.3 percent of the Columbus sample and 48.8 percent of the Seattle sample. The percentage of the Houston sample holding this opinion was significantly lower than in the other cities, being 30.2.

In Houston the cost of parking seems to irk the consumer more than its difficulty, as is shown by the fact that 41.5 percent of the sample indicated that the cost of parking there mattered much or very much. In Columbus and Seattle the reaction to the cost of parking indicated repulsion, but less than toward parking, with 44.6 percent in the former and 32.1 percent in the latter city finding the cost of parking mattering much or very much.

In all cities the negative reaction to traffic was less than to parking or to the cost of parking; the percentages of the samples in each city indicating that traffic was practically impossible or extremely difficult were 41.7, 16.7, and 22.5 in Columbus, Houston, and Seattle, respectively. In Columbus apparently both parking and traffic are felt to be much more of a problem than in either of the two other cities. It would seem, in view of intensity reaction to conditions, that parking and traffic problems constitute deterring factors to the use of downtown, with parking and parking cost being stronger repelling factors than traffic. The exception to this generalization is Houston, where parking problems, in the opinion of the car users, are apparently not as severe as in the other two cities.

While the above analysis indicates that parking and

traffic problems are disadvantageous to the downtown section, the amount of weight to give these factors in the total matrix of motivational factors must be explored further. This problem can be approached through the use of the behavior and attitude scales, which express by one number the score, the end-result of attracting and repelling forces. If, for example, the mean scores of Seattle and Houston on behavior and attitude scales are compared, we should expect, other things being equal, that if parking is a very crucial factor, Houston should have significantly higher scores indicating a stronger attraction to downtown, since the parking problem in Houston has been shown to be felt less than in Seattle. The opposite holds true, however, since the mean score for Seattle on the habit scale is 35.42 and on the attitude scale 59.38, while the corresponding figures for Houston were 33.46 and 56.82. The differences between the cities are significant, as the critical ratio of the differences of means on Scale I was 3.93 and on Scale II, 4.90. If we hold a number of variables constant by comparing two tracts, one in each city, which are very similar as to location with reference to downtown and suburban shopping centers as well as to socio-economic status, the Seattle respondents still score significantly higher on both scales, with the mean of Area 1 being 34.61 on the habit scale and 59.35 on the attitude scale.[18] The corresponding figures for Houston's Area 1 were 31.03 and 55.56. On this basis parking does not seem to be of paramount importance.

The subject may be pursued further by analyzing the differences in scores between car-users[19] and non-car-users in Seattle and Houston. If parking and traffic difficulties are very serious deterrents, the scores of the car-users who are subjected to these conditions should be significantly lower than those of the non-car-users not troubled by either parking or traffic on their downtown trips. The mean scores on behavior and attitude scales were calculated for car-users and non-car-users and the critical ratios of the differences between means determined.[20] The first series of calculations when the total samples of each city were used indicate that the scores of the non-car-users are higher in each case, but in Houston the difference is not great enough to be statistically significant. It would seem, therefore, that traffic and parking do influence attitudes to and the use of downtown in Seattle, but little if at all in Houston.

Some differences may be obscured in the above analysis by considering all areas in each city together. To determine if this had happened, the means and the

significance of the differences between means of car-users and non-car-users were determined for each area.[21] Examination of the results of these calculations reveals that in all areas of both cities except Area 2 in Houston the scores of non-car-users are higher, but the differences are so slight that only in Area 3 of Houston and Area 3 of Seattle are they large enough to be significant. The conclusion would therefore be, on the basis of area analysis, that if parking and traffic do affect shopping orientation, they do so to a very slight extent.

Another type of analysis may be brought to bear on this problem. Correlations between persons' reactions to parking, cost of parking, and traffic were calculated. These correlations are shown in Table 30 below. The

TABLE 30

CORRELATIONS OF DEGREE OF SATISFACTION WITH PARKING, COST OF PARKING AND TRAFFIC, AND SCORES ON SHOPPING HABIT AND SHOPPING ATTITUDE SCALES IN HOUSTON AND SEATTLE

	Houston				Seattle			
	Habit Scale I		Attitude Scale II		Habit Scale I		Attitude Scale II	
	r	S.D.	r	S.D.	r	S.D.	r	S.D.
Parking	.14*	.046	.30*	.043	.07	.053	.26*	.050
Cost of parking	.07	.047	.28*	.043	.14*	.052	.28*	.050
Traffic	.08	.047	.27*	.044	.09	.053	.28*	.051

* Significant at or beyond the 1 percent level of confidence.
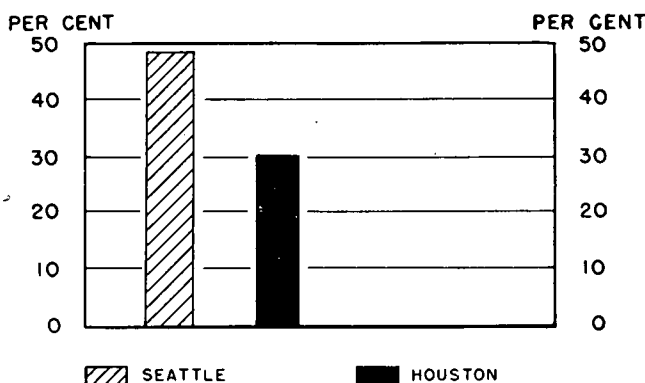
Source: Table 27

Chart 5. Percent of respondents finding downtown parking practically impossible or extremely difficult in Houston and Seattle.

correlations are all positive and all low, indicating a mild relationship between shopping habits and shopping attitudes on the one hand and parking and traffic items on the other hand. By the use of the coefficient of determination (r^2), the percentage of variance in the behavior or attitude scale that is determined by variance in parking and traffic items may be ascertained.

[18] See also Table 18.
[19] 'Car users' were operationally defined as the persons answering 'yes' to question 73 (See schedule Appendix A), and 'non-car-users' as those answering 'no' to the same question.
[20] See Appendix Tables F-11 and F-12.
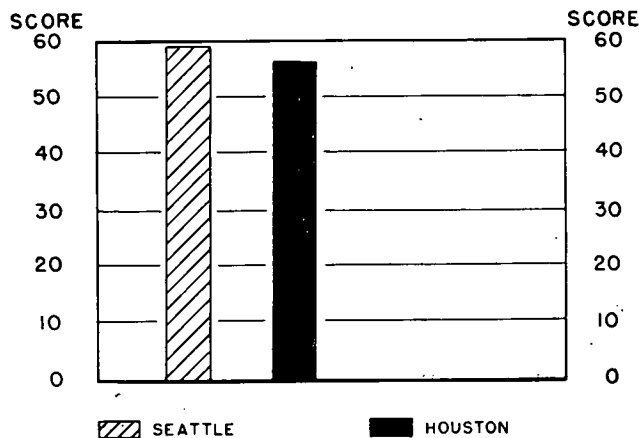
[21] See Appendix Tables F-11 and F-12.

Chart 6. Degree of attraction to downtown as shown by mean attitude scores of respondents in Houston and Seattle.

Parking, for example, with a correlation of .14 accounts for but 1.96 percent of the variance in the behavior score and 9.00 percent of the variance in the attitude score in Houston, and cost of parking accounts for 1.96 percent of the variance in the behavior score and 7.84 percent of the variance in the attitude score in Seattle. It is interesting to note that the attitude scale correlates higher with parking and traffic items than does the behavior scale. The reason for this is probably that externally limiting factors *force* people into certain patterns of behavior. For example, a correlation of .30 between attitude score and parking difficulty intensity score indicates that as satisfaction with parking increases, satisfaction with downtown in general increases, and the correlation of .14 between parking and behavior score indicates that as a person's satisfaction with parking conditions increases his use of the downtown area increases, but the association is much less in the latter case probably because the consumer *has* to use the downtown stores to get certain goods whether he likes the parking situation or not.

In view of the various types of analysis brought to bear on this problem, it would seem that parking and traffic conditions of the downtown area are troublesome to people, but not troublesome enough to determine or greatly affect their shopping orientation when all factors are taken into consideration. In other words, the number and weight of downtown advantages seem to minimize the disadvantages of parking and traffic.

COMPARISON OF THREE CITIES WITH REGARD TO
SATISFACTION WITH PARKING AND
TRAFFIC CONDITIONS

Responses to items 74, 75, and 77 of the schedule make it possible to compare the relative satisfaction felt by respondents with regard to parking and traffic conditions in their cities by constructing a parking, cost of parking, and traffic score on the basis of the five responses to the items indicated above. If this is done the score of a respondent, area, or group may range from 1 to 5, with 1 indicating an extreme degree of dissatisfaction and 5 the greatest satisfaction. In order to take into consideration possible effects of age, sex, income, and urban-rural background, these variables were controlled. Means for each group in each city were then calculated and the significance of means tested by critical ratio calculations.

Comparison of parking satisfaction in Columbus, Houston, and Seattle by income groups as indicated by mean parking satisfaction scores[22] reveals that Columbus citizens in all income categories achieved the lowest score, Seattle the next highest, and Houston the highest satisfaction score. Differences between Columbus and Houston are statistically significant for middle and upper groups, as are differences between Seattle and Houston, and between means of the upper income groups in Columbus and Seattle. Differences between means of the lower income groups are not significant. Analysis of parking satisfaction when sex is the controlled variable shows the same results as when income is the controlled variable, that is, Columbus scores lowest, Houston highest, and Seattle is in an intermediate position. The same ranking of cities may be observed when urban-rural background is kept constant.

It would seem, therefore, that parking is considered most difficult in Columbus, and least troublesome in Houston, with Seattle in an intermediate position.

Comparison of satisfaction with the *cost of parking* in Columbus, Seattle, and Houston by income groups as shown by mean cost-of-parking scores shows that the lowest satisfaction is evidenced by the Houston sample, while the Seattle group achieves the highest scores, with Columbus placed in the middle, although it should be noted that the only significant differences are between Columbus and Seattle in the $4000–$5999 bracket and the $6000-and-over category. Differences between the upper income groups in Seattle and Houston are also significant. The ranking of the cities with regard to satisfaction with the cost of parking is not changed when sex is controlled. When rural-urban background is controlled, the group with urban backgrounds in Seattle score significantly higher with regard to cost of parking than do similar groups in Columbus and Houston.

The conclusion is, therefore, that the car users of Seattle are more satisfied with the price of parking than

22 See Appendix F, and C. T. Jonassen, *op. cit.*, p. 31.

are those of either Columbus or Houston, with no significant difference between the latter two cities.

Satisfaction with traffic conditions in the three cities may be analyzed by examining the mean traffic-satisfaction scores of various income groups in the three cities.[23] The lowest scores are evident in Columbus and the highest in Seattle. Significant differences are evident between the middle income groups of Columbus and Houston and between Columbus and Seattle, with the Columbus group scoring lowest of the two cities in each case. The highest income group of the Seattle sample scores significantly higher than the same groups in either Columbus or Houston. The results are generally the same when male and female groups of the cities are compared. The low scoring of Columbus and the high scores of Seattle are again evident when the comparisons are in terms of rural-urban groups.

It would seem, therefore, that respondents are less satisfied with their traffic conditions in Columbus than they are in either Houston or Seattle, and that Seattle, in the opinion of the motorists, has the most satisfactory conditions as compared with the other two.

To sum up, in the opinion of their citizens, Houston has the most satisfactory parking situation, while Seattle respondents indicate higher satisfaction with the cost of parking and traffic than do motorists of the other two cities. Satisfaction with parking, with cost of parking, and with traffic conditions is lowest in Columbus.

It would be interesting to compare the traffic and parking conditions of these three cities as measured by objective criteria, such as origin and destination studies, traffic flow, and ratio of available parking spaces to needed parking spaces, to determine what kinds of physical conditions tend to produce the attitudinal differentials observed in this analysis.

VARIABILITY ASSOCIATED WITH CHILDREN IN THE FAMILY

The correlation analysis indicated a low negative relationship between the number of children in the family and habit and attitude scores.[24] In other words, the more children in the family, the stronger the suburban orientation of the respondent. The effect of children in the family was checked in another way, by dividing the samples of each city into two sub-groups one with children and one without. The mean score of each group was calculated for both attitude and behavior scales, and the significance of the difference between means tested as usual by the critical ratio technique.[25]

Results of the analysis show that people with children have consistently lower scores than do persons who are childless. All differences are significant except the one for Scale I in Seattle. It would seem, therefore, that children in the family are a factor which tends to orient people toward suburban facilities, probably because of the difficulty of getting away from home for longer periods of time.

VARIABILITY OF SHOPPING ORIENTATION ASSOCIATED WITH LENGTH OF RESIDENCE IN A NEIGHBORHOOD

It would seem to be a logical possibility that length of residence in a neighborhood would create neighborhood loyalty which might be apparent in shopping scores, so that persons with longer neighborhood affiliation would have lower scores or stronger orientation to suburban than to downtown areas. The samples of the two cities were divided into two groups, those with less than two years of residence in a neighborhood and those with more than this period of time spent in one locality. Calculation of behavior and attitude scores for both groups shows them to be remarkably similar, with no trends or statistically significant differences apparent.[26] The conclusion is consequently that neighborhood loyalty as measured by length of residence in it has no effect on shopping orientation.

SOME EFFECTS OF DISTANCE ON SHOPPING HABITS AND ATTITUDES

If distance to the source of shopping satisfaction is by itself the predominant factor in determining facility-use patterns and degree of satisfaction, this should be evident in the behavior and attitude scores of different tracts located at various distances from the source of supply. In Columbus it was noted that some areas far removed from the center of the city evidenced higher satisfaction with downtown than did areas much nearer the center,[27] thus showing that distance does not by itself determine shopping satisfaction, since if it did the satisfaction score should *always* be higher as the distance to downtown decreased.

Similar results were observed in Houston and Seattle as will be seen from Tables 31 and 32.

In Houston Area 1 and Area 4, which are about equidistant from downtown and a suburban shopping center, have scores on both attitude and behavior scales which are significantly different. Area 1 has a behavior score of 31.0, while Area 4 has one of 27.9. On the attitude scale Area 1 has a score of 55.6, while Area 4 has

[23] See Appendix F, and C. T. Jonassen, *op. cit.*, p. 31.
[24] See Appendix Tables F-25 and F-26.
[25] See Appendix Tables F-21 and F-22.
[26] See Appendix Tables F-23 and F-24.
[27] C. T. Jonassen *op. cit.*, p. 25, 26.

TABLE 31

MEAN SCORES ON SCALES I AND II BY AREA FOR HOUSTON

N = 150 for each area

Area Number	Miles to Downtown	Scale I		Scale II	
		Mean	S.D.	Mean	S.D.
3	2.3	38.44	7.38	60.27	8.33
2	2.6	36.47	7.96	58.97	8.01
1	5.2	31.03	8.30	55.56	10.52
4	5.5	27.92	9.09	52.47	8.67

TABLE 32

MEAN SCORES ON SCALES I AND II BY AREA FOR SEATTLE

N = 150 for each area

Area Number	Miles to Downtown	Scale I		Scale II	
		Mean	S.D.	Mean	S.D.
4	2.6	41.29	5.52	64.33	6.30
3	3.8	33.25	7.26	57.33	7.93
2	5.1	32.53	7.91	56.49	8.83
1	7.6	34.61	7.94	59.35	9.26

one of 52.5. The critical ratio of the difference between means on Scale I is 3.10 and 2.78 for Scale II. If distance were the determining factor these differences would not appear.

Likewise in Seattle if distance were the factor of dominant significance, Area 2, 5.1 miles from the center, should have a higher score than Area 1 which is 7.6 miles from the downtown area. But the reverse is true, since Area 1 has scores of 34.6 (Scale I) and 59.4 (Scale II), significantly higher than the scores obtained in Area 2, 32.5 (Scale I) and 56.5 (Scale II). Area 3 in this city, only 3.8 miles from the downtown area, also has a score lower than Area 1, 7.6 miles away.

It should be noted, however, that in both cities the areas achieving the higher scores were those nearest

the city's center, probably indicating the influence of distance.

Additional evidence of the effect of distance is provided by the correlation analysis.[28] In Houston the correlation between distance to downtown and score on Habit Scale was −.44 and between distance and attitudes, −.31. These negative correlations indicate that in Houston as the distance between a person's residence and downtown increases his use of downtown diminishes and his attitude toward downtown is less favorable. In Seattle the correlation between distance to downtown and use of downtown was −.22, and between distance and attitudes toward downtown −.16. Both correlations are significant beyond the .01 level of confidence.

In Columbus the correlation between the measured distance from downtown and the behavior score was −.17 and on the attitude score, −.21. The relationship of distance and scores in this city changed, however, if the distance that a person went for clothing was correlated with behavior and attitude scales. In this case the coefficients of correlation were .34 and .14 for behavior and attitude scales respectively. Apparently distance may cease to be an important deterrent if the desire for the article sought is strong enough, and if it is felt that the desiderata can be procured only at a given place.

It would seem, therefore, that distance is of importance in determining the degree of attraction to the downtown area, but that its influence, whatever it is, is sometimes minimized and vitiated by other factors present in new situations. In later sections an exploration will be made of other factors which might be involved in creating the observed effect, after which the attempt will be made to describe the result of several variables operating together in a given situation.

[28] See Appendix Tables F-25 and F-26.

Differential Reactions of Various Groups to Parking and Other Situational Factors Affecting Shopping Satisfaction

Parking, traffic, distance, the stores and crowds, the cost, variety, quality, and quantity of goods available are physical facts of the shopping environment which can be observed and measured. But these objective facts achieve motivational significance for the individual only after their meaning for him has been determined in the scales of his value system. Consequently the values of people may be as important factors as the physical facts of the environment in determining shopping habits and attitudes.

This section will attempt to determine if various groups and categories of people display differential reactions to the same objective facts of the environment. If such variations are present, they may explain and account for differences in shopping orientation.

Section IIA of the schedule asks, 'Which do you think are the three most important advantages of shopping downtown starting with the most important advantage first, the next important next, and so on, numbering them '1', '2', and '3' in the order of their importance?'

This question was repeated for downtown disadvantages and for suburban advantages and disadvantages. By dividing the sample into various categories of people, it was possible to ascertain whether these groups differed significantly from each other with regard to what they considered the most important advantages and disadvantages of the shopping facilities. In the following series of analyses, groups differing as to income, residential area, education, occupation, and age will be compared as to their differences and similarities with regard to their perceptions of downtown and suburban advantages and disadvantages.

GROUP VARIABILITY IN PERCEPTION OF MOST IMPORTANT
ADVANTAGES OF DOWNTOWN

Whereas all groups agreed that the larger selection of goods available downtown was the most important advantage for that shopping area, the degree to which this opinion was held differed markedly and significantly between groups as can be seen from Table 33 below. Thus data from Houston and Seattle confirm

TABLE 33

PERCENTAGE OF SAMPLE INDICATING LARGE SELECTION OF
GOODS AS THE GREATEST ADVANTAGE FOR DOWNTOWN
SHOPPING BY INCOME OF RESPONDENTS

City	Income Groups				Critical Ratio
	$3999 and under		$8000 and over		
	Number	Percent	Number	Percent	
Columbus......	171	44.0	154	66.9	4.13
Houston.......	229	38.0	128	49.2	2.07
Seattle........	214	41.6	97	50.5	1.46

the Columbus findings that a large selection of goods is more important for the upper income group as a downtown advantage.

This conclusion is again corroborated when the analysis is in terms of areas.[29] In Columbus, when proximity to shopping centers was kept constant, 70.5 percent in the high income area chose 'large selection' as being the most important advantage of downtown, while only 34.8 percent in a comparable lower income area made this selection (critical ratio of the difference in percentages, 4.90). The same kind of comparison is possible in Houston between Area 1 (high income) with 51.3 percent and Area 4 (low income) with 42.7 percent indicating 'large selection' as the most important downtown advantage (critical ratio, 3.51). In Seattle Area 1 (high income) where 54.0 percent selected this advan-

[29] The source data for the analysis of this section are the tables found in Appendix H. For Columbus data see C. T. Jonassen, *op. cit.*, Appendix F.

tage differed significantly from Area 2 (low income) with 51.3 percent (critical ratio, 2.20). Further corroboration of this fact is indicated by the analysis of various categories of the North-Hatt Occupational Ratings.

'Cheaper prices' as an advantage for downtown was selected by 12.9 percent of the grammar school group and by 8.6 percent of the college graduates in Columbus as being the most important advantage. In Houston the figures for these educational groups were 23.4 and 9.1 percent for grammar school and college groups respectively. In Seattle the greatest differences occurred between the high school group with 15.5 percent and the college group with 6.7 percent. Differences in Houston are significant; those for the other two cities are not large enough for significance, but they are all in the same direction.

In an analysis by occupational categories, professional classes differed significantly from unskilled workers in the proportion saying that 'large selection of goods' was the most important advantage for downtown, with 52.1 percent of the professionals and 31.3 percent of the unskilled workers choosing this advantage for downtown as the most important in Houston. In Seattle, occupational groups differed in the same direction with 48.8 percent of the professional group and 43.2 percent of the unskilled indicating 'large selection of goods' as the most important downtown advantage.

In analysis of differences in perception of advantages for downtown, the percentage of the higher age group (65+) who stated that large selection of goods was the greatest advantage for downtown was significantly lower than the percentage of the younger age groups choosing this advantage in both Houston and Seattle. It would appear that large selection is most important for the age group 18–49.

All groups agreed that 'large selection of goods' was the greatest advantage for downtown, but larger proportions of the upper socio-economic group, as measured by income, education, major occupational group, North-Hatt Scale, and residence, chose this advantage than did lower socio-economic groups. This advantage was also chosen to a greater extent by the 18–49 age group than by older age categories. 'Cheaper prices' was perceived to be the greatest advantage for the central business district by larger proportions of lower than of higher income groups.

GROUP VARIABILITY IN PERCEPTION OF
DISADVANTAGES OF DOWNTOWN

Marked variation was evident between income groups and between cities in their perception of downtown

disadvantages, when they were asked to rank the disadvantages in order of their importance. The percent-

TABLE 34

PERCENTAGE OF SAMPLE INDICATING DIFFICULT PARKING AS THE GREATEST DISADVANTAGE OF DOWNTOWN SHOPPING BY INCOME OF RESPONDENTS

| City | Income Groups | | | | Critical Ratio |
| | $3999 and under | | $8000 and over | | |
	Number	Percent	Number	Percent	
Columbus......	171	38.0	154	51.3	2.44
Houston.......	229	28.8	128	35.9	1.40
Seattle.........	214	16.8	97	43.3	5.00
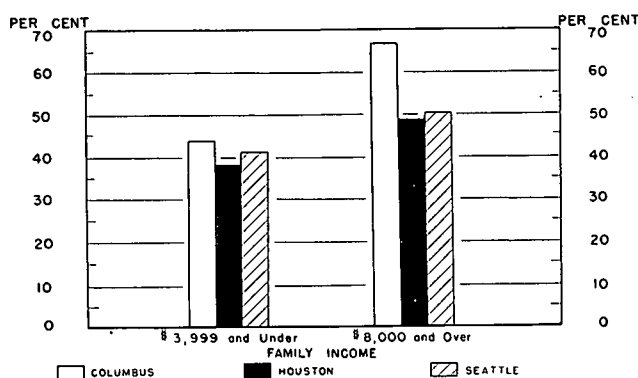
Source Table 33

Chart 7. Large selection of goods as the most-important advantage for downtown as chosen by respondents in lower- and higher-income groups.
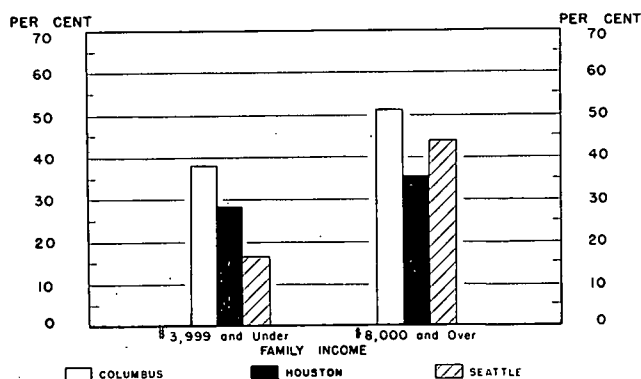
Source Table 34

Chart 8. Difficult parking as the greatest disadvantage of downtown as chosen by lower- and higher-income groups.

ages of high income and low income groups who indicated difficult parking as the greatest disadvantage of downtown are shown in table 34.

It will be seen that a greater proportion of the higher than of the lower income groups chose parking as the greatest downtown disadvantage in all cities. The

differences between income groups are statistically significant in Seattle and Columbus but not in Houston.

Further analysis where income categories are more refined revealed the same trend. For example, the upper income groups in Seattle felt difficult parking was the most important disadvantage, with 43.3 percent of the $8,000-and-over category naming it as the greatest disadvantage, as compared with only 18.6 percent of the $2,000-$3,999 group. Similarly, when comparing the families having an income of under $2,000 with those having incomes of $8,000-and-over, 13.7 percent of the former and 43.3 percent of the latter indicated that parking was the greatest downtown difficulty. The chief disadvantage of downtown for the $2,000-and-under category in Seattle was the cost of transportation. If the $3,999-and-under income category is contrasted with the $6,000-and-over bracket, differences are again large and consistent in this direction, with 16.82 percent of the lower and 40.53 percent of the upper group indicating parking as the greatest downtown disadvantage. All these differences are significant beyond the .01 level of confidence.

It might appear that these results are at variance with conclusions reported below, namely that the upper income group found less difficulty with parking than did lower income groups. However, closer examination will reveal that in the latter case respondents were asked to state the degree of trouble which parking caused them, while in the present instance the respondent was asked to compare the parking difficulty within the framework of other advantages and disadvantages. Thus, other difficulties appear to be of greater disadvantage than parking problems to lower socio-economic groups, as is evident from the following analysis.

The lower income groups in the same city (Seattle) felt that the chief difficulty for them was not parking but the cost of transportation. Thus, while 32.5 percent of those respondents having incomes under $2,000 felt that cost of transportation was the main difficulty, only 10.3 percent of the $4,000-$5,999 group chose this disadvantage of downtown as the most important. The difference between these two groups is statistically significant; other income groups show variations in the same directions, but the percentages of the other higher income groups choosing this disadvantage are so small that reliable comparisons are not possible.

When another measure of socio-economic status, the North-Hatt Occupational Rating Scale,[30] was used to

[30] The North-Hatt occupational rating scale is essentially a public ranking of 90 different jobs by a cross-section of Americans using a battery of questions. The occupation which achieved the highest score was U. S. Supreme Court Justice with 96; laborers averaged 45.8, professionals 80.6, clerical and sales 68.2, and craftsmen and foremen 68.0. See "Jobs and Occupation: a Popular Evaluation" in Logan Wilson and William L. Kolb, Sociological Analysis.

subdivide the respondents, the findings indicated above were corroborated. In Seattle, of those with ratings of 50–59, 18.7 percent chose parking as the greatest difficulty, while 38.0 percent of those rated 80–93 on the Scale felt this disadvantage was the most important. Significant differences in the same direction were also found between the 50–59 and the 60–69, between the 50–59 and the 70–79, and between the 50-59 and 80–93 categories with regard to parking. Again larger pro-portions of the groups rated lower in the occupational scale chose crowding and cost of transportation as im-portant downtown difficulties.[31]

In Houston, parking was again chosen as the greatest downtown handicap by a significantly larger proportion of higher rated groups than by the lower, and for the lower group crowding seemed to be the greatest de-terrent.

In the analysis of educational groups, the same general tendencies as indicated above are apparent, but the differences between educational groups are not large enough to be significant in either city.

No significant patterns were apparent when 'major occupational groupings' were analyzed with regard to downtown disadvantages, probably because the N's of the various cells are too small to permit reliable results.

Analysis by area reveals that, when distance to down-town and suburban shopping centers is held constant, parking is rated as the greatest disadvantage of down-town by a significantly larger proportion of those areas having the higher socio-economic status than of the lower socio-economic areas. These tendencies may be confirmed by examination of Tables H-21 and H-22 and by comparing Areas 1 and 2 in Seattle and 1 and 4 in Houston.

When the Seattle sample was subdivided according to age groups, 41.4 percent of the 18–34 group and 29.7 percent of the 50–64 year group chose difficult parking as the most important disadvantage for downtown. The proportion in the older groups who made this choice is significantly lower than in the younger groups. The same tendency is evident in Houston, where a com-parison of the 18–49 year group and the 50-and-over group reveals that more of the younger than of the older group considered parking the greatest disadvantage of downtown.[32]

GROUP VARIATIONS IN PERCEPTION OF MOST
IMPORTANT ADVANTAGES OF SUBURBAN
SHOPPING CENTERS

In all the sampled groups the most-often-chosen ad-vantage of the suburban shopping center was that it

[31] See Appendix Tables H-21, H-22.
[32] See Appendix Tables H-23, H-24.

was closer to home. Again some variations between groups appear. It would seem that lower socio-economic groups chose this advantage more often than did upper status groups in both cities. While the data are not al-ways consistent on this point, in the majority of cases and where differences between socio-economic groups are large enough to be significant, the above generaliza-tion is corroborated, as may be ascertained by examin-ing tables where education, major occupational groups, and residential location are the variables involved.[33] This tendency seems to corroborate what has been de-termined previously concerning the differential meaning of distance to upper and lower socio-economic groups. The greater ease of parking and the feeling that they do not have to dress up were greater advantages to the upper socio-economic group than to the lower.

When the analysis is in terms of age, all age groups agree in citing the proximity of the suburban shopping center as its greatest asset, but the proportion who chose this advantage was greater in the younger age groups than in the older ones. These differences are large enough to be significant in Seattle and Columbus, but not in Houston as can be seen from Table 35 below.

TABLE 35

PERCENTAGE OF SAMPLE INDICATING 'CLOSER TO HOME' AS THE
GREATEST ADVANTAGE OF SUBURBAN SHOPPING CENTERS
BY AGE OF RESPONDENTS

City	Age Groups				Critical Ratio
	15–49		50 and over		
	Number	Percent	Number	Percent	
Columbus......	423	47.5	167	38.3	2.07
Houston.......	441	53.5	159	49.7	0.85
Seattle........	362	45.0	238	34.0	2.67

GROUP VARIABILITY IN PERCEPTION OF MOST
IMPORTANT DISADVANTAGES OF SUBURBAN
SHOPPING CENTERS

There is considerable agreement between groups on the disadvantages of suburban shopping centers, with the majority of all groups selecting 'lack of a large selec-tion' as the greatest disadvantage. When differences between groups are evident, it would appear that lack of a large selection is felt more strongly as a disadvan-tage by the upper socio-economic groups than by lower and by the younger age groups (18–34) than by the older (50–64), although the differences between socio-economic groups are usually not large enough to be sig-nificant.

[33] See Appendix H.

GROUP VARIABILITY IN PERCEPTION OF PARKING AND TRAFFIC CONDITIONS

Do groups of persons who differ in such respects as socio-economic status or age differ in their reactions to parking and traffic conditions? Answers to items 74, 75, and 77 provide clues as to the meaning of parking and traffic for different categories of people, since they measure the intensity of reaction to parking and traffic
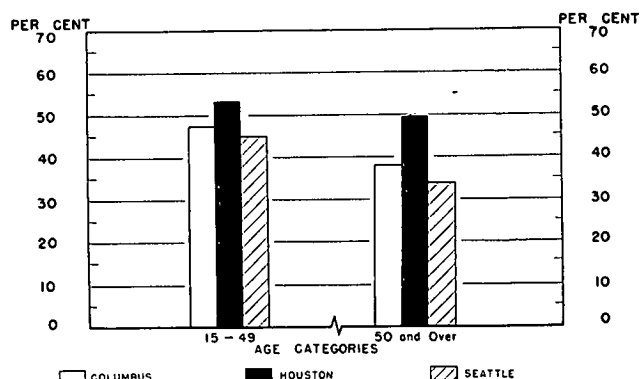
Chart 9. Closer to home as the greatest advantage of suburban shopping centers as chosen by lower- and higher-age groups.
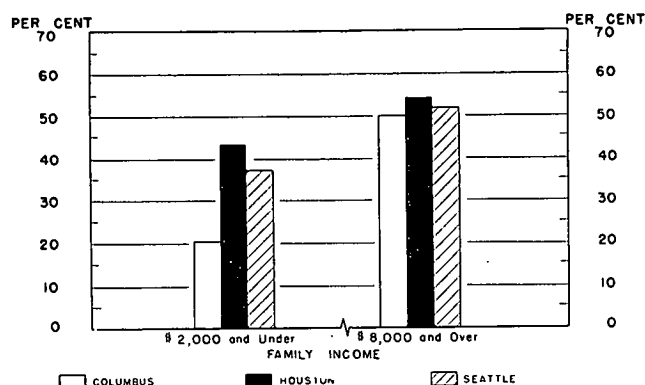
Chart 10. Lack of large selection as the most-important disadvantage of suburban shopping centers as chosen by lower- and higher-income groups.

conditions.[34] It will be remembered that the higher the score a respondent achieved, the greater his satisfaction with the condition.

The middle group in the $4,000–$5,999 range seems to be the one for whom parking difficulty, parking cost, and traffic are worst. This fact was noted in Columbus as well.[35] The differences indicated in the tables are not all significant, but except for one instance out of 24 comparisons, this income group has the lowest score.[36]

[34] Appendix Tables F-13 through F-19 give the intensity scores of Houston and Seattle respondents for item 74, difficulty of parking; item 75, cost of parking; and item 77, difficulty of traffic conditions, by income groups.
[35] See C. T. Jonassen, op. cit., p. 31.
[36] See Appendix Tables F-1 through F-10.

The $8,000-and-over income category is the one which evidences the greatest satisfaction when compared with other groups in their reactions to parking, parking cost, and traffic. It has the highest score of all groups in 22 of the 24 comparisons, although these differences are not all large enough to be significant. The greater satisfaction of the upper income group is particularly evident with regard to parking. Differences in scores between the highest income group and the other groups are all statistically significant in Houston and Seattle with critical ratios of the difference between means ranging from 2.88 to 4.12 in Seattle and between 2.33 and 4.55 in Houston. As might be expected, the cost of parking troubles the highest income group less as their scores are significantly higher than the $4,000–$5,999 group in Seattle; and with regard to concern for traffic difficulty the $8,000-and-over group scores significantly higher than the $4,000–$5,999 group both in Seattle and in Houston.

The reason for the result indicated is probably that the middle income group uses cars more than the lower income people, and though they may use cars somewhat less than the upper income group, the upper bracket is apparently less concerned with parking fees and more of them probably have available private parking spaces or chauffeur driven cars. Thus, the upper income group has at its disposal greater means with which to overcome the friction of space, while the low income group uses the automobile less and is therefore less troubled by parking and traffic difficulties.

When males and females are compared, the score of males is lower for parking but higher for cost of parking and traffic in all three cities.[37] However, except for male-female differentials with regard to parking cost in Seattle, the differences between scores for males and females are not large enough to be statistically significant.

There are few significant differences in the reaction of different age groups to parking and traffic problems, as will be seen by an examination of Tables F-17 and F-18 in the Appendix. The older age group is apparently troubled less with the cost of parking since their scores are significantly higher than the younger age group on item No. 75 in Seattle, and the older age group (50–64) in Houston scores higher on the traffic item, No. 77. In general, the higher age groups seem to be slightly less concerned with parking and traffic difficulties than do the younger groups, but these differences may be a function of income rather than age, since the upper age

[37] See Appendix Tables F-15 and F-16; also for Columbus data see C. T Jonassen, op. cit., p. 31.

groups will tend to have higher incomes than the younger people.

When comparing those with urban and rural backgrounds, in Houston and Seattle, unlike in Columbus, no statistically significant differences are apparent,[38] although the reaction of the urban group is generally more favorable to downtown than that of the rural, as was the case in Columbus. The failure to get significant differences in Houston and Seattle may be due to the small N's of the 'rural' category, and to the gross nature of the 'urban' category.

When respondents are asked to state the degree of parking difficulty they encounter, the upper socio-economic group apparently finds parking less difficult than do the lower income categories. But if respondents are asked to name the greatest disadvantage of downtown, or, in other words, to weigh the parking difficulty as

[38] See Appendix Tables F-19 and F-20.

against other disadvantages, parking was chosen by a greater proportion of upper socio-economic groups as the one which troubled them most. Lower income categories, as seems logical, felt the cost problem more, as is indicated by this group's choosing cost of transportation as the major disadvantage of the downtown area in Seattle.

Generalizing from the findings of this section, it would appear that some groups differing in measurable qualities display variations in their reactions to many of the crucial facts of the environment within which they have to meet their needs.

It should be expected that these differentials of reaction to the objective facts of the environment should produce some effect on the shopping orientation of consumers as measured by shopping habit and attitude scores. This aspect of the problem will be explored in the next section.

Influence of Socio-Economic Status, Sex, Age, and Distance on Shopping Habits and Attitudes

Factors associated with shopping satisfaction and dissatisfaction have been isolated, the weight and importance of the factors have been analyzed, and differential reaction of various groups to them explored. In this section we shall attempt to determine how these factors and the differential reaction of various groups to them affect the final shopping orientation of various groups.

The Columbus study showed that people who differ as to measurable qualities such as socio-economic status and location differ also in their use of and attitudes toward alternate sources of shopping satisfaction. Are these preferences related to the same variables in Houston and Seattle? If they are, wider generalization will make it possible to determine if and to what degree these factors and differential reaction to them affect the shopping orientation of various groups as measured by shopping habit and attitude scores. This study thus goes beyond most studies of locational and mobility behavior when it asks whether groups that differ in some measurable way will differ also in the degree to which they use either downtown or suburban shopping centers.

The answer to such a question would, of course, have significance for the retailer who must determine merchandising and advertising policies, and to others such as realtors, chambers of commerce, merchant associations, planners, and traffic engineers who have to decide how to allocate available means to the best ad-

vantage in order to meet the felt needs and aspirations of a community as a whole and of the various groups within the community.

Mean shopping attitude and behavior scores were computed by personal variables and also by area. Where area or location is held constant it becomes possible to ascertain the effect of distance, which has been found by previous analysis to be important but whose function has not been definitively delineated. Furthermore, the effect of other variables besides distance operating in the causal matrix is minimized and the picture is clarified when area is held constant, since ecological processes have already created a fair amount of homogeneity within each area.

VARIABILITY IN SHOPPING HABITS AND SHOPPING ATTITUDES ASSOCIATED WITH EDUCATION

Mean scores on the Shopping Habit Scale I obtained by three educational groups in the four areas of Houston are given below. To facilitate analysis the area columns are arranged so that the area farthest from downtown is represented at the left and the tract nearest downtown at the right. In other words, as one reads across from left to right, within each category of the educational variable, the tracts near the right are nearer to the center of the city than those on the left, and if read this way the effect of distance becomes apparent. As the values are read vertically within each tract, the

effect of the education variable should become apparent, since distance and area are kept constant.

Education	Area 4	Area 1	Area 2	Area 3
Grammar school........	27.35	24.57	35.29	41.00
High school............	27.55	30.77	35.23	38.40
College................	31.50	31.63	36.27	36.89

·If comparison is made between areas within each educational category, it is generally apparent that the areas nearer the city's center have the higher scores in every educational category, indicating the substantial effect of distance on the facility-use pattern. The pat-

GRAMMAR SCHOOL   ■ HIGH SCHOOL   ▨ COLLEGE
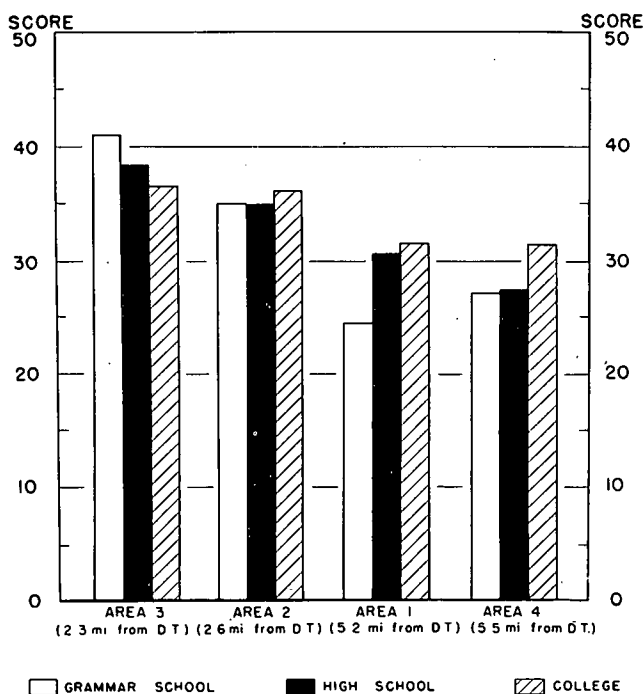
Source Appendix Table G-5

Chart 11. Shopping-habit scores of educational groups at various distances from downtown in Houston.

tern is consistent within each category in the grammar and high school groups with the one exception that the grammar school group in Area 4 has a higher score than its counterpart in Area 1. An examination of the source table[39] will show that the N for this category in Area 1 is too small for stability and the aberration may be attributed to this fact. Differences between categories of all areas are statistically significant except that the college group in Area 4 does not differ from its counterpart in Area 1, nor does this group in Area 2 differ significantly from its counterpart in Area 3. These exceptions should be noted since they seem to corroborate previous findings that the effect of distance

[39] See Appendix Table G-5.

on the shopping orientation of upper socio-economic groups is less than on lower socio-economic groups.

If the various educational categories are compared within each area, a different pattern emerges. In Areas 1 and 4, farthest removed from the city's center, the grammar school group has significantly lower scores than the college group. In Area 2, located in an intermediate position, no significant differences appear between educational groups, while in Area 3, nearest to downtown, the positions of upper and lower educational groups are reversed with the lower education group achieving a significantly higher score than the upper group.

Do attitudes evidence the same pattern as behavior? That they do is evident upon examining the attitude scores of the four areas of Houston as given below:[40]

Education	Area 4	Area 1	Area 2	Area 3
Grammar school........	50.76	49.00	56.53	64.00
High school............	52.88	54.49	58.47	60.51
College................	55.15	56.56	59.84	57.55

It might seem that the college group in Area 2 has substantially higher mean scores than the. grammar school category in the same area, but the differences are not great enough to be statistically significant, whereas the differences of these groups in Area 4 and Area 3 are large enough for confidence that they are not due to chance. .

These findings may be generalized as follows. When people want to buy shopping goods, higher educational groups living at the periphery of Houston patronize downtown more and evidence more favorable attitudes to it than do lower educational groups living in similar locations. As the distance to the city's center diminishes, differences in facility-use and satisfaction between different educational classes diminish and may be reversed in the area proximate to downtown where the lower educational classes use this shopping area more and are more satisfied with it than the upper educational classes.

Similar analysis was made using the Seattle data. Here the effect of distance is again apparent as all educational categories have significantly higher scores on Shopping Habit Scale I in areas near the downtown area than away from it.[41] There are, however, no significant differences between various educational groups within areas. This may be due to the fact that these areas are in the northern part of. Seattle where Northgate Shopping Center, one of the largest, most modern and complete shopping centers in the United States, is located. In the northern section of Seattle also are found

[40] See Appendix Table G-4.
[41] See Appendix Table G-5.

branches of J. C. Penney, Inc. and Sears, Roebuck and Co.

The mean scores on the Shopping Attitude Scale of all educational groups in the four areas of Seattle are significantly higher in areas near the city's center than on the periphery.[42] The pattern of scores of educational groups within areas is more like that for Houston, with higher educational groups at the periphery having the higher scores and lower educational categories at the center having the higher scores, however, in Area 1 the differences are not large enough to be statistically significant.

VARIABILITY IN SHOPPING HABITS AND SHOPPING ATTITUDES ASSOCIATED WITH INCOME

It should be expected that the habit and attitude patterns associated with education should also be associated with income, since income and education are usually closely related, but this assumption must be checked. Mean scores on the Shopping Habit Scale of three income groups of the Houston sample for four areas show that within every income group the respondents in the area nearer the city's center have significantly higher scores than those living farther away.[43] There are no significant differences between the income groups when location is kept constant.

Attitude scores of the income groups for the four Houston areas indicate that if income is kept constant the tracts nearer the downtown area have the higher scores. While this pattern is somewhat more like the educational one than is that of the behavior scores, the differences between income groups in areas of extreme location are not large enough to be significant.[44]

The mean scores on Scale I of Seattle respondents by area and income groups show that all income groups in Area number 4 near the center of the city have significantly higher scores than those in the other areas.[45] In Area number 2 at the periphery of the city the higher income group has a score of 35.57 and the low one 31.16, the critical ratio of the difference of means being 2.35. In all other areas the differences between means are not significant.

The scores on Scale II achieved by various income groups of the Seattle sample in the four areas again reveal that the area nearest the city has the higher score; and within areas, the higher income groups in peripheral areas 1 and 2 have significantly higher scores than the lower income groups in their tracts, while in areas near the center of the city there are no statistically signifi-

cant differences between mean scores of the three income groups.[46]

It can now be said that part of the pattern of scores observed for education groups hold for income groups as well; namely, that income groups in areas near downtown evidence higher Shopping Habit and Attitude scores than do their counterparts in peripheral areas. The rest of the pattern is not repeated consistently either for habits or attitudes according to this analysis. That peripheral high income groups evidence significantly higher scores than lower income groups in similar locations is sustained with respect to behavior in Area 2 of Seattle, but not in Area 1 of that city nor in Areas 4 and 1 of Houston; on the other hand, the hypothesis is corroborated with regard to attitudes in Areas 1 and 2 of Seattle. Thus it would seem that though similarities between the two patterns are evident, they are not always consistent.

Attacking this problem from a slightly different angle may clarify the picture somewhat. Ecological forces within urban areas tend to sort and segregate the population according to income. Consequently if each area is described in terms of median income the combined effect of income and distance might be determined. Tables 36 and 37 below show the mean attitude and

TABLE 36

MEAN SCORES ON SHOPPING HABIT SCALE I, SHOPPING ATTITUDE SCALE II, DISTANCE FROM DOWNTOWN, AND AVERAGE ANNUAL INCOME OF FOUR AREAS IN SEATTLE

N = 150 for each area

Area No.	Average Annual Income*	Shopping Habit Scale I Score	Shopping Attitude Scale II Score	Distance From Downtown
1	3900	34.61	59.4	7.6
2	2963	32.53	56.5	5.1
3	3109	33.25	57.3	3.8
4	3800	41.29	64.3	2.6

* Data from *U. S. Census of Population;* 1950, *Census Tract Statistics.*

TABLE 37

MEAN SCORES ON SHOPPING HABIT SCALE I, SHOPPING ATTITUDE SCALE II, DISTANCE FROM DOWNTOWN, AND AVERAGE ANNUAL INCOME OF FOUR AREAS IN HOUSTON

N = 150 for each area

Area No.	Average Annual Income*	Shopping Habit Scale I Score	Shopping Attitude Scale II Score	Distance From Downtown
4	3156	27.92	52.5	5.5
1	6073	31.03	55.6	5.2
2	3324	36.47	58.7	2.6
3	3378	38.44	60.3	2.3

* Data from *U. S. Census of Population;* 1950, *Census Tract Statistics.*

[46] See Appendix Table G-4.

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[42] See Appendix Table G-6.
[43] See Appendix Table G-3.
[44] See Appendix Table G-4.
[45] See Appendix Table G-3.

behavior scores for four areas of Houston and four areas of Seattle together with the mean incomes of these areas and their measured distance from the downtown areas.

Areas 1 and 4 in Houston, equidistant from downtown, have scores that differ significantly, with the high income area having the higher score; and Areas 1 and 2 in Seattle have significantly different scores, with the lower income Area 2, even though it is nearer to downtown, having the lower score, indicating less attraction to downtown. It will be seen that Area 4 in Seattle and Area 3 in Houston have the highest scores, which probably result from the cumulative effect of high income and proximity to the downtown area.

VARIABILITY ASSOCIATED WITH AGE

Consistent differences large enough to be statistically significant are evident among age groups proximate to the city and among those on the periphery, with all age groups in peripheral areas having the lower scores.[47] This pattern is probably, as before, the result of the cumulative effect of distance and the location near downtown of persons whose residential choice reflects their downtown bias. When significant differences do appear between age groups within areas, the tendency is for the higher age groups, '50–64' and '65 and over', to have the higher scores. The tendency for higher age groups to be more strongly oriented to downtown probably results from several factors. The older age groups are not tied down with young children, their shopping habits were formed before the coming of adequate suburban shopping centers, and the older age groups are probably in higher income brackets which seem to be more strongly attracted to the downtown area.

VARIABILITY ASSOCIATED WITH SEX OF RESPONDENT

The analysis of the variability of shopping orientation associated with this variable shows little differences between males and females; where differences do appear, females seem to have slightly higher scores, but differences are never large enough to be statistically significant.[48] This is substantially what was found in Columbus; hence the conclusion must be that females tend to be more oriented to downtown than males but that differences in shopping orientation are not large enough to be of much significance. The impression of the investigator is that differences between males and females are in the direction indicated but larger than

[47] See Appendix Tables G-7 and G-8.
[48] See Appendix Tables G-9 and G-10.

the statistical analysis shows. This result may have occurred because of the comparatively few males in the sample and because these males were not a good representative group of males in our society, in that most of the interviewing was done in homes during the day when it is usual for males to be away at work. It is probable that a larger, more representative sample of males would reveal considerably less attraction than females to use of the downtown area.

VARIABILITY ASSOCIATED WITH URBAN-RURAL BACKGROUND

Examination of Appendix Tables G-11 and G-12 will reveal that in general the urban groups have higher scores than those with rural backgrounds. However, the N's of 'rural' and 'metropolitan' categories are too small for reliable measures, but wherever N's are large the direction is as indicated above. Comparison of the 'city' groups, whose N's are large in the various areas, shows the same pattern as in other analyses, with the effects of distance and status variables definitely apparent and in the direction previously described.

VARIABILITY OF SHOPPING HABITS AND SHOPPING ATTITUDES ASSOCIATED WITH MAJOR OCCUPATIONAL GROUPS

While the general conclusion that upper income groups at the periphery of the city tend to use downtown facilities and have more favorable attitudes toward the central business district than lower socioeconomic groups seems to be corroborated by the previous analysis, the refinements of the generalization possible with regard to educational groups do not appear consistent in analysis of income groups. It is quite possible that significant differences may exist between various occupational groups within the same income class. It might be expected, for example, that a college professor would have a different value system from a skilled worker, yet they might be in the same income class. This section seeks to determine if differences in facility-use patterns and attitudes toward facilities are characteristically and significantly associated with major occupational groups. The categories of major occupations used were those of the Census.[49]

[49] Cf. U.S. Bureau of the Census, *1950 Census of Population, Alphabetical Index of Occupations and Industries (Revised Edition)*, Washington, D. C., 1950. The major occupational groups are given as follows:

Code	Major occupation group
0—	Professional, technical, and kindred workers.
1—	Farmers and farm managers.
2—	Managers, officials, and proprietors, except farm.
3—	Clerical and kindred workers.
4—	Sales workers.
5—	Craftsmen, foremen, and kindred workers.
6—	Operatives and kindred workers.
700 to 720	Private household workers.
730 to 790	Service workers, except private household.
8—	Farm laborers and foremen.
9—	Laborers, except farm and mine.

To insure large enough N's for the analysis by areas, some of the major occupational categories were combined. Categories 0–4 were designated as 'White Collar'; 5, 'Skilled'; and 6–9, 'Unskilled'.

In Houston the significant differences on the habit scale appear within occupational groups from area to area with those nearest downtown scoring higher. Differences of occupational groups within areas are not significant.[50]

On the attitude scale the differences between 'skilled' and 'white collar' groups of this city are large enough to be significant in Areas 1, 2, and 3, with the white collar groups having the higher scores; the difference between these groups is significant also in Area 3, but here the direction is reversed, with the low socio-economic group having the higher score.[51] It should be noted that the skilled groups have lower scores in all areas except Area 3, although means are not significantly lower. Scores within occupational categories are nearly all significantly higher for the tracts closer to the downtown area.

The mean scores on Habit Scale I of occupational categories by area and category for Seattle indicate that in Areas 1, 2, and 3 the 'skilled' have significantly lower scores than the other two groups, and in Area 2, the 'unskilled' have significantly lower scores than the 'white collar' group.[52] There are no differences between groups in Area 4 near the city's center. If occupational category is kept constant and location varied, significant differences appear between all categories in Areas 1 and 4 and all groups in Areas 2 and 4. The similarity in scores of the 'skilled' group in Areas 1, 2, and 3 should be noted.

That attitudes of the Seattle sample show a very similar pattern may be seen by examining mean scores for all areas.[53]

The 'white collar' group in peripheral Areas 1 and 2 has significantly higher scores than the 'unskilled' and 'skilled', while no significant differences were found between occupational categories in Area 4 near the downtown section. The 'skilled' groups in all areas except Area 4 are significantly lower than the 'white collar' group.

It would appear, then, that if area is kept constant, where significant variations between occupational groups appear, these differences are found in peripheral areas and in the direction indicated by the analysis of educational groups. There is, however, one exception, namely, that the 'skilled worker' group seems to have

[50] See Appendix Table G-1.
[51] See Appendix Table G-2.
[52] See Appendix Table G-1.
[53] See Appendix Table G-2.

consistently low scores, although the differences between the means of this group and other groups are usually not large enough to be statistically significant. It is possible that real differences exist among various occupational groups, but that they have been somewhat obscured by lumping a number of occupations together in such categories as 'white collar', etc., and that these differences might appear if greater categorical refinement is employed. Consequently the total samples of the two cities were subdivided into more specific categories, and the means of these categories were calculated. Results of this analysis are shown in Tables 38 and 39 below.

TABLE 38

MEAN SCORES ON SHOPPING HABIT AND SHOPPING ATTITUDE SCALES OF DESIGNATED OCCUPATIONAL CATEGORIES IN HOUSTON

| Occupational Category | Houston | | | | | |
| | Scale I | | | Scale II | | |
	No.	Mean	S.D.	No.	Mean	S.D.
Professional........	146	34.04	8.35	146	57.73	9.10
Prof. + managers, proprietors.......	236	33.48	8.58	236	56.99	9.43
Clerical, sales......	100	34.83	8.17	100	58.65	9.21
Skilled workers.....	137	31.74	9.72	137	55.26	9.77
Unskilled..........	99	33.74	10.22	99	56.22	9.32

TABLE 39

MEAN SCORES ON SHOPPING HABIT AND SHOPPING ATTITUDE SCALES OF DESIGNATED OCCUPATIONAL CATEGORIES IN SEATTLE

| Occupational Category | Seattle | | | | | |
| | Scale I | | | Scale II | | |
	No.	Mean	S.D.	No.	Mean	S.D.
Professional........	83	36.94	7.87	83	62.08	7.60
Prof. + managers, proprietors.......	187	36.72	8.04	187	61.78	8.11
Clerical, sales......	89	36.90	7.52	89	59.84	8.68
Skilled workers.....	116	32.02	7.57	116	56.70	8.53
Unskilled..........	183	35.14	7.99	183	57.98	8.56

TABLE 40

CRITICAL RATIOS OF DIFFERENCES BETWEEN MEANS OF BEHAVIOR AND ATTITUDE SCORES OF INDICATED MAJOR OCCUPATIONAL CATEGORIES IN HOUSTON AND SEATTLE SAMPLES

| Categories | Houston | | Seattle | |
	Scale I	Scale II	Scale I	Scale II
Professional and unskilled........	.24	1.26	1.71	3.90
Professional and skilled..........	2.13	2.19	4.43	4.68
Clerical, sales, and skilled........	2.64	2.73	4.60	2.57
Skilled and unskilled............	1.52	.76	3.39	1.27

The significance of the differences between means of occupational categories were then calculated with the results indicated in Table 40.

From this analysis it appears to be clear that professionals, managers, proprietors, and clerical and sales categories are very much alike in their behavior and attitude patterns, and that these groups differ significantly from the skilled workers, being definitely more oriented to the downtown than the skilled group. Differences between professional and unskilled and between skilled and unskilled, are not consistent and in most cases not significant. It appears, however, that the large differences are not between professional and unskilled but between the skilled and other categories, with the skilled consistently and significantly lower scorers than the other groups.

In the analysis of the past three parts of this section the attempt has been made to control the distance variable and variables associated with socio-economic status. In general the results of the Columbus study were corroborated; however, greater refinement of relationships is now possible.

The effect of distance is indicated consistently, if the socio-economic variable is held constant, by the fact that behavior and attitude scores increase as one approaches the downtown area. This result may be heightened because people who strongly prefer urban life would choose to live near the center of the city and those liking suburban life would elect the periphery whatever their socio-economic status; hence, the stronger downtown orientation would become evident in the scores.

If the distance variable is held constant, the pattern is not always consistent, but these tendencies are evident in all cities: higher socio-economic groups living at the periphery of the city patronize downtown more and evidence more favorable attitudes to it than do lower status groups living in similar locations. As the distance to the city's center diminishes, differences in facility-use and satisfaction between different socio-economic classes diminish and may be reversed, with lower status groups in the area proximate to downtown using this shopping area more and being more satisfied with it than the upper socio-economic groups. It seems definitely established that the 'skilled worker' group is the one most definitely oriented toward suburban shopping and the 'professional' category the one most strongly attracted to the downtown area.

Conclusion

This study has described how individuals and groups in three American cities meet their shopping needs; it has depicted shopping factors and attitudes associated with this behavior and some social correlates of it. In this concluding chapter these findings are summarized and interpreted.

SUMMARY

After the earlier research in Columbus, studies in Houston and Seattle were made to retest the methodology and instruments and to discover how these operate under different conditions. The aim was also to test the degree to which the Columbus findings would hold in other cities. The conclusions here presented are based on interview data using a pretested schedule with areal samples in selected areas of these cities.

The finding that shopping behavior and attitudes are measurable was corroborated. Analysis showed that most of the items concerned with cost, service, quality, shopping conditions, and frequency of shopping were as effective in Houston and Seattle as in Columbus in discriminating between downtown and suburban shoppers. These items were combined in scales which by statistical analysis were found to be valid. Further tests indicated that revision had raised the reliability of earlier scales; the following split-half correlations were obtained: for Shopping Habit Scale I, .79 in Houston and .77 in Seattle; for Shopping Attitude Scale II, .89 in Houston and .84 in Seattle.

Examination of the spatial pattern of shopping reveals that food, doctor's care, and movies are sought in areas nearer home, and that buying of clothing, shoes, and house furnishings is predominantly downtown. Comparison of percentages of the samples of each city buying selected items in the central business district and in suburban shopping centers shows Houston to be more strongly oriented toward suburban shopping than Seattle. This fact is corroborated by scores on the Shopping Habit and Shopping Attitude scales, Houston scoring significantly higher than Seattle on both. Temporal patterns indicate that buying food is most usually a weekly affair, while downtown shopping is done by a majority of people about once a month. Frequency of shopping downtown seems related to shopping orientation, with the groups shopping more frequently achieving the higher behavior and attitude scores, indicating their greater use and appreciation of downtown facilities.

Series of interviews, field tests, and statistical analyses made it possible to draw up a list of factors affecting shopping attitudes and behavior. Comparison of downtown and suburban shopping centers reveals that the downtown section has the advantage over the suburban shopping centers *in all three cities* on sixteen of twenty-three factors.

The study next investigated the weight of various factors and found in all three cities that the most important *disadvantage* of the central business district was difficult parking; next in importance for all cities was 'too crowded'; and third, traffic congestion. Respondents from all three cities agreed that the *advantages* of downtown shopping were, in the order of their importance: first, 'large selection of goods'; second, 'can do several errands at one time'; and third, 'cheaper prices.' Opinions concerning suburban shopping centers were less uniform in second and third choices, but respondents in the three cities agreed that closeness to home was the chief *attraction*. Similarly, the three cities named the same *disadvantages* of the suburban shopping centers in the same order, with 'lack of large selection' first, 'not all kinds of business represented' in second place, and 'prices too high' in the third position, demonstrating a remarkably consistent pattern.

Since the present study was particularly concerned with the parking angle, special effort was exerted to weight this factor properly when all factors were taken into consideration. After a series of analyses were brought to bear on this question, the conclusion is that though parking is the greatest disadvantage of the central business district, and though traffic conditions of the downtown area in the cities of the study are troublesome to people when they want to procure shopping goods, these disadvantages apparently are not troublesome enough to determine or greatly affect their shopping orientation when all factors are taken into consideration, and therefore that the number and weight of downtown *advantages* seem to minimize the *disadvantages* of parking and traffic difficulties.

When comparing cities with regard to satisfaction with parking and traffic conditions, in the opinion of the car-using citizens of the samples, Houston has the most satisfactory parking situation; Seattle respondents are more satisfied with the cost of parking and traffic than are the motorists of the other two cities; Columbus respondents evidenced the lowest satisfaction of all cities with regard to parking, cost of parking, and traffic conditions.

Neighborhood loyalty as measured by length of residence in a neighborhood apparently has no effect on use of or attitude toward shopping areas, but presence of children in the family is a factor in favor of suburban shopping centers.

From the Columbus study, it appeared that the effect of *distance* was apparently minimized or overcome under certain situations and conditions by the presence of other variables. The additional data from Houston and Seattle confirm this conclusion and make possible an amplification of that generalization by a description of the conditions and the other variables involved. While the pattern is not always consistent, much evidence is available to support this generalization: when people want to procure shopping goods, higher socio-economic groups living at the periphery of a city patronize downtown more and evidence more favorable attitudes to it than do lower economic groups living in similar locations. As the distance to the city's center diminishes, differences in facility-use and satisfaction between different socio-economic groups diminish and may be reversed, with lower status groups in the area proximate to downtown using this shopping area more and being more satisfied with it than the upper socio-economic classes. The effect of distance is also noticeable when other variables are controlled, since attitude and behavior scores of subcategories based on age, sex, income, education, etc. increase as the distance to the city's center diminishes.

From the earlier study it was evident that persons differing as to measurable qualities such as education, income, occupation, urban-rural background, and sex differed also in their use of and in their attitudes toward the central business district and suburban centers. This tendency is confirmed in general by the Seattle and Houston data, but not definitively in all particulars. While the tendency is for higher socio-economic groups, as measured by various indices, to evidence a stronger attraction toward downtown, differences associated with socio-economic status are obscured and nullified under certain conditions as described above.

Differences between age groups are not always significant, but where significant differences do appear the 50-64 year category is more strongly oriented toward downtown than is the 18-34 or 35-49 year group.

A tendency for females to be more oriented to downtown than males is apparent, but differences between the sexes in the light of evidence from the three cities are not large enough to be of much significance.

In the Columbus study the urban groups scored significantly higher than did rural groups; while this tendency is apparent in the other two cities, differences between urban and rural groups in Houston and Seattle are not large enough to be significant. It is possible that larger differences might have been observed if the N's

had been larger in rural-urban and male-female comparisons.

Comparison of various major occupational groups in Houston and Seattle showed that professionals, managers, proprietors, and clerical and sales categories are very similar in their behavior and attitude. They differ significantly from the skilled workers, being more strongly oriented to the downtown area than the skilled group. It appears that the large difference is not between 'professional' and 'unskilled,' but between other groups and the 'skilled', who consistently and significantly show greater orientation toward suburban shopping than the other groups.

The hypothesis that people who differ in various ways may be dissimilarly attracted or repelled by specific conditions of downtown and suburban shopping centers was sustained by data from three cites. In all of them 'large selection of goods' was found more important as an advantage for the upper socio-economic groups than for the lower, and in Houston and Seattle for the 18–49 year group as against the 65-and-over age category. 'Cheaper prices', however, was selected as the most important advantage for downtown by a larger percentage of the lower than the higher socio-economic group.

A significantly greater proportion of the higher than of lower income groups, and of younger than of older age groups in Seattle, chose parking over other factors as the greatest downtown disadvantage, while the lower income groups felt that the chief difficulty in the central business district was the cost of transportation.

Variations of groups in perception of most important advantages of suburban shopping centers were also apparent. While all groups in all three cities felt that nearness to home was the greatest advantage of the suburban shopping centers, the lower socio-economic groups and younger age group (18–49) chose this advantage to a significantly greater degree than did upper status and older groups in Columbus and Houston.

It would appear that lack of a large selection is felt more strongly as a *disadvantage* of the *suburban shopping centers* by the upper socio-economic groups than by the lower, and by the younger age groups (18–34) than by the older (50–64).

When comparing various groups as to their perception of the parking difficulty, the middle income group ($4,000–$5,999) seems to be the one for whom parking difficulty, parking cost, and traffic congestion are worst. When asked to state the degree of difficulty experienced with parking, cost of parking, and traffic, the higher income category ($8,000 and over) felt a lesser degree of difficulty with these conditions than did lower income groups.

When the comparison is made between males and females, the score of males is lower for parking, but higher for cost of parking in all three cities. No great differences are apparent between age groups with regard to these conditions, but the older age groups seem to be slightly less concerned with parking and traffic difficulties than do the younger groups, but the differences are not statistically significant either between males and females or among age groups. When comparing persons with urban or rural backgrounds, no statistically significant differences are apparent, although the urban group seems to be more attracted to downtown than does the rural group; however, the failure to get large differences in this instance may be due to small N's in the rural category rather than to a lack of real differences between the two groups.

In general some groups differing in measurable qualities display differences in their reactions to many important facts and conditions which they meet when shopping. There is consequently a high probability that differences in shopping orientation and attitudes as measured by the Habit and Attitude Scales result from differential reaction of various groups to the objective facts with which they have to deal as they buy goods and services.

INTERPRETATIONS

If the central business district were to decline and give way to suburban shopping centers, this social change would involve a radical reordering of the ecological and functional structure of urban communities. To explain social change it is often necessary to ascertain not only what new stimuli affect a group, but also to determine how a group interprets those stimuli. Through the process described by McIver as 'dynamic assessment', an individual strikes a balance of conditions and limitations of available means to achieve the ends he seeks, and thus brings into a single order of coherent relationship the diverse factors determining his behavior.

Social change results from the weight of combined assessments of many individuals, groups, and categories within society. In order to explain this process the human behavior scientist needs to understand the motivations which prompt behavior. In this study, attitude scales tested for validity and reliability were employed to facilitate and make more rigorous and accurate the process of dynamic assessment and to permit an analysis of certain motives.

The mushrooming of suburban shopping centers around large cities is a sign to many that the integrity and stability of the central business district are in dire

jeopardy. The findings of this research reveal, however, that the central business district still possesses certain very definite advantages.

There is a question, however, as to whether these advantages are of basic importance and of a permanent nature, or whether they are merely ephemeral. The remarkable agreement of respondents in three different regions of the United States in their evaluations of downtown and of suburban shopping centers seems to deserve notice and comment. In the opinion of the majority, the central business district has decided advantages, offering better services, greater variety of goods, better quality, and cheaper prices. The downtown area may retain these advantages because it has a greater number of actual and potential customers than are available elsewhere.

That distance is an important factor in affecting where a person will shop is clear from the data presented. This advantage of the downtown area derives from the historical development of the city's spatial pattern. The central business district was the original nucleus of the city, from which it grew outward along radial lines of travel. As transport facilities were improved and expanded, an ever greater flow of people to the center resulted in further growth of the central area. Economic and governmental institutions of interest and importance to all the people of the metropolitan area sought locations of maximum accessibility. The cumulative effect was to create an area of tremendous pulling power.

The location of the central business district results also from other features of the urban culture. American urban society is characterized by a value system which allows people's behavior, particularly with regard to economic relations, to be governed by rationalistic bargaining. Other factors such as sentiment and kinship decline in importance in the interaction process. Findings that neighborhood loyalty or sentiment in no way influences shopping orientation illustrate this point. Thus, retail stores are unfettered by sentimental, personal, or kinship considerations and may locate wherever various factors combine to produce the maximum profit. Retail stores preempt the zones of maximum population flow, since their function and existence demand it, and since they have the economic power to outbid other institutions for the costliest land at locations of maximum accessibility. This is the place where most people believe they can achieve the maximum gains in their exchange relationships. That the majority of respondents of the three cities felt that they could get the best products there for the lowest cost in money and at a tolerable cost of time and inconvenience reflects these relationships.

Recognizing the advantages of central position, the developers of a huge new shopping center in Portland, Oregon, which will be twice the size of the celebrated Northgate Center in Seattle, are locating it near the geographic center of the city and not on the periphery. The pattern of urban spatial structure has been set in concrete, asphalt, brick, and steel; social and economic relations have evolved, grown, and intertwined decade after decade into an interrelated complex structure not easily disrupted.

Why should 'large selection of goods', chosen by respondents of all cities as the most important advantage of the central business district, be considered so vital? Thorstein Veblen and others have pointed out the importance of clothes and other belongings as symbols of status in our open-class system. A larger selection, particularly where all the 'best' stores are available for comparison, would seem to facilitate the acquisition of the status symbols of the elite. This explanation may be important in explaining why the upper socio-economic groups in the samples studied found this a more important factor than did lower income groups.

Another explanation in terms of the nature of urban culture and social structure may have wider applicability. Urban society is characterized by two contradictory tendencies: on the one hand we have mass consumption and interests, and on the other a great diversity of interests and needs arising out of the heterogeneity of urban culture and its multigroup social structure. In the large population of a metropolitan region there are therefore a number of uncommon specialized needs and interests that must be met, but these are so scattered in space and time that a very large population is needed by the retail institutions which supply them. The suburban shopping centers, because of their more limited accessibility, cannot support as large a selection of goods as downtown and must therefore concentrate on what the average or the greater majority of persons want relatively frequently. The downtown area therefore becomes the place where a greater number of people have a better chance of meeting their needs whatever they are, and in some instances it is the only place where they can get what they need.

The changes taking place seem to involve a general redistribution of functions. Downtown facilities may increasingly serve specialized needs, and servicing of more frequent and common needs may be in process of transfer to peripheral areas.

Merchants in the downtown area, if they are to maintain their dominant position, will need to recognize,

utilize, and exploit the solid advantages of their loca-
tions. They must also bend their effort to prevent
congestion and parking difficulties from raising the
'cost' in inconveniences of downtown shopping. It is
clear from the data from three cities that the advan-
tages of the suburban shopping centers result from the
negative factors of the downtown situation—the in-
conveniences experienced in shopping there.

Of all these inconveniences, parking has most often
been singled out as the most damaging to the central
business district. The results of this research indicate
that parking, though it is downtown's greatest dis-
advantage, is not as serious a handicap to downtown
business as many believe, since analysis reveals that it
does not greatly affect the shopping orientation of per-
sons when other factors are taken into consideration. A
number of reasons may be advanced to explain this
phenomenon: in the first place, a large proportion of
people do not use their cars for shopping downtown. To
these must be added many who have reserved or private
parking facilities. Moreover, the buying of shopping
goods is infrequent, the average persons shopping about
once a month. In other words, the parking difficulty *as
far as shopping downtown is concerned* affects a large
proportion of people not at all and the majority infre-
quently. Thirdly, the advantages of the central business
district as against the suburban centers are of such a
nature that the majority are willing to pay the incon-
venience cost to get what they feel is available only
downtown. Since parking seems, however, to be the
number one disadvantage of downtown, efforts to im-
prove that situation will increase the stability of the
area. Parking, however, should be kept in its proper
perspective. Other measures, such as the improvement
of mass transportation, should not be neglected.

Why do suburban shopping centers continue to pro-
liferate, and what are some of the more important fac-
tors associated with this development? In a sense we are
also asking here, 'What other factors beside parking are
responsible for some shift in retail trade to suburban
areas?' Their continued growth, like the genesis of the
central business district, may be attributed to the cumu-
lative effect of the convergence in time and space of a
number of cultural, ecological, demographic, and eco-
nomic factors favorable to their development. They
should continue to grow if the juxtaposition of these
historical accidents is maintained, but, like the central
areas, the new centers are vulnerable to fundamental
changes in any of the factors or combination of events
which initiated their development.

The growth of the city pushed the bulk of its popula-
tion ever farther away from the center, and traffic con-

gestion increased the inconveniences in getting there.
The development of automobile transport made any
point on a highway accessible to a fairly large number
of people. Thus, while distances to subcenters from the
surrounding area were in effect decreasing, those to the
center were increasing. The effect of this development is
reflected in the attitudes of people when the majority of
respondents of all three cities making independent
judgments find the chief advantages of the suburban
centers are that less time is needed to get there, that less
walking is required, that shopping is less tiring there,
that the cost of transportation is less, and that it is
easier to take children shopping there.

The automobile, by increasing the accessibility of
suburban shopping centers, increased their number of
potential customers, which in turn enabled them to pro-
vide a wider variety of goods and meet a greater range
of consumer needs. These new centers attract some
people who regard the inconveniences of downtown as
onerous, and for whom the greater selection of goods
and other advantages of the central business district are
not worth these inconveniences. The present research
indicates that skilled workers are among the persons
most attracted to suburban shopping centers.

There has also been an unprecedented increase in the
suburban areas of families whose needs for convenience
goods, food, drugs, hardware, etc. must be met by
neighborhood stores. It is probable that a large portion
if not the greater portion of sales in suburban shopping
centers is accounted for by 'convenience goods', as it
always has been.

In this period of suburban growth the country has
experienced an economic boom with plenty of cheap
money in circulation. What the fate of suburban centers
will be in times of contracting rather than expanding
economy we do not know.

The suburban shopping centers have also profited by
being a novelty. Will the novelty wear off, or will the
buying of shopping goods in suburban centers grow and
become a habit and a new shopping pattern for the
majority of people? That Houston is more oriented to-
ward suburban centers may be due in part to the fact
that this city, like Los Angeles, is an 'automobile city',
having had its greatest growth in the age of the automo-
bile, so that the mobility pattern of its people developed
in response to the ecological pattern associated with
this method of travel. It is also possible that atomic
energy may create a new basis for yet another ecological
reorganization, but this seems far in the future.

It is characteristic in a capitalistic economy for en-
trepreneurs to rush into any area of business where the
possibility of profits exists. Suburban shopping centers

have given an unprecedented opportunity for the smaller investor to capture a share of the huge metropolitan retail market which up to now has been largely monopolized by the large downtown stores. The rush into areas of profit continues until a series of failures indicates that the possibility of achieving a profit are too remote for the risk involved. These limiting forces are not yet prevalent, although there is some evidence that they are beginning to affect some suburban shopping centers. Some stores in the peripheral centers are branches of much larger stores in the downtown area. This reduces the overhead of the branch store, and it may be carried for some time at a loss in anticipation of later profit or as a hedge against any loss that might be incurred from a decline in downtown shopping.

Recent research[54] on trends in shopping goods sales indicates that the percentage *increases* in shopping goods total sales have been proportionately greater in suburban shopping centers than in the downtown section of some cities. However, it should be remembered that any absolute increase, no matter how small, in an area which had few such sales to begin with, results in a large percentage increase, while a very great amount of new sales is required to show any appreciable per-

[54] Highway Research Board, SPECIAL REPORT 11, *Parking As a Factor in Business*, Washington, D. C., 1953.

centage increase in an area that in the earlier period had a large number of sales.

The suburban shopping center, if it is to supplant downtown, must approach that area's variety and selection, a most difficult task because of its peripheral position. It could take the place of downtown if some basic changes should take place in our culture affecting our ideas of the 'good life.' If this involves a rejection of the 'urban way of life,' or if some of the basic values of a contractualistic, rationalistic, capitalistic system are changed, such changes in values might favor the suburban location.

To be sure that generalizations from the studies of Columbus, Houston, and Seattle would hold in supermetropolises such as New York or Chicago would require additional studies. Although it is apparent that some reordering of the functional areas of the city is taking place, this research indicates that negative conditions in the type of city studied have as yet not developed to a degree which seriously endangers the integrity of the downtown area.

The advantages now enjoyed by the central business district are not easily alterable, for they are rooted in the ecological structure of American cities and in their cultural and social system, but rapid social changes so characteristic of our dynamic urban society blur the outlines of the patterns of tomorrow.

Acknowledgments

APPENDIX A

Final Revised Schedule

An examination of the schedule will reveal that the front page of the final schedule seeks to ascertain the shopping habit pattern of the respondent. Questions were added to permit extension of The Shopping Habit Scale and to make feasible correlation of these data with data from other studies under way or completed.

Section IIA is the same as that of last year's schedule. In Section IIB are contained the items which, on the basis of the item analysis, proved to be discriminating. Scale IIC was retained intact, but the positions of some of the items have been changed. Part II D of the final schedule has been kept as it was last year, but its position within the schedule changed. These items were not used in a scale, but were kept as survey items to compare results from the other cities with Columbus' findings. The background information on individuals and families in the last part is practically the same, except that a question concerning the length of residence in the neighborhood has been added, and items on race and nativity dropped. The last two items in this part concern distance from the respondent's home to the suburban shopping centers and to downtown. These were measured on a map and filled in after the interview was completed.

STUDY OF SHOPPING AND PARKING
NATIONAL RESEARCH COUNCIL AND OHIO STATE UNIVERSITY
I

1 2 3				4	5 6 7
□ □ □				□	□ □ □
Schedule No.				Area	Block No.

Last purchase of groceries or meat in a suburban shopping center (SSC).

When last trip?	8	Within the last week (1)____ Over 1 week ago but less than 1 mo. ago (2)____ Over one month ago (3)____
Mode?	9	Auto (1)____ Public (2)____ Walk (3)____
Origin?	10	Home (1)____ Work (2)____ Other (3)____

Have you bought groceries or meat downtown within the past year? If so:

When last trip?	11	Within the last week (1)____ Over 1 week ago but less than 1 mo. ago (3)____ Over one month ago (5)____
Mode?	12	Auto (1)____ Public (2)____ Walk (3)____
Origin?	13	Home (1)____ Work (2)____ Other (3)____

Where respondent last bought the following goods and services.

14	Food	SSC (1)____	DT (5)____	Other (3)____
15	Doctor's Office	SSC (1)____	DT (5)____	Other (3)____
16	Movies	SSC (1)____	DT (5)____	Other (3)____
17	Shoes	SSC (1)____	DT (5)____	Other (3)____
18	Furniture	SSC (1)____	DT (5)____	Other (3)____
19	Clothing	SSC (1)____	DT (5)____	Other (3)____
20	House Furnishings	SSC (1)____	DT (5)____	Other (3)____
21	Appliance	SSC (1)____	DT (5)____	Other (3)____

Have you shopped in a SSC for such things as clothing and furniture within the past year? If so:

22	Within the last week (1)____ Over 1 week ago but less than 1 mo. ago (3)____ Over one month ago (5)____
23	Auto (1) Public (2) Walk (3)
24	Home (1)____ Work (2)____ Other (3)____

Have you shopped downtown for such things as clothing and furniture within the past year? If so:

25	Within the last week (5)____ Over 1 week ago but less than 1 mo. ago (3)____ Over 1 mo. ago (1)____
26	Auto (1)____ Public (2)____ Walk (3)____
27	Home (1)____ Work (2)____ Other (3)____

28 Estimated no. of items bought on last trip downtown
none (1)____   one to two (3)____   three and over (5)____

29 Estimated no. of different kinds of errands and shopping done on last trip downtown.
none (1)____   one to two (3)____   three and over (5)____

30 Estimated amount spent in downtown stores monthly.
0-$9 (1)____ $10-$19 (3)____   over $20 (5)____

31 Estimated amount spent in SSC monthly for such things as clothing, furniture.
0-$9 (5)____ $10-$19 (3)____   over $20 (1)____

Scale I Score   32
33

II A

ATTITUDES TOWARD SHOPPING IN CENTRAL BUSINESS SECTION AND SUBURBAN SHOPPING CENTERS

Your answers to the questions in this section will help us to find out what you like or dislike about shopping conditions downtown or in the suburban shopping center. I realize this is rather difficult to say when you have not been thinking about it before, but I hope you will try to decide.

NOTE: Use sets of cards.

Which do you think are the three most important *advantages* of shopping *downtown* starting with the most important advantage first, the next important next, and so on, numbering them "1", "2", and "3" in the order of their importance?

1 ☐ Larger selection of goods
2 ☐ Cheaper prices
3 ☐ Convenient public transportation   34 ☐
4 ☐ Enjoyable place to shop   35 ☐
5 ☐ Close to home   36 ☐
6 ☐ Stores close together
7 ☐ Can do several errands at one time
8 ☐ Better delivery service
9 ☐ Other_____

Which do you think are the three most important *disadvantages* in shopping *downtown* starting with the most important disadvantage first, the next important next, and so on, numbering them "1", "2", and "3" in the order of their importance?

1 ☐ Poor public transportation
2 ☐ Takes too long to shop there
3 ☐ Difficult parking   37 ☐
4 ☐ Too crowded   38 ☐
5 ☐ Congested traffic conditions   39 ☐
6 ☐ Cost of transportation too high
7 ☐ Too far to go
8 ☐ Unfriendly service
9 ☐ Other_____

Which do you think are the three most important *advantages* of shopping in the *suburban shopping center*, starting with the most important advantage first, the next important next, and so on, numbering them "1", "2", and "3" in the order of their importance?

1 ☐ Closer to home
2 ☐ Less crowded
3 ☒ More convenient hours   40 ☐
4 ☐ Parking easy   41 ☐
5 ☐ Clean and modern stores   42 ☐
6 ☐ Friendly and courteous clerks
7 ☐ Do not have to dress up to go there
8 ☐ Less noise and confusion
9 ☐ Other_____

Which do you think are the three most important *disadvantages* of shopping in the *suburban shopping center*, starting with the most important disadvantage first, the next important next, and so on, numbering them "1", "2", and "3" in the order of their importance?

1 ☐ Poor public transportation
2 ☐ Lack of large selection
3 ☐ Not all kinds of business represented
4 ☐ Too far to go   43 ☐
5 ☐ Prices high   44 ☐
6 ☐ Bus fare too high   45 ☐
7 ☐ Hard to get credit
8 ☐ Poor delivery service
9 ☐ Other_____

II B

ATTITUDES TOWARD SHOPPING

Different people like some things and dislike other things about the downtown area or the suburban shopping centers. You will probably agree with some of the following statements and disagree with others. Indicate for each statement whether you "strongly agree", "agree", "are undecided", "disagree", or "strongly disagree" with the statement. Underline the statement which shows how you feel.

46. One of the things I like about shopping downtown is the good delivery service.
strongly agree   agree   undecided   disagree   strongly disagree   ☐
5   4   3   2   1

47. One of the things I like about downtown is the ease with which I can establish a charge account.
strongly agree   agree   undecided   disagree   strongly disagree   ☐
5   4   3   2   1

48. It is easier to return and exchange goods in the suburban shopping center than downtown.
strongly agree   agree   undecided   disagree   strongly disagree   ☐
1   2   3   4   5

49. One of the things I like about suburban shopping is that it is so much easier to take children shopping there.
strongly agree   agree   undecided   disagree   strongly disagree   ☐
1   2   3   4   5

50. I find a better quality of goods in the suburban shopping center.
strongly agree   agree   undecided   disagree   strongly disagree   ☐
1   2   3   4   5

51. When comparing downtown and suburban stores, I find the prices lower for the same quality goods in suburban shopping centers.
strongly agree   agree   undecided   disagree   strongly disagree   ☐
1   2   3   4   5

52. Downtown is a good place to combine different kinds of shopping and other things I may want to do.
strongly agree   agree   undecided   disagree   strongly disagree   ☐
5   4   3   2   1

53. When shopping downtown, I find the amount of walking required is altogether too much.
strongly agree   agree   undecided   disagree   strongly disagree   ☐
1   2   3   4   5

54. I find that the suburban stores generally give a more dependable guarantee of goods.

| strongly agree | agree | undecided | disagree | strongly disagree | ☐ |
| 1 | 2 | 3 | 4 | 5 | |

55. Stores in the suburban shopping center keep more convenient hours.

| strongly agree | agree | undecided | disagree | strongly disagree | ☐ |
| 1 | 2 | 3 | 4 | 5 | |

56. One of the things I like about the suburban shopping center is the comparative peace and quiet and lack of crowding and dirt.

| strongly agree | agree | undecided | disagree | strongly disagree | ☐ |
| 1 | 2 | 3 | 4 | 5 | |

57. When I want to go shopping downtown for such things as clothing and furniture, the time it takes me matters:

| very much | much | some | a little | not at all | ☐ |
| 1 | 2 | 3 | 4 | 5 | |

58. As far as I am concerned, the cost of transportation to downtown matters:

| very much | much | some | a little | not at all | ☐ |
| 1 | 2 | 3 | 4 | 5 | |

59. When I go shopping for clothing, I:

always go	usually go	am	usually go	always go to	☐
downtown	downtown	undecided	to the SSC	the SSC	☐
5	4	3	2	1	☐

60. When I go shopping for furniture and household furnishings, I:

always go	usually go	am	usually go	always go to	☐
downtown	downtown	undecided	to the SSC	the SSC	
5	4	3	2	1	

61. All things considered, I have found that the best place to go shopping for such things as clothing, furniture, and household furnishings has been:

| always DT | usually DT | don't know | usually SSC | always SSC | ☐ |
| 5 | 4 | 3 | 2 | 1 | |

62. I consider myself:

definitely a down-	probably a		probably a	definitely a	☐
town shopper	downtown	undecided	SSC shopper	SSC shopper	
5	shopper	3	2	1	
	4				

63. The suburban shopping centers satisfy me in every way no matter what I want to buy, so I see no reason for shopping elsewhere.

| strongly agree | agree | undecided | disagree | strongly disagree |
| 1 | 2 | 3 | 4 | 5 |

Scale II B Score   64 ☐
                     65 ☐

II C*

66. My situation is such that for me to get to an adequate suburban shopping center is

practically	extremely		slightly	no trouble	☐
impossible	difficult	difficult	difficult	at all	
5	4	3	2	1	

67. My situation is such that for me to get downtown is:

practically	extremely		slightly	no trouble	☐
impossible	difficult	difficult	difficult	at all	
5	4	3	2	1	

68. With regard to downtown crowds, I can truly say that I:

hate	dislike	am affected in	like	like them	☐
them	them	no way by them	them	very much	
1	2	3	4	5	

69. With regard to the hustle and bustle downtown, I can truly say that I:

hate it	dislike it	am unaffected	like it	like it very much	☐
1	2	by it	4	5	
		3			

70. Downtown shopping is a pleasant change from every day routine.

| strongly agree | agree | undecided | disagree | strongly disagree | ☐ |
| 5 | 4 | 3 | 2 | 1 | |

71. One of the things I dislike about shopping downtown is that I have to dress up.

| strongly agree | agree | undecided | disagree | strongly disagree | ☐ |
| 1 | 2 | 3 | 4 | 5 | |

72. I go downtown only when I cannot avoid it.

| strongly agree | agree | undecided | disagree | strongly disagree | ☐ |
| 1 | 2 | 3 | 4 | 5 | |

73. Have you ever used an automobile for shopping downtown? (1) Yes____ (2) No____
    NOTE: Answer the following questions only if the answer to the previous question is "yes".

74. When I go downtown by car, finding a place to park for me is:

practically	extremely		fairly	no trouble	☐
impossible	difficult	difficult	difficult	at all	
1	2	3	4	5	

75. As far as I am concerned, the cost of parking downtown matters:

| very much | much | some | a little | not at all | ☐ |
| 1 | 2 | 3 | 4 | 5 | |

76. I take the bus rather than drive my car downtown:

| always | usually | often | occasionally | never | ☐ |
| 5 | 4 | 3 | 2 | 1 | |

77. When I drive downtown, I find the traffic:

| practically impossible 1 | extremely difficult 2 | difficult 3 | fairly difficult 4 | no trouble at all 5 | □ |

Scale II C Score   78 □
79 □

* Items 66, 67, and 73 not included in total Scale II C score.

II D

We have asked you how you feel about certain conditions and things found downtown and in suburban shopping centers. We should now like you to compare downtown and suburban shopping centers by indicating where you find the better condition with regard to the items which I will read to you. Please indicate whether you think downtown or the suburban shopping center has the advantage. If the item is of no concern to you or if you are undecided tell me that. Check the appropriate box.

DT(Downtown): SSC(suburban shopping center):
UN(undecided): NC(no concern).

Item No.	(1) DT	(2) SSC	(3) UN	(4) NC	Item
80					Better delivery service
81					Easier to establish a charge account
82					Easier to return and exchange goods bought
83					Better place to establish a credit rating
84					Greater variety and range of prices and quality
85					Greater variety of styles and sizes
86					More bargain sales
87					Better quality of goods
88					Cheaper prices
89					Takes less time to get there
90					Better place to combine different kinds of shopping and other things one may want to do
91					Less walking required
92					Goods more attractively displayed
93					Less tiring
94					Cost of transportation less
95					More convenient to public transportation
96					Easier to take children shopping
97					It's the better place for a little outing away from home
98					The right people shop here
99					More dependable guarantees of goods
100					Best place to meet friends from other parts of the city for a shopping trip together
101					Keep open more convenient hours
102					Better places to eat lunch

III

BACKGROUND INFORMATION

Please check the appropriate answer to each question or write the required information in the blank provided.

103. What is your sex? (1) Male___   (2) Female___   □
104. How many years of school have you completed? (Write the no. of years in the appropriate space. Indicate only highest no. of years completed.)
    (1) Less than 8 years___   (4) 12 years___
    (2) 8 years___   (5) 13–15 years___
    (3) 9–11 years___   (6) 16 years and over___   □
105. What is your marital status:
    (1) Single___   (2) Married___   (3) Divorced___   (4) Widow(er)_____   □
106. How many children under 12 are there in your family?_____   □
107. Do you own this house? (1) Yes___   (2) No___   □
108. What is your occupation? (Be specific)_____   □
109.   □
110. If you are married, what is your $\begin{bmatrix} \text{husband's} \\ \text{wife's} \end{bmatrix}$ occupation?_____   □
111. What is the population of the community where you have lived most of your life? (Write population in the appropriate space.)
    (1) Rural (500–2,499)_____   (2) City (2,500–999,999)_____   □
    (3) Metropolis (1,000,000 or over)_____
112. a. How many years have you lived in your present neighborhood? Put the number of years in the appropriate space.   □
    (1) Less than 2 yrs. A_____   (2) More than 2 yrs. A_____
    b. What was your age when you moved here?   B_____
113. Age of respondent. (Write age (A + B) in the appropriate space.)
    (1) 18–24 yrs._____   (2) 25–34 yrs._____   (3) 35–49 yrs._____   □
    (4) 50–64 yrs._____   (5) 65 yrs. and over_____
114. For classification purposes only, indicate by number the broad range in which your income would fall. (If married, combined income of husband and wife. Check appropriate space.) Use cards.
    (1) Under $2,000___   (5) $8,000–$9,999___
    (2) $2,000–$3,999___   (6) $10,000–$11,999___   □
    (3) $4,000–$5,999___   (7) $12,000–$13,999___
    (4) $6,000–$7,999___   (8) $14,000 and over___

> Not to be asked. To be measured and filled in by interviewer after interview.
> 115. Distance from respondent's home to downtown (nearest tenth
> 116. mile)___
>
> 117. Distance from respondent's home to SSC (nearest tenth
> 118. mile)___

Interviewer_____

APPENDIX B

Tables Presenting Personal Background Data for Houston and Seattle Samples

TABLE B-1
MARITAL STATUS OF HOUSTON AND SEATTLE RESPONDENTS

Status	Houston		Seattle	
	Number	Percent	Number	Percent
Single...............	33	5	25	4
Married.............	499	83	496	83
Divorced...........	10	2	15	2
Widow(er)..........	58	10	64	11
Total..............	600	100	600	100

TABLE B-2
SEX OF HOUSTON AND SEATTLE RESPONDENTS

Sex	Houston		Seattle	
	Number	Percent	Number	Percent
Male................	100	17	97	16
Female..............	500	83	505	84
Total..............	600	100	600	100

TABLE B-3
HOME OWNERSHIP OF HOUSTON AND SEATTLE RESPONDENTS

Status	Houston		Seattle	
	Number	Percent	Number	Percent
Owner...............	343	57	472	79
Tenant..............	253	42	128	21
No data.............	4	1	0	0
Total..............	600	100	600	100

TABLE B-4
SIZE OF COMMUNITY WHERE HOUSTON AND SEATTLE RESPONDENTS LIVED MOST OF THEIR LIVES

Community Population	Houston		Seattle	
	Number	Percent	Number	Percent.
500–2,499............	52	9	48	8
2,500–999,999........	529	88	539	90
1,000,000 and over....	19	3	13	2
Total..............	600	100	600	100

TABLE B-5
AGE COMPOSITION OF HOUSTON AND SEATTLE RESPONDENTS

Age Groups	Houston		Seattle	
	Number	Percent	Number	Percent
18–24................	73	12	35	6
25–34................	148	25	143	23
35–49................	220	37	184	31
50–64................	119	19	148	25
65 and over..........	40	7	90	15
No data.............	0	0	0	0
Total..............	600	100	600	100

TABLE B-6
EDUCATION OF HOUSTON AND SEATTLE RESPONDENTS

Education	Houston		Seattle	
	Number	Percent	Number	Percent
Less than 8 years.....	61	10	31	5
8 years..............	33	5	61	10
9–11 years...........	103	17	90	15
12 years.............	172	28	207	35
13–15 years..........	136	23	145	24
16 years and over.....	94	16	64	10
No data.............	1	0	2	1
Total..............	600	100	600	100

TABLE B-7
OCCUPATIONAL SCORES OF HOUSTON AND SEATTLE RESPONDENTS ON NORTH-HATT SCALE

Occupational Scores	Houston		Seattle	
	Number	Percent	Number	Percent
39–49................	33	5	41	7
50–59................	101	17	123	21
60–69................	227	38	240	40
70–79................	152	25	121	20
80–93................	59	10	50	8
No data.............	28	5	25	4
Total..............	600	100	600	100

TABLE B-8
HOUSTON AND SEATTLE RESPONDENTS BY MAJOR OCCUPATIONAL GROUPS

Occupational Group	Houston		Seattle	
	Number	Percent	Number	Percent
Professional, technical and kindred...	146	24	83	14
Farmers and farm managers...........	0	0	1	0
Managers, proprietors and officials, except farm...............	90	15	103	17
Clerical and kindred	45	7	30	5
Sales................	55	9	59	10
Craftsmen, foremen and kindred........	137	23	116	19
Operative and kindred...............	28	5	62	10
Household, personal, custodial and protective service......	43	7	94	16
Farm laborers and foremen...........	0	0	0	0
Laborers except farm and mine..........	28	5	27	5
No data..............	28	5	25	4
Total..............	600	100	600	100

TABLE B-9
FAMILY INCOME OF HOUSTON AND SEATTLE RESPONDENTS

Family Income	Houston		Seattle	
	Number	Percent	Number	Percent
Under $2,000.........	53	9	80	13
$2,000-$3,999.........	176	29	134	22
$4,000-$5,999.........	158	27	194	32
$6,000-$7,999.........	85	14	93	16
$8,000-$9,999.........	39	7	30	5
$10,000-$11,999.......	37	6	28	5
$12,000-$13,999.......	26	4	13	2
$14,000 and over......	26	4	26	4
No data..............	0	0	2	1
Total..............	600	100	600	100

TABLE B-10
NUMBER OF CHILDREN UNDER 12 PER FAMILY IN HOUSTON AND SEATTLE SAMPLES

Number of Children	Houston		Seattle	
	Number	Percent	Number	Percent
0.....................	325	54	345	58
1.....................	142	24	111	19
2.....................	76	13	87	14
3.....................	37	6	42	7
4.....................	11	2	11	2
5.....................	4	1	2	0
6 or over.............	3	0	0	0
No data..............	2	0	2	0
Total..............	600	100	600	100

TABLE B-11
WHERE RESPONDENTS OF COLUMBUS, HOUSTON, AND SEATTLE LAST BOUGHT INDICATED ITEMS OR SERVICE

N = 600 in each city. Data expressed as percentages. DT = Downtown. SSC = Suburban shopping center.

Item	Columbus			Houston			Seattle		
	DT	SSC + other	No data	DT	SSC + other	No data	DT	SSC + other	No data
Food..............	1.7	98.1	0.2	0.0	100.0	0.0	1.5	98.0	0.5
Movies............	22.7	60.2	17.1	23.2	76.3	0.5	35.7	56.3	8.0
Medical care......	28.3	69.3	2.4	27.5	72.5	0.0	45.7	53.1	1.2
Furniture.........	61.8	30.9	7.3	48.7	51.3	0.0	59.0	41.0	0.0
House furnishings.	—	—	—	53.0	47.0	0.0	62.1	37.9	0.0
Appliances........	—	—	—	54.5	45.5	0.0	48.3	51.7	0.0
Clothing..........	72.2	26.5	1.3	59.7	40.3	0.0	70.5	29.5	0.0
Shoes.............	—	—	—	64.0	36.0	0.0	67.3	32.7	0.0

The 'other' category includes retail or service units which could not be considered part of a group of stores constituting a 'shopping center'.

APPENDIX C

Tables Presenting Data on Eight Areas Sampled in Houston and Seattle

TABLE C-1
COMPOSITION OF FOUR HOUSTON AREAS, BY INCOME
N = 150 for each area. Data expressed as percentages

Family Income	Area 1	Area 2	Area 3	Area 4	Total
Under $2,000	3	13	9	11	9
$2,000–$3,999	10	37	30	40	30
$4,000–$5,999	15	29	26	35	26
$6,000–$7,999	20	11	15	12	15
$8,000–$9,999	15	4	5	1	6
$10,000–$11,999	14	3	7	1	6
$12,000–$13,999	11	3	3	0	4
$14,000 and over	12	0	5	0	4
Total	100	100	100	100	100

TABLE C-2
COMPOSITION OF FOUR HOUSTON AREAS, BY EDUCATION
N = 150 for each area. Data expressed as percentages

Years of Education	Area 1	Area 2	Area 3	Area 4	Total
Less than 8 years	3	5	9	23	10
8 years	1	6	4	10	5
9–11 years	9	12	20	28	17
12 years	23	26	42	25	29
13–15 years	33	28	20	11	23
16 years and over	31	23	5	3	16
No data	0	0	0	0	0
Total	100	100	100	100	100

TABLE C-3
COMPOSITION OF FOUR HOUSTON AREAS, BY MAJOR OCCUPATIONAL GROUPS
N = 150 for each area. Data expressed as percentages

Major Occupational Groups	Area 1	Area 2	Area 3	Area 4	Total
Professional, technical and kindred	51	27	15	4	24
Farmers and farm managers	0	0	0	0	0
Managers, proprietors and officials, except farm	17	12	18	14	15
Clerical and kindred	5	9	9	6	7
Sales	12	11	9	4	9
Craftsmen, foremen and kindred	9	18	27	37	23
Operative and kindred	0	0	4	14	5
Household, personal, custodial and protective service	0	9	11	8	7
Farm laborers and foremen	0	0	0	0	0
Laborers except farm and mine	3	4	4	9	5
No data	3	10	3	4	5
Total	100	100	100	100	100

TABLE C-4
COMPOSITION OF FOUR HOUSTON AREAS, BY RURAL-URBAN BACKGROUND
N = 150 for each area. Data expressed as percentages

Rural-Urban Background	Area 1	Area 2	Area 3	Area 4	Total
Rural	4	8	8	16	9
Urban	89	89	92	83	88
Metropolitan	7	3	0	1	3
Total	100	100	100	100	100

TABLE C-5
AVERAGE DISTANCE IN MILES FROM DOWNTOWN AND SUBURBAN SHOPPING CENTERS TO HOMES OF HOUSTON RESPONDENTS IN INDICATED AREAS

Average Distance in Miles to	Area 1	Area 2	Area 3	Area 4
Downtown	5.2	2.6	2.3	5.5
Suburban shopping center	1.1	1.0	1.5	1.2

TABLE C-6
AVERAGE RATING ON NORTH-HATT SCALE OF HOUSTON RESPONDENTS BY AREAS

Area	Average North-Hatt Rating
1	73.7
2	66.5
3	65.1
4	62.0

TABLE C-7
COMPOSITION OF FOUR SEATTLE AREAS, BY INCOME
N = 150 for each area. Data expressed as percentages

Family Income	Area 1	Area 2	Area 3	Area 4	Total
Under $2,000	4	19	15	14	13
$2,000–$3,999	8	26	30	24	22
$4,000–$5,999	28	39	38	25	32
$6,000–$7,999	22	13	14	14	16
$8,000–$9,999	11	1	2	7	5
$10,000–$11,999	11	1	1	5	5
$12,000–$13,999	6	1	0	1	2
$14,000 and over	10	0	0	10	4
No data	0	0	0	0	1
Total	100	100	100	100	100

TABLE C-8

COMPOSITION OF FOUR SEATTLE AREAS, BY EDUCATION

N = 150 for each area. Data expressed as percentages

Years of Education	Area 1	Area 2	Area 3	Area 4	Total
Less than 8 years	1	7	6	7	5
8 years	11	12	11	7	10
9–11 years	9	27	12	12	15
12 years	33	33	41	31	35
13–15 years	31	17	25	23	24
16 years and over	14	4	5	19	10
No data	1	0	0	1	1
Total	100	100	100	100	100

TABLE C-9

COMPOSITION OF FOUR SEATTLE AREAS, BY MAJOR
OCCUPATIONAL GROUPS

N = 150 for each area. Data expressed as percentages

Major Occupational Groups	Area 1	Area 2	Area 3	Area 4	Total
Professional, technical and kindred	23	7	5	20	14
Farmers and farm managers	0	0	0	0	0
Managers, proprietors and officials, except farm	26	6	17	20	17
Clerical and kindred	3	6	5	5	5
Sales	14	4	10	12	10
Craftsmen, foremen and kindred	14	25	26	12	19
Operative and kindred	9	17	12	4	10
Household, personal, custodial and protective service	3	21	22	16	16
Farm laborers and foremen	0	0	0	0	0
Laborers except farm and mine	3	11	1	3	5
No data	5	3	2	8	4
Total	100	100	100	100	100

TABLE C-10

COMPOSITION OF FOUR SEATTLE AREAS, BY
RURAL–URBAN BACKGROUND

N = 150 for each area. Data expressed as percentages

Rural-Urban Background	Area 1	Area 2	Area 3	Area 4	Total
Rural	12	9	7	3	8
Urban	87	91	89	94	90
Metropolitan	1	0	4	3	2
Total	100	100	100	100	100

TABLE C-11

AVERAGE DISTANCE IN MILES FROM DOWNTOWN AND
SUBURBAN SHOPPING CENTERS TO HOMES OF
SEATTLE RESPONDENTS IN INDICATED AREAS

Average Distance in Miles to	Area 1	Area 2	Area 3	Area 4
Downtown	7.6	5.1	3.8	2.6
Suburban shopping center	2.8	1.3	1.9	1.8

TABLE C-12

AVERAGE RATING ON NORTH-HATT SCALE OF SEATTLE
RESPONDENTS BY AREAS

Area	Average North-Hatt Rating
1	69.5
2	60.7
3	63.4
4	67.2

APPENDIX D

Tabular Presentation of Percentages Indicating Responses to Statistically Significant Items in Behavior and Attitude Scales

TABLE D-1

CRITICAL RATIOS AND MEAN SCORES OF TWO SEGMENTS OF
THE SAMPLE IN HOUSTON AND SEATTLE, ON BEHAVIOR
AND ATTITUDE ITEMS, USING SCALE I AS A
CRITERION

Houston: N = 98 Upper segment; N = 96 lower segment
Seattle: N = 125 Upper segment; N = 109 lower segment

Item No.	Houston			Seattle		
	Upper segment mean score	Lower segment mean score	Critical ratio	Upper segment mean score	Lower segment mean score	Critical ratio
18	4.73	1.85	19.88	4.86	1.88	19.24
19	5.00	1.15	52.88	5.00	1.73	22.57
20	4.96	1.15	63.50	4.94	1.72	24.01
21	4.88	1.65	25.55	4.86	1.72	22.79
22	4.53	3.02	8.31	4.78	3.64	7.52
25	3.82	1.40	13.33	3.02	1.50	9.81
28	4.67	2.81	10.57	4.52	3.35	6.87
29	3.96	2.60	8.97	4.22	3.06	8.90
30	4.59	1.46	21.60	4.57	1.86	18.70
31	4.80	1.96	18.33	4.81	2.54	14.97
46	3.68	3.23	4.29	3.88	3.42	5.15
47	3.85	3.05	9.57	3.69	3.35	3.59
48	3.07	2.34	5.78	3.38	2.88	5.00
49	2.42	2.16	2.74	2.59	2.23	4.03
50	3.61	3.16	4.33	3.60	3.38	2.43
51	3.59	3.21	3.36	3.44	3.40	0.39
52	4.16	3.33	7.35	4.18	3.61	6.33
53	3.14	2.25	6.31	3.19	2.28	6.84
54	3.39	2.94	3.98	3.39	3.15	2.49
55	2.63	2.40	2.04	2.77	2.53	2.31
56	2.70	2.06	5.25	2.52	2.03	6.32
57	3.30	2.52	3.56	3.94	2.87	5.72
58	3.42	3.34	0.35	3.50	3.02	2.49
59	4.44	2.03	24.10	4.53	2.68	17.62
60	4.26	2.16	17.50	4.55	2.56	18.95
61	4.29	2.16	19.36	4.46	2.59	19.08
62	4.36	1.74	29.44	4.51	2.09	23.50
63	3.98	2.54	12.31	4.02	2.89	9.46

APPENDIX E

Tabular Presentation of Results of Direct Comparison of Downtown and Suburban Shopping Centers With Regard to Twenty-Three Shopping Satisfaction Factors, Columbus, Houston and Seattle

Tables Showing First, Second and Third Order of Importance of Advantages and Disadvantages of Downtown and Suburban Shopping Centers in Houston and Seattle

TABLE E-1

PERCENTAGE OF *COLUMBUS* SAMPLE INDICATING SUPERIORITY OF DOWNTOWN OR SUBURBAN SHOPPING CENTERS WITH REGARD TO TWENTY-THREE SHOPPING SATISFACTION FACTORS

N = 600 per item

Item No.†	Shopping Satisfaction Factors	Choices*				No Data	Total
		DT	SSC	UN	NC		
33	Better delivery service	37.2	5.4	36.2	21.2	0.0	100
34	Easier to establish a charge account	30.1	5.2	40.6	23.9	0.2	100
35	Easier to return and exchange goods bought	39.5	13.5	32.6	14.4	0.0	100
36	Better place to establish a credit rating	38.5	4.8	36.8	19.7	0.2	100
37	Greater variety and range of prices and quality	81.1	1.7	15.5	1.5	0.2	100
38	Greater variety of styles and sizes	86.3	2.3	10.4	0.7	0.3	100
39	More bargain sales	65.5	2.7	14.3	17.5	0.0	100
40	Better quality of goods	27.3	15.0	54.1	3.3	0.3	100
41	Cheaper prices	46.6	7.9	41.4	3.8	0.3	100
42	Takes less time to get there	12.3	78.9	8.0	0.8	0.0	100
43	Better place to combine different kinds of shopping and other things one may want to do	56.3	29.7	10.0	3.8	0.2	100
44	Less walking required	16.3	69.9	12.0	1.8	0.0	100
45	Goods more attractively displayed	44.1	16.3	33.5	6.1	0.0	100
46	Less tiring	9.3	75.0	14.5	1.2	0.0	100
47	Cost of transportation less	15.7	59.3	17.3	7.4	0.3	100
48	More convenient to public transportation	52.5	14.2	16.8	16.2	0.3	100
49	Easier to take children shopping	2.5	47.6	6.1	43.8	0.0	100
50	It's the better place for a little outing away from home	38.5	33.2	14.5	13.5	0.3	100
51	The right people shop there	10.3	21.5	41.2	26.8	0.2	100
52	More dependable guarantees of goods	34.2	10.0	50.8	5.0	0.0	100
53	Best place to meet friends from other parts of the city for a shopping trip together	66.9	11.5	7.8	13.3	0.5	100
54	Keep open more convenient hours	16.3	62.6	15.3	5.8	0.0	100
55	Better places to eat lunch	61.3	7.9	14.8	16.0	0.0	100

* DT—Downtown. SSC—Suburban Shopping Center. UN—Undecided. NC—Item of no concern.
† These item numbers refer to item numbers on Schedule of Columbus study only.

TABLE E-2

PERCENTAGE OF *HOUSTON* SAMPLE INDICATING SUPERIORITY OF DOWNTOWN OR SUBURBAN SHOPPING CENTERS WITH REGARD TO TWENTY-THREE SHOPPING SATISFACTION FACTORS

N = 600 per item

Item No.	Shopping Satisfaction Factors	Choices*				No Data	Total
		DT	SSC	UN	NC		
80	Better delivery service	44.5	8.0	36.4	11.1	0.0	100
81	Easier to establish a charge account	33.5	7.3	48.9	10.3	0.0	100
82	Easier to return and exchange goods bought	31.0	37.7	26.3	4.7	0.3	100
83	Better place to establish a credit rating	50.2	8.4	32.8	7.8	0.8	100
84	Greater variety and range of prices and quality	83.1	5.0	11.4	0.5	0.0	100
85	Greater variety of styles and sizes	87.6	4.0	7.5	0.6	0.3	100
86	More bargain sales	70.8	6.7	19.2	3.3	0.0	100
87	Better quality of goods	42.0	7.7	48.4	1.8	0.1	100
88	Cheaper prices	51.5	8.6	37.7	2.1	0.1	100
89	Takes less time to get there	9.6	78.8	8.5	2.8	0.3	100
90	Better place to combine different kinds of shopping and other things one may want to do	72.3	20.6	5.5	1.3	0.3	100
91	Less walking required	13.6	72.4	11.5	2.2	0.3	100
92	Goods more attractively displayed	67.9	6.5	22.2	3.3	0.1	100
93	Less tiring	9.0	75.4	12.0	3.3	0.3	100
94	Cost of transportation less	4.0	72.4	19.7	3.1	0.8	100
95	More convenient to public transportation	44.4	17.8	23.5	14.2	0.1	100
96	Easier to take children shopping	1.6	60.9	6.2	31.2	0.1	100
97	It's the better place for a little outing away from home	50.2	28.5	13.2	8.0	0.1	100
98	The right people shop here	15.3	15.5	28.7	39.4	1.1	100
99	More dependable guarantees of goods	32.8	14.4	49.4	3.1	0.3	100
100	Best place to meet friends from other parts of the city for a shopping trip together	65.1	16.0	7.6	11.3	0.0	100
101	Keep open more convenient hours	9.1	51.6	34.5	4.8	0.0	100
102	Better places to eat lunch	49.0	26.7	18.3	6.0	0.0	100

* DT—Downtown. SSC—Suburban Shopping Center. UN—Undecided. NC—Item is of no concern.

TABLE E-3

PERCENTAGE OF *SEATTLE* SAMPLE INDICATING SUPERIORITY OF DOWNTOWN OR SUBURBAN SHOPPING CENTERS WITH REGARD TO TWENTY-THREE SHOPPING SATISFACTION FACTORS

N = 600 per item

Item No.	Shopping Satisfaction Factors	Choices*				No Data	Total
		DT	SSC	UN	NC		
80	Better delivery service	37.5	3.2	50.7	8.6	0.0	100
81	Easier to establish a charge account	27.2	3.5	56.3	13.0	0.0	100
82	Easier to return and exchange goods bought	29.3	12.3	51.9	6.5	0.0	100
83	Better place to establish a credit rating	29.5	4.8	53.7	12.0	0.0	100
84	Greater variety and range of prices and quality	84.6	2.6	12.4	0.3	0.1	100
85	Greater variety of styles and sizes	90.0	1.3	8.6	0.1	0.0	100
86	More bargain sales	68.4	1.5	19.8	10.3	0.0	100
87	Better quality goods	32.5	2.2	64.9	0.1	0.3	100
88	Cheaper prices	49.0	3.8	46.6	0.6	0.0	100
89	Takes less time to get there	25.3	65.1	8.4	1.1	0.1	100
90	Better place to combine different kinds of shopping and other things one may want to do	71.6	16.8	11.3	0.3	0.0	100
91	Less walking required	14.0	67.8	16.5	1.7	0.0	100
92	Goods more attractively displayed	57.6	4.8	36.7	0.8	0.1	100
93	Less tiring	9.5	70.8	18.0	1.6	0.1	100
94	Cost of transportation less	10.0	53.1	31.5	5.3	0.1	100
95	More convenient to public transportation	61.3	6.8	23.8	8.1	0.0	100
96	Easier to take children shopping	2.1	47.4	7.4	43.0	0.1	100
97	It's the better place for a little outing away from home	42.4	35.6	9.6	12.3	0.1	100
98	The right people shop here	2.1	7.3	35.2	55.4	0.0	100
99	More dependable guarantees of goods	27.5	4.3	67.1	1.0	0.1	100
100	Best place to meet friends from other parts of the city for a shopping trip together	66.4	12.4	6.6	14.6	0.0	100
101	Keep open more convenient hours	8.3	44.9	41.2	5.6	0.0	100
102	Better places to eat lunch	68.3	8.6	14.3	8.8	0.0	100

* DT—Downtown. SSC—Suburban Shopping Center. UN—Undecided. NC—Item is of no concern.

TABLE E-4

PERCENTAGE OF *HOUSTON* SAMPLE PLACING CERTAIN ADVANTAGES OF DOWNTOWN SHOPPING IN FIRST, SECOND, AND THIRD ORDER OF IMPORTANCE

N = 600 per item

Advantage	Order of Choice			Composite Rank
	First	Second	Third	
Larger selection of goods....	42.0	27.0	9.0	1
Can do several errands at one time....................	14.0	17.0	19.0	2
Cheaper prices...............	14.0	13.0	7.0	3
Stores close together........	3.0	10.0	11.0	4
Convenient public transportation...................	5.0	5.0	7.0	5
Enjoyable place to shop.....	4.0	6.0	9.0	6
Better delivery service.......	2.0	4.0	8.0	7
Close to home..............	4.0	0.0	1.0	8
Other.....................	3.0	1.0	1.0	—
No advantage..............	9.0	0.0	0.0	—
No choice.................	0.0	17.0	28.0	—
Total....................	100.0	100.0	100.0	—

TABLE E-5

PERCENTAGE OF *SEATTLE* SAMPLE PLACING CERTAIN ADVANTAGES OF DOWNTOWN SHOPPING IN FIRST, SECOND, AND THIRD ORDER OF IMPORTANCE

N = 600 per item

Advantage	Order of Choice			Composite Rank
	First	Second	Third	
Larger selection of goods....	44.0	24.0	13.0	1
Can do several errands at one time....................	18.0	18.0	20.0	2
Cheaper prices...............	11.0	11.0	7.0	3
Convenient public transportation...................	6.0	9.0	10.0	4
Stores close together........	3.0	10.0	9.0	5
Enjoyable place to shop.....	5.0	5.0	8.0	6
Better delivery service.......	2.0	6.0	8.0	7
Close to home..............	4.0	4.0	2.0	8
Other.....................	1.0	1.0	2.0	—
No advantage..............	6.0	0.0	0.0	—
No choice.................	0.0	12.0	21.0	—
Total....................	100.0	100.0	100.0	—

TABLE E-6

PERCENTAGE OF *HOUSTON* SAMPLE PLACING CERTAIN DISADVANTAGES OF DOWNTOWN SHOPPING IN FIRST, SECOND, AND THIRD ORDER OF IMPORTANCE

N = 600 per item

Disadvantage	Order of Choice			Composite Rank
	First	Second	Third	
Difficult parking............	33.0	20.0	8.0	1
Too crowded...............	22.0	15.0	16.0	2
Congested traffic conditions..	5.0	21.0	16.0	3
Takes too long to shop there..	11.0	11.0	8.0	4
Too far to go...............	9.0	8.0	12.0	5
Poor public transportation...	9.0	3.0	2.0	6
Cost of transportation too high......................	2.0	5.0	6.0	7
Unfriendly service..........	2.0	1.0	2.0	8
Other.....................	1.0	1.0	1.0	—
No disadvantage............	6.0	0.0	0.0	—
No choice.................	0.0	15.0	29.0	—
Total....................	100.0	100.0	100.0	—

TABLE E-7

PERCENTAGE OF *SEATTLE* SAMPLE PLACING CERTAIN DISADVANTAGES OF DOWNTOWN SHOPPING IN FIRST, SECOND, AND THIRD ORDER OF IMPORTANCE

N = 600 per item

Disadvantage	Order of Choice			Composite Rank
	First	Second	Third	
Difficult parking............	32.0	17.0	9.0	1
Too crowded...............	22.0	13.0	9.0	2
Cost of transportation too high......................	13.0	13.0	11.0	3
Takes too long to shop there..	11.0	12.0	7.0	4
Congested traffic conditions..	2.0	13.0	12.0	5
Too far to go...............	5.0	7.0	10.0	6
Poor public transportation...	4.0	2.0	2.0	7
Unfriendly service..........	1.0	2.0	2.0	8
Other.....................	1.0	2.0	1.0	—
No disadvantage............	9.0	0.0	0.0	—
No choice.................	0.0	19.0	37.0	—
Total....................	100.0	100.0	100.0	—

TABLE E-8

PERCENTAGE OF *HOUSTON* SAMPLE PLACING CERTAIN
ADVANTAGES OF SUBURBAN SHOPPING CENTER IN
FIRST, SECOND, AND THIRD ORDER OF IMPORTANCE

N = 600 per item

Advantage	Order of Choice			Composite Rank
	First	Second	Third	
Closer to home	53.0	17.0	8.0	1
Do not have to dress up to go there	15.0	16.0	22.0	2
Less crowded	13.0	22.0	14.0	3
Parking easy	9.0	24.0	18.0	4
More convenient hours	3.0	8.0	7.0	5
Friendly and courteous clerks	2.0	3.0	6.0	6
Less noise and confusion	1.0	3.0	7.0	7
Clean and modern stores	1.0	2.0	5.0	8
Other	0.0	0.0	1.0	—
No advantage	3.0	0.0	0.0	—
No choice	0.0	5.0	12.0	—
Total	100.0	100.0	100.0	—

TABLE E-9

PERCENTAGE OF *SEATTLE* SAMPLE PLACING CERTAIN
ADVANTAGES OF SUBURBAN SHOPPING CENTER IN
FIRST, SECOND, AND THIRD ORDER OF IMPORTANCE

N = 600 per item

Advantage	Order of Choice			Composite Rank
	First	Second	Third	
Closer to home	40.0	15.0	10.0	1
Parking easy	12.0	22.0	19.0	2
Do not have to dress up to go there	19.0	12.0	15.0	3
Less crowded	13.0	23.0	8.0	4
More convenient hours	2.0	7.0	10.0	5
Friendly and courteous clerks	2.0	4.0	5.0	6
Less noise and confusion	1.0	3.0	7.0	7
Clean and modern stores	1.0	1.0	2.0	8
Other	2.0	1.0	3.0	—
No advantage	5.0	0.0	0.0	—
No choice	3.0	12.0	20.0	—
Total	100.0	100.0	100.0	—

TABLE E-10

PERCENTAGE OF *HOUSTON* SAMPLE PLACING CERTAIN
DISADVANTAGES OF SUBURBAN SHOPPING CENTER IN
FIRST, SECOND, AND THIRD ORDER OF IMPORTANCE

N = 600 per item

Disadvantage	Order of Choice			Composite Rank
	First	Second	Third	
Lack of large selection	50.0	15.0	5.0	1
Not all kinds of business represented	9.0	25.0	13.0	2
Prices high	10.0	15.0	9.0	3
Poor public transportation	8.0	4.0	5.0	4
Poor delivery	3.0	3.0	5.0	5
Too far to go	1.0	2.0	1.0	6
Bus fare too high	1.0	1.0	1.0	7
Hard to get credit	0.0	2.0	1.0	8
Other	2.0	1.0	1.0	—
No disadvantage	16.0	0.0	0.0	—
No choice	0.0	32.0	59.0	—
Total	100.0	100.0	100.0	—

TABLE E-11

PERCENTAGE OF *SEATTLE* SAMPLE PLACING CERTAIN
DISADVANTAGES OF SUBURBAN SHOPPING CENTER IN
FIRST, SECOND, AND THIRD ORDER OF IMPORTANCE

N = 600 per item

Disadvantage	Order of Choice			Composite Rank
	First	Second	Third	
Lack of large selection	49.0	16.0	5.0	1
Not all kinds of business represented	11.0	27.0	11.0	2
Prices high	6.0	11.0	8.0	3
Too far to go	7.0	3.0	3.0	4
Poor public transportation	6.0	4.0	2.0	5
Poor delivery	4.0	3.0	4.0	6
Bus fare too high	2.0	3.0	1.0	7
Hard to get credit	0.0	1.0	1.0	8
Other	1.0	1.0	1.0	—
No disadvantage	12.0	0.0	0.0	—
No choice	2.0	31.0	64.0	—
Total	100.0	100.0	100.0	—

APPENDIX F

Summary Tables of Mean Parking and Traffic Satisfaction Scores With Critical Ratios of Differences Between Means of Columbus, Houston, and Seattle Samples

Tabular Presentation of Mean Parking and Traffic Satisfaction Scores of Various Categories of Respondents, Houston and Seattle

Tables Showing Results of Correlation Analysis

SUMMARY TABLES ON PARKING AND TRAFFIC IN COLUMBUS, HOUSTON, AND SEATTLE

NOTE: The complete data on which the following summary tables are based will be found in Appendix Tables F-13 to F-22, and in *Attitudes Toward Parking and Related Conditions in Columbus* (1953), p. 31.

TABLE F-1
MEAN PARKING SATISFACTION SCORES OF INCOME GROUPS IN COLUMBUS, HOUSTON, AND SEATTLE SAMPLES

Income Groups	Means			Critical Ratios		
	Columbus	Seattle	Houston	Columbus vs. Houston	Columbus vs. Seattle	Seattle vs. Houston
$2000-$3999	2.55	2.63	2.89	1.68	0.35	0.00
$4000-$5999	2.23	2.50	3.07	5.42	1.78	3.93
$6000+	2.46	2.98	3.39	7.62	3.69	2.97

TABLE F-2
MEAN PARKING SATISFACTION SCORES OF MALES AND FEMALES IN COLUMBUS, HOUSTON, AND SEATTLE SAMPLES

Sex Groups	Means			Critical Ratios		
	Columbus	Seattle	Houston	Columbus vs. Houston	Columbus vs. Seattle	Seattle vs. Houston
Male	2.15	2.50	3.11	5.22	1.69	3.59
Female	2.45	2.78	3.17	7.58	3.30	4.33

TABLE F-3
MEAN PARKING SATISFACTION SCORES OF RURAL AND URBAN BACKGROUND GROUPS IN COLUMBUS, HOUSTON, AND SEATTLE SAMPLES

Rural-Urban Background Groups	Means			Critical Ratios		
	Columbus	Seattle	Houston	Columbus vs. Houston	Columbus vs. Seattle	Seattle vs. Houston
Rural	2.14	2.59	3.08	3.41	1.47	2.00
Urban	2.42	2.73	3.15	8.20	3.26	5.00

TABLE F-4
MEAN COST OF PARKING SATISFACTION SCORES OF INCOME GROUPS IN COLUMBUS, HOUSTON, AND SEATTLE SAMPLES

Income Groups	Means			Critical Ratios		
	Columbus	Seattle	Houston	Columbus vs. Houston	Columbus vs. Seattle	Seattle vs. Houston
$2000-$3999	3.03	3.06	2.76	1.24	0.00	1.33
$4000-$5999	2.74	3.09	2.86	0.75	2.13	1.38
$6000+	2.96	3.38	2.89	0.54	2.90	3.31

TABLE F-5
MEAN COST OF PARKING SATISFACTION SCORES OF MALES AND FEMALES IN COLUMBUS, HOUSTON, AND SEATTLE SAMPLES

Sex Groups	Means			Critical Ratios		
	Columbus	Seattle	Houston	Columbus vs. Houston	Columbus vs. Seattle	Seattle vs. Houston
Male	3.14	3.54	2.88	1.12	1.69	3.00
Female	2.85	3.12	2.85	0.00	2.45	2.55

TABLE F-6
MEAN COST OF PARKING SATISFACTION SCORES OF RURAL AND URBAN BACKGROUND GROUPS IN COLUMBUS, HOUSTON, AND SEATTLE SAMPLES

Rural-Urban Background Groups	Means			Critical Ratios		
	Columbus	Seattle	Houston	Columbus vs. Houston	Columbus vs. Seattle	Seattle vs. Houston
Rural	2.79	2.70	3.16	1.13	0.23	1.34
Urban	2.91	3.25	2.83	0.90	3.40	4.20

TABLE F-7
MEAN TRAFFIC SATISFACTION SCORES OF INCOME GROUPS IN COLUMBUS, HOUSTON, AND SEATTLE SAMPLES

Income Groups	Means			Critical Ratios		
	Columbus	Seattle	Houston	Columbus vs. Houston	Columbus vs. Seattle	Seattle vs. Houston
$2000-$3999	3.07	3.32	3.07	0.00	1.13	1.45
$4000-$5999	2.80	3.34	3.23	3.05	3.65	0.85
$6000+	3.18	3.83	3.39	1.72	5.00	3.73

TABLE F-8

MEAN TRAFFIC SATISFACTION SCORES OF MALES AND FEMALES
IN COLUMBUS, HOUSTON, AND SEATTLE SAMPLES

Sex Groups	Means			Critical Ratios		
	Colum-bus	Seattle	Hous-ton	Colum-bus vs. Hous-ton	Colum-bus vs. Seattle	Seattle vs. Hous-ton
Male...............	3.05	3.56	3.33	1.52	2.59	1.46
Female.............	3.04	3.52	3.27	2.58	5.05	2.94

TABLE F-9

MEAN TRAFFIC SATISFACTION SCORES OF GROUPS WITH URBAN
AND RURAL BACKGROUNDS IN COLUMBUS, HOUSTON,
AND SEATTLE SAMPLES

Rural-Urban Background Groups	Means			Critical Ratios		
	Colum-bus	Seattle	Hous-ton	Colum-bus vs. Hous-ton	Colum-bus vs. Seattle	Seattle vs. Hous-ton
Rural...............	2.46	3.52	3.18	2.63	3.62	1.38
Urban..............	3.09	3.53	3.29	2.25	4.63	2.86

TABLE F-10

COMPARISON OF MEAN SCORES ON ATTITUDE AND BEHAVIOR
SCALES OF CAR-USERS AND NON-CAR-USERS—HOUSTON
AND SEATTLE SAMPLES

Car-Users, N = 477 in Houston, 371 in Seattle
Non-Car-Users, N = 123 in Houston, 229 in Seattle

City	Scale I			Scale II		
	Mean Scale I		Critical ratios of means	Mean Scale II		Critical ratios of means
	Car-users	Non-car-users		Car-users	Non-car-users	
Houston.....	33.20	34.48	1.32	56.57	57.79	1.31
Seattle......	34.73	36.55	2.76	58.68	60.50	2.56

TABLE F-11

MEAN SCORES OF CAR-USERS AND NON-CAR-USERS ON
BEHAVIOR SCALE I AND ATTITUDE SCALE II BY
AREAS IN HOUSTON

Area	Scale I					Scale II				
	Car-users		Non-car-users		Critical ratios of means	Car-users		Non-car-users		Critical ratios of means
	No.	Mean	No.	Mean		No.	Mean	No.	Mean	
1	134	30.85	16	32.50	0.68	113	55.20	16	58.56	1.17
2	121	36.69	29	35.52	0.70	121	59.00	29	58.86	0.09
3	113	37.59	37	41.03	2.97	113	59.43	37	62.84	2.80
4	109	27.66	41	28.61	0.53	109	52.58	41	52.17	0.26

TABLE F-12

MEAN SCORES OF CAR-USERS AND NON-CAR-USERS ON
BEHAVIOR SCALE I AND ATTITUDE SCALE II BY
AREAS IN SEATTLE

Area	Scale I					Scale II				
	Car-users		Non-car-users		Critical ratios of means	Car-users		Non-car-users		Critical ratios of means
	No.	Mean	No.	Mean		No.	Mean	No.	Mean	
1	111	33.93	39	36.56	1.81	111	59.23	39	59.69	0.27
2	84	32.10	66	33.09	0.77	84	55.50	66	57.76	1.58
3	90	32.29	60	34.70	1.99	90	55.92	60	59.45	2.74
4	86	40.88	64	41.84	1.10	86	63.98	64	64.81	0.86

TABLE F-13

MEAN PARKING AND TRAFFIC SATISFACTION SCORES OF
INDICATED INCOME GROUPS FOR HOUSTON

Income Group	Item Number 74			Item Number 75			Item Number 77		
	Parking difficulty			Parking cost			Traffic difficulty		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Under $2000..	31	2.90	1.10	31	3.00	1.39	31	3.55	1.00
$2000–$3999..	116	2.89	1.09	116	2.76	1.40	116	3.07	1.04
$4000–$5999..	134	3.07	1.22	134	2.86	1.30	134	3.23	1.00
$6000–$7999..	78	3.14	1.26	78	2.88	1.28	78	3.33	1.09
$8000+......	118	3.55	1.16	118	2.90	1.35	118	3.43	1.13

TABLE F-14

MEAN PARKING AND TRAFFIC SATISFACTION SCORES OF
INDICATED INCOME GROUPS FOR SEATTLE

Income Group	Item Number 74			Item Number 75			Item Number 77		
	Parking difficulty			Parking cost			Traffic difficulty		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Under $2000..	33	2.67	0.85	33	3.27	1.43	33	3.39	1.06
$2000–$3999..	63	2.63	1.17	63	3.06	1.46	63	3.32	1.14
$4000–$5999..	133	2.50	1.15	133	3.09	1.43	133	3.34	1.10
$6000–$7999..	68	2.66	1.17	68	3.21	1.35	68	3.48	1.03
$8000+......	74	3.27	1.35	74	3.53	1.38	74	4.15	0.98

TABLE F-15

MEAN PARKING AND TRAFFIC SATISFACTION SCORES OF
INDICATED SEX GROUPS FOR SEATTLE

Sex Groups	Item Number 74			Item Number 75			Item Number 77		
	Parking difficulty			Parking cost			Traffic difficulty		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Male........	78	2.50	1.21	78	3.54	1.42	78	3.56	1.09
Female......	293	2.78	1.20	292	3.12	1.41	293	3.52	1.12

TABLE F-16
MEAN PARKING AND TRAFFIC SATISFACTION SCORES OF
INDICATED SEX GROUPS FOR HOUSTON

Sex Groups	Item Number 74 Parking difficulty			Item Number 75 Parking cost			Item Number 77 Traffic difficulty		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Male........	89	3.11	0.92	89	2.88	1.46	89	3.33	0.95
Female......	388	3.17	1.21	388	2.85	1.32	388	3.27	1.08

TABLE F-17
MEAN PARKING AND TRAFFIC SATISFACTION SCORES OF
INDICATED AGE GROUPS FOR HOUSTON

Age Groups	Item Number 74 Parking difficulty			Item Number 75 Parking cost			Item Number 77 Traffic difficulty		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
18–34........	169	3.08	1.13	169	2.77	1.33	169	3.17	1.00
35–49........	191	3.29	1.17	191	2.91	1.35	191	3.31	1.07
50–64........	91	3.10	1.30	91	2.84	1.26	91	3.43	1.01
65+.........	26	2.69	1.25	26	3.12	1.52	26	3.31	1.19

TABLE F-18
MEAN PARKING AND TRAFFIC SATISFACTION SCORES OF
INDICATED AGE GROUPS FOR SEATTLE

Age Groups	Item Number 74 Parking difficulty			Item Number 75 Parking cost			Item Number 77 Traffic difficulty		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
18–34........	132	2.61	1.07	132	3.04	1.39	132	3.47	1.09
35–49........	117	2.91	1.33	117	3.26	1.44	117	3.60	1.11
50–64........	82	2.65	1.28	82	3.15	1.39	82	3.50	1.13
65+.........	39	2.64	1.08	39	3.79	1.34	39	3.56	1.19

TABLE F-19
MEAN PARKING AND TRAFFIC SATISFACTION SCORES FOR
SEATTLE SAMPLE BY URBAN-RURAL BACKGROUND

Urban-Rural Background	Item Number 74 Parking difficulty			Item Number 75 Parking cost			Item Number 77 Traffic difficulty		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Rural (under 2500 pop.)..	28	2.59	1.03	28	2.70	1.49	28	3.52	0.99
Urban (over 2500 pop.)..	342	2.73	1.22	343	3.25	1.41	343	3.53	1.12

TABLE F-20
MEAN PARKING AND TRAFFIC SATISFACTION SCORES FOR
HOUSTON SAMPLE BY URBAN-RURAL BACKGROUND

Urban-Rural Background	Item Number 74 Parking difficulty			Item Number 75 Parking cost			Item Number 77 Traffic difficulty		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Rural (under 2500 pop.)..	38	3.08	0.89	38	3.16	1.17	38	3.18	0.98
Urban (over 2500 pop.)..	439	3.15	1.22	439	2.83	1.35	439	3.29	1.06

TABLE F-21
MEAN SCORES ON SHOPPING HABIT AND SHOPPING ATTITUDE
SCALES OF PERSONS WITH CHILDREN AND WITH NO
CHILDREN IN HOUSTON

Group	Scale I			Scale II		
	No.	Mean	S.D.	No.	Mean	S.D.
With no children....	325	33.91	9.35	325	57.63	9.90
With children.......	273	32.85	9.03	273	55.79	8.82

TABLE F-22
MEAN SCORES ON SHOPPING HABIT AND SHOPPING ATTITUDE
SCALES OF PERSONS WITH CHILDREN AND WITH NO
CHILDREN IN SEATTLE

Group	Scale I			Scale II		
	No.	Mean	S.D.	No.	Mean	S.D.
With no children....	345	36.29	7.47	345	60.38	8.66
With children.......	253	34.16	8.48	253	57.95	8.33

TABLE F-23
MEAN SCORES ON SHOPPING HABIT AND SHOPPING ATTITUDES
SCALES OF PERSONS WHO HAVE RESIDED FOR DIFFERENT
LENGTHS OF TIME IN THEIR NEIGHBORHOODS IN
HOUSTON

Length of Time in Neighborhood	Scale I			Scale II		
	No.	Mean	S.D.	No.	Mean	S.D.
Less than 2 years....	134	33.64	9.18	134	56.79	8.57
More than 2 years...	466	33.41	9.24	466	56.83	9.65

TABLE F-24
MEAN SCORES ON SHOPPING HABIT AND SHOPPING ATTITUDE
SCALES OF PERSONS WHO HAVE RESIDED FOR DIFFERENT
LENGTHS OF TIME IN THEIR NEIGHBORHOODS IN
SEATTLE

Length of Time in Neighborhood	Scale I			Scale II		
	No.	Mean	S.D.	No.	Mean	S.D.
Less than 2 years....	118	34.83	7.87	118	59.07	7.52
More than 2 years...	467	35.65	8.06	464	59.55	8.93

TABLE F-25

CORRELATION OF INDICATED ITEMS WITH SHOPPING HABIT
AND SHOPPING ATTITUDE SCORES—HOUSTON SAMPLE
N = 570 per item

Item	Shopping Habits (Scale I Score)		Shopping Attitudes (Scale II Score)	
	r	Standard error	r	Standard error
Parking.................	.14**	.046	.30**	.043
Cost of parking........	.07	.047	.28**	.043
Traffic.................	.08	.047	.27**	.044
Number of children.....	−.07	.041	−.11**	.041
North-Hatt Occupational Scale..........	.01	.047	.06	.042
Distance to DT†.......	−.44**	.034	−.31**	.038
Distance to SSC‡.......	−.12**	.041	−.14**	.041

** Significant at or beyond the .01 level of confidence.

† Distance is the measured distance from the center of downtown to the center of the respondent's census tract.

‡ Distance is the measured distance from the center of the respondent's block to the suburban shopping center named in response to questions in the lower left-hand corner of Part I of the schedule.

TABLE F-26

CORRELATION OF INDICATED ITEMS WITH SHOPPING HABIT AND
SHOPPING ATTITUDE SCORES—SEATTLE SAMPLE
N = 570 per item

Item	Shopping Habits (Scale I Score)		Shopping Attitudes (Scale II Score)	
	r	Standard error	r	Standard error
Parking................	.07	.053	.26**	.050
Cost of parking........	.14**	.052	.28**	.050
Traffic.................	.09	.053	.28**	.051
Number of children.....	−.14**	.041	−.13**	.041
North-Hatt Occupational Scale..........	.20**	.040	.18**	.040
Distance to DT†.......	−.22**	.040	−.16**	.041
Distance to SSC‡.......	−.21**	.040	−.10*	.042

* Significant at or beyond the .05 level of confidence.

** Significant at or beyond the .01 level of confidence.

† Distance is the measured distance from the center of downtown to the center of the respondent's census tract.

‡ Distance is the measured distance from the center of the respondent's block to the suburban shopping center named in response to questions in the lower left-hand corner of Part I of the schedule.

APPENDIX G

Tabular Presentation of Mean Scores on Behavior and Attitude Scales of Various Categories of Respondents by Area in Houston and Seattle

TABLE G-1
MEAN SHOPPING HABIT SCALE I SCORES BY CITY, AREA, AND OCCUPATION

| City and Area* | Occupation | | | | | | | | |
| | Unskilled | | | Skilled | | | White Collar | | |
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Houston									
4	46	29.04	10.23	56	26.96	9.09	42	28.67	7.51
1	5	26.80	4.66	13	26.92	9.64	127	31.32	8.00
2	20	38.30	8.47	27	34.81	8.33	90	36.29	7.73
3	28	39.43	7.11	41	37.76	7.03	77	38.13	7.62
Seattle									
1	23	35.13	6.88	22	30.36	7.10	99	35.37	8.19
2	73	32.44	8.44	38	30.05	6.54	35	35.20	7.28
3	52	34.38	7.31	39	30.87	6.33	57	33.79	7.54
4	35	41.89	3.87	17	41.18	5.88	85	41.06	6.03

* NOTE: Areas within each city are listed with the one at the greatest distance from the central business district at the top and the area nearest downtown at the bottom.

TABLE G-3
MEAN SHOPPING HABIT SCALE I SCORES BY CITY, AREA, AND INCOME

| City and Area | Income | | | | | | | | |
| | $3999 and under | | | $4000–5999 | | | $6000+ | | |
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Houston									
4	76	28.57	9.75	52	27.27	8.24	22	27.23	8.42
1	19	29.58	8.12	23	28.87	8.23	108	31.74	8.26
2	75	37.04	7.89	44	35.32	7.51	31	36.71	8.60
3	59	38.68	6.69	39	37.95	7.78	52	38.54	7.75
Seattle									
1	20	36.10	5.27	42	33.19	7.18	87	34.97	8.67
2	69	31.16	7.51	58	32.97	7.91	23	35.57	7.91
3	68	32.94	7.13	57	33.39	7.71	25	34.00	5.15
4	57	41.72	4.02	37	40.43	6.14	55	41.38	6.16

TABLE G-2
MEAN SHOPPING ATTITUDE SCALE II SCORES BY CITY, AREA, AND OCCUPATION

| City and Area | Occupation | | | | | | | | |
| | Unskilled | | | Skilled | | | White Collar | | |
	No.	Mean	S.D.	No.	Mean	S.D	No.	Mean	S.D.
Houston									
4	46	52.65	9.78	56	51.84	7.58	42	53.38	9.40
1	5	51.40	8.59	13	49.92	15.87	127	56.00	9.75
2	20	57.45	5.31	27	57.33	9.80	90	59.71	7.83
3	28	62.07	7.49	41	60.27	6.60	77	59.57	9.41
Seattle									
1	23	54.00	7.99	22	56.73	7.74	99	60.89	9.26
2	73	56.01	9.19	38	54.76	9.08	35	58.97	6.88
3	52	58.33	7.52	39	54.79	7.00	57	58.05	8.56
4	35	64.17	5.00	17	65.35	5.86	85	64.44	6.25

TABLE G-4
MEAN SHOPPING ATTITUDE SCALE II SCORES BY CITY, AREA, AND INCOME

| City and Area | Income | | | | | | | | |
| | $3999 and under | | | $4000–$5999 | | | $6000+ | | |
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Houston									
4	76	52.08	8.22	52	52.62	9.05	22	53.45	9.25
1	19	53.84	9.37	23	52.65	12.62	108	56.48	10.07
2	75	58.48	7.85	44	59.09	7.67	31	60.00	8.63
3	59	61.36	6.56	39	59.54	8.64	52	59.60	9.54
Seattle									
1	20	55.35	7.04	42	58.79	8.85	87	60.43	9.53
2	69	54.01	8.45	58	58.40	9.13	23	59.13	6.90
3	68	57.87	7.78	57	56.96	8.15	25	56.72	7.59
4	57	64.53	5.31	37	63.16	5.91	55	64.95	6.41

TABLE G-5
MEAN SHOPPING HABIT SCALE I SCORES BY CITY, AREA, AND EDUCATION

City and Area	Grammar school			High school			College		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Houston									
4	49	27.35	10.02	80	27.55	8.63	20	31.50	7.21
1	7	24.57	8.67	47	30.77	8.43	96	31.63	8.00
2	17	35.29	8.85	57	35.23	8.82	75	36.27	12.06
3	20	41.00	6.18	91	38.40	6.78	38	36.89	8.65
Seattle									
1	18	36.33	8.64	62	34.06	7.30	69	34.55	8.24
2	28	32.21	6.05	91	32.68	8.56	31	32.39	7.32
3	26	33.62	6.47	79	33.44	6.85	45	32.71	8.26
4	17	41.41	5.64	65	40.71	6.01	64	41.72	4.95

TABLE G-6
MEAN SHOPPING ATTITUDE SCALE II SCORES BY CITY, AREA, AND EDUCATION

City and Area	Grammar school			High school			College		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Houston									
4	49	50.76	7.38	80	52.88	9.30	20	55.15	8.27
1	7	49.00	11.28	47	54.49	10.73	96	56.56	10.14
2	17	56.53	7.63	57	58.47	8.34	75	59.84	7.70
3	20	64.00	4.87	91	60.51	7.97	38	57.55	9.51
Seattle									
1	18	57.44	10.63	62	57.79	8.63	69	61.16	9.07
2	28	57.18	11.61	91	56.33	8.18	31	56.35	7.57
3	26	58.54	7.99	79	57.18	7.72	45	56.91	8.07
4	17	65.18	6.36	65	63.66	5.76	64	64.81	5.99

TABLE G-7
MEAN SHOPPING HABIT SCALE I SCORES BY CITY, AREA, AND AGE

City and Area	18–34			35–49			50–64			65+		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Houston												
4	55	28.51	9.32	54	27.28	9.42	33	28.33	8.94	8	26.50	8.82
1	34	30.53	7.49	71	30.65	8.19	33	31.58	8.17	12	33.17	11.05
2	72	37.64	7.03	41	34.88	8.81	26	36.23	8.18	11	35.27	8.68
3	60	36.67	7.74	54	39.19	7.60	27	40.52	6.04	9	39.56	2.73
Seattle												
1	48	31.71	7.96	60	35.53	7.75	34	36.29	7.06	8	38.00	7.74
2	45	32.93	8.42	40	31.55	7.37	39	33.28	7.54	26	32.23	8.20
3	43	31.26	7.81	46	34.48	7.64	37	33.41	6.25	24	34.25	5.90
4	42	42.43	5.59	38	40.37	6.61	38	42.42	4.17	32	39.56	4.57

TABLE G-8
MEAN SHOPPING ATTITUDE SCALE II SCORES BY CITY, AREA, AND AGE

City and Area	18–34			35–49			50–64			65+		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Houston												
4	55	52.20	7.62	54	53.43	9.02	33	52.36	9.67	8	48.25	7.50
1	34	54.59	9.59	71	55.94	10.34	33	56.73	10.47	12	52.83	13.22
2	72	58.78	7.25	41	58.32	8.62	26	59.65	8.10	11	61.09	9.22
3	60	58.65	8.08	54	59.87	9.25	27	64.11	5.93	9	62.00	5.57
Seattle												
1	48	56.75	8.49	60	60.97	8.46	34	59.71	10.59	8	61.38	9.21
2	45	56.84	8.03	40	55.35	9.15	39	57.28	7.83	26	56.46	10.65
3	43	55.30	8.53	46	58.00	7.31	37	57.49	7.64	24	59.46	7.39
4	42	63.17	4.42	38	63.84	7.74	38	65.87	4.96	32	64.63	5.73

TABLE G-9
MEAN SHOPPING HABIT SCALE I SCORES BY CITY, AREA, AND SEX

City and Area	Male			Female		
	No.	Mean	S.D.	No.	Mean	S.D.
Houston						
4	25	28.64	7.65	125	27.78	9.34
1	31	30.13	7.78	119	31.34	8.14
2	28	35.79	8.47	122	36.62	7.86
3	16	37.50	6.61	134	38.55	7.46
Seattle						
1	24	34.42	8.11	126	34.65	7.89
2	22	31.00	7.48	128	32.80	7.92
3	25	32.40	5.99	125	33.42	7.48
4	24	39.67	5.83	126	41.60	5.39

TABLE G-10
MEAN SHOPPING ATTITUDE SCALE II SCORES BY CITY, AREA, AND SEX

City and Area	Male			Female		
	No.	Mean	S.D.	No.	Mean	S.D.
Houston						
4	25	51.96	9.44	125	52.57	8.54
1	31	56.77	8.20	119	55.24	11.03
2	28	58.11	8.65	122	59.17	7.82
3	16	61.31	7.53	134	60.15	8.39
Seattle						
1	24	57.17	10.06	126	59.77	9.01
2	22	54.73	10.16	128	56.80	8.49
3	25	57.80	7.99	125	57.24	7.88
4	24	63.29	6.08	126	64.53	5.91

TABLE G-11

MEAN SHOPPING HABIT SCALE I SCORES BY CITY, AREA, AND URBAN-RURAL BACKGROUND

City and Area	Background								
	Rural (Under 2500)			Urban (2500–999,999)			Metropolitan (1,000,000+)		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Houston									
4	23	26.96	8.87	125	28.11	9.15	2	27.00	7.00
1	6	32.67	12.30	133	30.51	7.87	11	36.36	8.91
2	12	37.17	7.55	133	36.68	7.83	5	29.20	8.82
3	11	33.27	6.00	138	38.81	7.34	1	44.00	0.00
Seattle									
1	18	31.89	8.36	130	34.97	7.85	2	36.00	2.00
2	14	31.00	6.92	136	32.69	7.98	0	00.00	0.00
3	11	36.90	6.73	133	33.02	7.35	6	31.67	3.11
4	5	39.60	5.28	140	41.49	5.38	5	37.60	6.37

TABLE G-12

MEAN SHOPPING ATTITUDE SCALE II SCORES BY CITY, AREA, AND URBAN-RURAL BACKGROUND

City and Area	Background								
	Rural (Under 2500)			Urban (2500–999,999)			Metropolitan (1,000,000+)		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
Houston									
4	23	52.61	7.26	125	52.55	8.95	2	45.50	4.50
1	6	53.00	12.48	133	55.10	10.28	11	62.55	9.39
2	12	60.00	5.48	133	58.82	8.14	5	60.60	8.62
3	11	56.00	8.24	138	60.54	8.24	1	70.00	0.00
Seattle									
1	18	57.72	8.68	130	59.68	9.25	2	53.00	8.00
2	14	56.07	9.79	136	56.54	8.68	0	00.00	0.00
3	11	58.82	5.06	133	57.09	8.13	6	60.00	5.94
4	5	61.40	8.06	140	64.51	5.84	5	62.40	3.72

APPENDIX H

Tables Showing Percentages of Seattle and Houston Samples Ranking Advantages and Disadvantages of Shopping Areas

TABLE H-1

SEATTLE: ADVANTAGES OF DOWNTOWN SHOPPING BY INCOME

Percentages of sample placing indicated advantages in first place

Advantages	Income Categories				
	Under $2000 (N = 80)	$2000–$3999 (N = 134)	$4000–$5999 (N = 194)	$6000–$7999 (N = 93)	$8000+ (N = 97)
Larger selection of goods	36.5	44.8	44.3	43.0	50.5
Cheaper prices	5.0	10.4	16.0	11.7	7.2
Convenient public transportation	5.0	6.7	9.3	3.2	2.1
Enjoyable place to shop	7.5	3.1	4.6	5.4	5.1
Close to home	5.0	3.7	1.1	4.3	7.2
Stores close together	3.7	3.7	2.6	2.2	1.1
Can do several errands at one time	23.7	19.4	14.4	20.4	16.5
Better delivery service	1.2	1.5	2.6	2.2	3.1
No advantage	1.2	1.5	0.5	2.2	3.1
Other	10.0	5.2	4.6	5.4	4.1
No data	1.2	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-2

HOUSTON: ADVANTAGES OF DOWNTOWN SHOPPING BY INCOME

Percentages of sample placing indicated advantages in first place

Advantages	Income Categories				
	Under $2000 (N = 53)	$2000–$3999 (N = 176)	$4000–$5999 (N = 158)	$6000–$7999 (N = 85)	$8000+ (N = 128)
Larger selection of goods	24.5	42.0	41.1	43.5	49.2
Cheaper prices	28.3	16.5	13.9	12.9	4.7
Convenient public transportation	0.0	6.8	8.8	3.5	3.9
Enjoyable place to shop	7.5	2.8	5.1	2.4	3.9
Close to home	3.8	2.3	3.2	3.5	5.5
Stores close together	5.7	2.3	3.2	2.4	2.3
Can do several errands at one time	11.3	17.6	12.6	12.9	13.3
Better delivery service	0.0	0.6	1.3	3.5	3.9
No advantage	0.0	2.3	1.3	8.3	3.9
Other	18.9	6.8	9.5	7.1	9.4
No data	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-3

SEATTLE: ADVANTAGES OF DOWNTOWN SHOPPING BY NORTH-HATT OCCUPATIONAL RATING SCALE

Percentages of sample placing indicated advantages in first place

Advantages	North-Hatt Occupational Rating Categories				
	39–49 (N = 41)	50–59 (N = 123)	60–69 (N = 240)	70–79 (N = 121)	80–93 (N = 50)
Larger selection of goods	36.5	48.7	42.2	45.5	54.0
Cheaper prices	19.5	10.6	10.8	11.6	6.0
Convenient public transportation	9.8	4.1	7.5	4.9	2.0
Enjoyable place to shop	0.0	5.7	3.7	4.2	8.0
Close to home	4.9	4.1	1.7	4.9	6.0
Stores close together	4.9	2.4	2.5	1.6	2.0
Can do several errands at one time	12.2	16.3	20.4	20.7	14.0
Better delivery service	2.4	1.6	2.1	1.6	4.0
No advantage	0.0	2.4	1.2	0.8	2.0
Other	9.8	4.1	7.5	4.2	2.0
No data	0.0	0.0	0.4	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-4

HOUSTON: ADVANTAGES OF DOWNTOWN SHOPPING BY NORTH-HATT OCCUPATIONAL RATING SCALE

Percentages of sample placing indicated advantages in first place

Advantages	North-Hatt Occupational Rating Categories				
	39–49 (N = 33)	50–59 (N = 101)	60–69 (N = 227)	70–79 (N = 152)	80–93 (N = 59)
Larger selection of goods	21.2	37.7	43.6	45.4	54.2
Cheaper prices	36.3	20.8	10.6	13.2	5.1
Convenient public transportation	15.1	4.9	5.7	3.3	3.4
Enjoyable place to shop	6.1	2.0	3.5	4.7	1.7
Close to home	0.0	2.9	2.6	5.9	1.7
Stores close together	6.1	2.0	2.2	1.9	6.8
Can do several errands at one time	9.1	15.9	16.8	12.5	13.5
Better delivery service	0.0	0.0	0.9	3.3	6.8
No advantage	0.0	2.9	3.5	3.9	1.7
Other	6.1	10.9	10.6	5.9	5.1
No data	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-5
SEATTLE: ADVANTAGES OF DOWNTOWN SHOPPING BY EDUCATION
Percentages of sample placing indicated advantages in first place

Advantages	Education		
	Grammar school (N = 92)	High school (N = 297)	College (N = 209)
Larger selection of goods	43.5	41.4	47.8
Cheaper prices	7.6	15.5	6.7
Convenient public transportation	6.5	5.7	6.2
Enjoyable place to shop	5.4	4.7	4.8
Close to home	3.3	3.7	3.8
Stores close together	5.4	1.4	3.4
Can do several errands at one time	14.1	19.9	17.7
Better delivery service	1.1	1.7	3.4
No advantages	3.3	1.0	1.4
Other	9.8	4.7	4.8
No data	0.0	0.3	0.0
Total	100.0	100.0	100.0

TABLE H-7
SEATTLE: ADVANTAGES OF DOWNTOWN SHOPPING BY OCCUPATION
Percentages of sample placing indicated advantages in first place

Advantages	Occupational Categories				
	Professional (N = 84)	Managers and proprietors (N = 103)	Clerical (N = 89)	Skilled workers (N = 116)	Unskilled workers (N = 183)
Larger selection of goods	48.8	50.5	43.8	40.5	43.2
Cheaper prices	9.5	8.7	6.7	14.6	13.2
Convenient public transportation	4.8	4.9	9.0	5.2	6.0
Enjoyable place to shop	7.1	3.9	2.3	5.2	3.8
Close to home	5.9	3.9	3.4	0.9	3.8
Stores close together	1.2	1.9	1.1	2.6	3.8
Can do several errands at one time	16.7	18.4	22.5	17.2	18.1
Better delivery service	3.6	1.0	3.4	1.7	1.6
No advantages	1.2	1.9	1.1	0.9	1.6
Other	1.2	4.9	6.7	10.3	4.9
No data	0.0	0.0	0.0	0.9	0.0
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-6
HOUSTON: ADVANTAGES OF DOWNTOWN SHOPPING BY EDUCATION
Percentages of sample placing indicated advantages in first place

Advantages	Education		
	Grammar school (N = 94)	High school (N = 275)	College (N = 230)
Larger selection of goods	39.3	40.7	44.3
Cheaper prices	23.4	14.5	9.1
Convenient public transportation	4.3	5.1	7.0
Enjoyable place to shop	3.2	4.0	4.4
Close to home	2.1	4.4	3.0
Stores close together	1.1	2.9	3.5
Can do several errands at one time	10.6	15.3	14.3
Better delivery service	1.1	0.7	3.5
No advantages	3.2	1.8	4.4
Other	11.7	10.6	6.5
No data	0.0	0.0	0.0
Total	100.0	100.0	100.0

TABLE H-8
HOUSTON: ADVANTAGES OF DOWNTOWN SHOPPING BY OCCUPATION
Percentages of sample placing indicated advantages in first place

Advantages	Occupational Categories				
	Professional (N = 146)	Managers and proprietors (N = 90)	Clerical (N = 100)	Skilled workers (N = 137)	Unskilled workers (N = 99)
Larger selection of goods	52.1	41.2	42.0	43.2	31.3
Cheaper prices	4.8	14.4	7.0	17.5	29.3
Convenient public transportation	4.1	1.1	11.0	2.9	8.1
Enjoyable place to shop	5.5	2.2	4.0	2.2	3.1
Close to home	2.7	7.8	3.0	3.6	0.0
Stores close together	3.4	1.1	3.0	2.2	4.0
Can do several errands at one time	13.7	12.2	17.0	16.8	13.1
Better delivery service	4.8	3.3	0.0	0.7	0.0
No advantages	3.4	6.7	4.0	0.7	2.0
Other	5.5	10.0	9.0	10.2	9.1
No data	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-9

SEATTLE: ADVANTAGES OF DOWNTOWN SHOPPING BY AREA

N = 150 in each area. Percentages of sample placing indicated advantages in first place

Advantages	Areas			
	1	2	3	4
Larger selection of goods......	54.0	51.3	37.3	34.0
Cheaper prices...............	9.4	14.0	14.0	7.3
Convenient public transportation....................	6.7	5.3	8.7	3.3
Enjoyable place to shop......	3.3	2.0	4.0	10.0
Close to home...............	0.0	1.3	1.3	12.1
Stores close together.........	2.0	2.7	2.7	3.3
Can do several errands at one time......................	15.3	13.3	20.0	24.0
Better delivery service.......	3.3	0.7	2.0	2.7
No advantages...............	0.0	2.0	2.7	1.3
Other......................	6.0	6.7	7.3	2.0
No data....................	0.0	0.7	0.0	0.0
Total...................	100.0	100.0	100.0	100.0

TABLE H-11

SEATTLE: ADVANTAGES OF DOWNTOWN SHOPPING BY AGE

Percentages of sample placing indicated advantages in first place

Advantages	Age Categories			
	18–34 (N = 178)	35–49 (N = 184)	50–64 (N = 148)	65+ (N = 90)
Larger selection of goods.....	47.8	46.7	41.2	36.6
Cheaper prices..............	16.3	11.4	6.8	7.8
Convenient public transportation....................	4.5	7.1	6.8	5.6
Enjoyable place to shop......	4.5	4.9	3.3	7.8
Close to home...............	2.8	2.2	6.8	3.3
Stores close together.........	3.9	1.1	1.4	5.6
Can do several errands at one time......................	14.6	16.8	22.2	21.1
Better delivery service.......	1.1	3.8	2.7	0.0
No advantages...............	0.6	2.2	2.0	1.1
Other......................	3.9	3.8	6.8	10.0
No data....................	0.0	0.0	0.0	1.1
Total.....................	100.0	100.0	100.0	100.0

TABLE H-10

HOUSTON: ADVANTAGES OF DOWNTOWN SHOPPING BY AREA

N = 150 in each area. Percentages of sample placing indicated advantages in first place

Advantages	Areas			
	1	2	3	4
Larger selection of goods.....	51.3	38.7	35.3	42.7
Cheaper prices..............	6.0	15.3	16.7	17.3
Convenient public transportation....................	3.3	4.7	8.7	6.0
Enjoyable place to shop......	5.3	6.7	2.7	1.3
Close to home...............	0.0	3.3	10.6	0.0
Stores close together.........	2.0	5.3	1.3	2.7
Can do several errands at one time......................	11.4	18.0	18.0	9.3
Better delivery service.......	3.3	1.3	2.0	0.7
No advantages...............	4.0	4.7	0.0	3.3
Other......................	13.4	2.0	4.7	16.7
No data....................	0.0	0.0	0.0	0.0
Total...................	100.0	100.0	100.0	100.0

TABLE H-12

HOUSTON: ADVANTAGES OF DOWNTOWN SHOPPING BY AGE

Percentages of sample placing indicated advantages in first place

Advantages	Age Categories			
	18–34 (N = 221)	35–49 (N = 220)	50–64 (N = 119)	65+ (N = 40)
Larger selection of goods.....	47.1	42.7	36.9	25.0
Cheaper prices..............	13.6	13.6	15.1	12.5
Convenient public transportation....................	6.3	5.9	3.4	7.5
Enjoyable place to shop......	1.8	4.1	5.9	10.0
Close to home...............	4.1	2.7	3.4	5.0
Stores close together.........	3.6	2.7	2.5	0.0
Can do several errands at one time......................	14.5	12.3	16.0	17.5
Better delivery service.......	1.8	1.8	1.7	2.5
No advantages...............	2.7	3.3	3.4	2.5
Other......................	4.5	10.9	11.7	17.5
No data....................	0.0	0.0	0.0	0.0
Total.....................	100.0	100.0	100.0	100.0

TABLE H-13
SEATTLE: DISADVANTAGES OF DOWNTOWN SHOPPING BY INCOME
Percentages of sample placing indicated disadvantages in first place

Disadvantages	Income Categories				
	Under $2000 (N = 80)	$2000–$3999 (N = 134)	$4000–$5999 (N = 194)	$6000–$7999 (N = 93)	$8000+ (N = 97)
Poor public transportation	1.2	7.5	3.1	7.5	3.1
Takes too long to shop there	8.8	14.2	8.2	10.8	12.4
Difficult parking	13.7	18.6	39.3	37.7	43.3
Too crowded	25.0	23.9	20.6	24.7	19.6
Congested traffic conditions	1.2	1.5	2.6	1.1	3.1
Cost of transportation too high	32.5	14.9	10.3	8.6	2.1
Too far to go	3.8	8.2	4.6	3.2	5.2
Unfriendly service	3.8	0.0	0.5	0.0	0.0
No disadvantage	0.0	1.5	1.5	0.0	1.0
Other	10.0	9.7	9.3	6.4	10.2
No data	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-15
SEATTLE: DISADVANTAGES OF DOWNTOWN SHOPPING BY NORTH-HATT OCCUPATIONAL RATING SCALE
Percentages of sample placing indicated disadvantages in first place

Disadvantages	North-Hatt Occupational Rating Categories				
	39–49 (N = 41)	50–59 (N = 123)	60–69 (N = 240)	70–79 (N = 121)	80–93 (N = 50)
Poor public transportation	9.7	3.2	5.8	3.3	2.0
Takes too long to shop there	7.4	11.4	10.4	11.6	12.0
Difficult parking	21.9	18.7	33.3	42.9	38.0
Too crowded	24.4	26.0	22.5	14.9	26.0
Congested traffic conditions	0.0	0.0	3.3	2.5	2.0
Cost of transportation too high	14.6	22.8	10.8	9.9	0.0
Too far to go	12.2	6.6	4.3	4.9	4.0
Unfriendly service	0.0	1.6	0.4	0.8	0.0
No disadvantage	2.4	0.8	0.4	0.8	4.0
Other	7.4	8.9	8.8	8.4	12.0
No data	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-14
HOUSTON: DISADVANTAGES OF DOWNTOWN SHOPPING BY INCOME
Percentages of sample placing indicated disadvantages in first place

Disadvantages	Income Categories				
	Under $2000 (N = 53)	$2000–$3999 (N = 176)	$4000–$5999 (N = 158)	$6000–$7999 (N = 85)	$8000+ (N = 128)
Poor public transportation	20.8	5.1	10.1	7.1	9.4
Takes too long to shop there	18.9	7.9	10.8	14.1	10.9
Difficult parking	13.2	33.5	36.7	36.5	35.9
Too crowded	28.3	31.2	17.7	15.3	15.6
Congested traffic conditions	3.8	3.4	4.4	11.8	6.3
Cost of transportation too high	5.7	2.3	1.9	3.5	1.6
Too far to go	5.7	10.2	9.5	7.1	7.0
Unfriendly service	0.0	1.1	2.6	1.1	1.6
No disadvantage	1.8	0.6	1.9	0.0	0.0
Other	1.8	4.7	4.4	3.5	11.7
No data	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-16
HOUSTON: DISADVANTAGES OF DOWNTOWN SHOPPING BY NORTH-HATT OCCUPATIONAL RATING SCALE
Percentages of sample placing indicated disadvantages in first place

Disadvantages	North-Hatt Occupational Rating Categories				
	39–49 (N = 33)	50–59 (N = 101)	60–69 (N = 227)	70–79 (N = 152)	80–93 (N = 59)
Poor public transportation	3.0	10.9	8.4	9.2	10.2
Takes too long to shop there	12.1	15.9	11.0	9.2	13.4
Difficult parking	21.2	22.9	37.8	38.1	32.2
Too crowded	33.3	25.7	21.1	21.7	11.9
Congested traffic conditions	6.1	5.9	4.0	6.6	6.8
Cost of transportation too high	6.1	3.0	2.2	0.7	0.0
Too far to go	9.1	9.9	9.7	5.9	10.2
Unfriendly service	0.0	1.9	0.9	2.0	3.4
No disadvantage	0.0	0.9	0.9	0.7	0.0
Other	9.1	3.0	4.0	5.9	11.9
No data	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-17

SEATTLE: DISADVANTAGES OF DOWNTOWN SHOPPING BY
EDUCATION

Percentages of sample placing indicated disadvantages in first
place

Disadvantages	Education		
	Grammar school (N = 92)	High school (N = 297)	College (N = 209)
Poor public transportation.....	2.2	1.7	3.3
Takes too long to shop there...	15.2	9.8	13.5
Difficult parking..............	15.2	14.5	19.6
Too crowded....................	6.5	15.8	12.4
Congested traffic conditions....	6.5	12.1	16.7
Cost of transportation too high.	9.8	16.2	10.0
Too far to go..................	9.8	6.4	6.2
Unfriendly service.............	4.4	1.0	1.9
No disadvantages..............	1.1	2.0	2.9
Other.........................	0.0	0.0	0.0
No data.......................	29.3	20.5	13.5
Total.....................	100.0	100.0	100.0

TABLE H-18

HOUSTON: DISADVANTAGES OF DOWNTOWN SHOPPING BY
EDUCATION

Percentages of sample placing indicated disadvantages in first
place

Disadvantages	Education		
	Grammar school (N = 94)	High school (N = 275)	College (N = 230)
Poor public transportation.....	3.2	2.5	3.0
Takes too long to shop there...	19.1	10.9	8.3
Difficult parking..............	12.8	18.2	24.4
Too crowded....................	14.9	18.2	11.7
Congested traffic conditions....	10.6	20.7	24.4
Cost of transportation too high.	3.2	5.1	5.2
Too far to go..................	14.9	6.5	7.8
Unfriendly service.............	0.0	2.2	0.9
No disadvantages..............	1.1	1.1	0.4
Other.........................	0.0	0.0	0.0
No data.......................	20.2	14.6	13.9
Total.....................	100.0	100.0	100.0

TABLE H-19

SEATTLE: DISADVANTAGES OF DOWNTOWN SHOPPING BY
OCCUPATION

Percentages of sample placing indicated disadvantages in first
place

Disadvantages	Occupational Categories				
	Professional (N = 84)	Managers and proprietors (N = 103)	Clerical (N = 89)	Skilled workers (N = 116)	Unskilled workers (N = 183)
Poor public transportation..............	4.8	3.9	2.2	1.7	1.1
Takes too long to shop there...............	7.1	14.6	11.2	9.5	14.7
Difficult parking......	21.4	13.6	14.7	21.6	12.6
Too crowded.........	13.1	12.6	11.2	11.2	16.9
Congested traffic conditions..............	15.5	16.5	12.4	13.8	8.2
Cost of transportation too high...........	13.1	12.6	14.7	12.9	11.5
Too far to go.........	4.8	2.9	9.0	7.8	9.3
Unfriendly service....	0.0	0.0	2.2	1.7	3.8
No disadvantages.....	1.2	2.9	2.2	0.9	3.3
Other................	0.0	0.0	0.0	0.0	0.0
No data.............	19.0	20.4	20.2	18.9	18.6
Total.............	100.0	100.0	100.0	100.0	100.0

TABLE H-20

HOUSTON: DISADVANTAGES OF DOWNTOWN SHOPPING BY
OCCUPATION

Percentages of sample placing indicated disadvantages in first
place

Disadvantages	Occupational Categories				
	Professional (N = 146)	Managers and proprietors (N = 90)	Clerical (N = 100)	Skilled workers (N = 137)	Unskilled workers (N = 99)
Poor public transportation..............	2.7	3.3	2.0	3.6	2.0
Takes too long to shop there...............	8.9	10.0	11.0	13.1	13.1
Difficult parking......	21.9	22.2	22.0	16.8	18.2
Too crowded.........	11.0	5.6	10.0	25.5	20.2
Congested traffic conditions..............	29.5	22.2	29.0	10.3	11.1
Cost of transportation too high...........	3.4	6.7	8.0	4.4	3.0
Too far to go.........	6.8	7.8	9.0	9.5	8.1
Unfriendly service....	2.7	0.0	2.0	0.7	1.0
No disadvantages.....	0.7	1.1	0.0	1.5	0.0
Other................	0.0	0.0	0.0	0.0	0.0
No data.............	12.4	21.1	7.0	14.6	23.3
Total.............	100.0	100.0	100.0	100.0	100.0

TABLE H-21

SEATTLE: DISADVANTAGES OF DOWNTOWN SHOPPING BY AREA
N = 150 in each area. Percentages of sample placing indicated disadvantages in first place

Disadvantages	Areas			
	1	2	3	4
Poor public transportation....	6.7	2.7	7.3	1.3
Takes too long to shop there..	8.0	8.7	18.7	7.3
Difficult parking..............	42.7	25.3	25.3	34.0
Too crowded..................	19.3	24.0	23.3	22.7
Congested traffic conditions..	2.7	2.0	2.0	1.3
Cost of transportation too high	4.0	23.3	8.7	14.7
Too far to go.................	9.3	6.7	4.0	0.7
Unfriendly service............	0.0	1.3	0.7	0.7
No disadvantages.............	1.3	0.7	0.0	2.0
Other........................	6.0	5.3	10.0	15.3
No data......................	0.0	0.0	0.0	0.0
Total......................	100.0	100.0	100.0	100.0

TABLE H-22

HOUSTON: DISADVANTAGES OF DOWNTOWN SHOPPING BY AREA
N = 150 in each area. Percentages of sample placing indicated disadvantages in first place

Disadvantages	Areas			
	1	2	3	4
Poor public transportation....	8.7	12.7	3.3	11.3
Takes too long to shop there..	12.0	5.3	11.3	16.0
Difficult parking..............	38.0	45.4	32.0	18.7
Too crowded..................	12.0	21.3	31.4	22.7
Congested traffic conditions..	8.7	6.0	4.0	3.3
Cost of transportation too high	0.7	3.3	4.7	1.3
Too far to go.................	11.3	2.0	1.3	19.4
Unfriendly service............	1.3	1.3	0.7	2.7
No disadvantages.............	0.0	0.0	0.0	3.3
Other........................	7.3	2.7	11.3	1.3
No data......................	0.0	0.0	0.0	0.0
Total......................	100.0	100.0	100.0	100.0

TABLE H-23

SEATTLE: DISADVANTAGES OF DOWNTOWN SHOPPING BY AGE
Percentages of sample placing indicated disadvantages in first place

Disadvantages	Age Categories			
	18–34 (N = 178)	35–49 (N = 184)	50–64 (N = 148)	65+ (N = 90)
Poor public transportation....	3.4	4.9	3.4	7.8
Takes too long to shop there..	10.2	13.6	10.8	5.6
Difficult parking..............	41.4	31.5	29.7	16.7
Too crowded..................	24.7	20.1	20.9	24.4
Congested traffic conditions..	1.1	3.3	0.7	3.3
Cost of transportation too high	5.6	10.3	15.5	26.7
Too far to go.................	6.3	4.9	6.1	2.2
Unfriendly service............	0.6	0.0	0.7	2.2
No disadvantages.............	1.1	1.6	0.7	0.0
Other........................	5.6	9.8	11.5	11.1
No data......................	0.0	0.0	0.0	0.0
Total......................	100.0	100.0	100.0	100.0

TABLE H-24

HOUSTON: DISADVANTAGES OF DOWNTOWN SHOPPING BY AGE
Percentages of sample placing indicated disadvantages in first place

Disadvantages	Age Categories			
	18–34 (N = 221)	35–49 (N = 220)	50–64 (N = 119)	65+ (N = 40)
Poor public transportation....	11.3	6.8	8.4	10.0
Takes too long to shop there..	9.5	12.7	10.1	15.0
Difficult parking..............	33.5	38.2	29.4	20.0
Too crowded..................	22.6	20.0	24.4	20.0
Congested traffic conditions...	6.3	5.0	2.5	12.5
Cost of transportation too high	2.3	1.8	4.2	2.5
Too far to go.................	9.5	7.3	9.2	7.5
Unfriendly service............	0.9	1.8	1.7	2.5
No disadvantages.............	0.0	0.9	2.5	0.0
Other........................	4.1	5.5	7.6	10.0
No data......................	0.0	0.0	0.0	0.0
Total......................	100.0	100.0	100.0	100.0

TABLE H-25
SEATTLE: ADVANTAGES OF SUBURBAN SHOPPING CENTERS BY INCOME

Percentages of sample placing indicated advantages in first place

Advantages	Income Categories				
	Under $2000 (N = 80)	$2000–$3999 (N = 134)	$4000–$5999 (N = 194)	$6000–$7999 (N = 93)	$8000+ (N = 97)
Closer to home........	41.2	43.4	38.8	39.9	40.2
Less crowded.........	15.0	11.9	11.3	18.2	10.3
More convenient hours	2.5	3.7	3.1	0.0	2.1
Parking easy..........	5.0	8.9	14.9	6.5	19.6
Clean and modern stores...............	0.0	0.7	2.1	1.1	1.0
Friendly and courteous clerks...............	2.5	2.3	2.6	0.0	1.0
Do not have to dress up	11.2	17.2	21.6	21.3	19.6
Less noise and confusion.................	1.3	1.5	0.5	2.2	0.0
No advantages........	7.5	2.9	1.0	2.2	0.0
Other................	10.0	5.2	3.1	3.2	3.1
No data.............	3.8	2.3	1.0	5.4	3.1
Total..............	100.0	100.0	100.0	100.0	100.0

TABLE H-27
SEATTLE: ADVANTAGES OF SUBURBAN SHOPPING CENTERS BY NORTH-HATT OCCUPATIONAL RATING SCALE

Percentages of sample placing indicated advantages in first place

Advantages	North-Hatt Occupational Rating Categories				
	39–49 (N = 41)	50–59 (N = 123)	60–69 (N = 240)	70–79 (N = 121)	80–93 (N = 50)
Closer to home........	53.6	39.0	44.2	35.5	36.0
Less crowded.........	14.7	9.8	13.7	11.6	12.0
More convenient hours	7.3	0.8	2.6	4.1	0.0
Parking easy..........	7.3	8.9	10.8	16.5	14.0
Clean and modern stores...............	0.0	0.8	0.4	3.3	2.0
Friendly and courteous clerks...............	0.0	2.4	2.1	2.5	0.0
Do not have to dress up	14.7	16.3	17.6	19.0	32.0
Less noise and confusion.................	0.0	2.4	0.8	0.8	0.0
No advantages........	0.0	5.7	1.2	1.7	0.0
Other................	2.4	9.8	3.7	3.3	2.0
No data.............	0.0	4.1	2.9	1.7	2.0
Total..............	100.0	100.0	100.0	100.0	100.0

TABLE H-26
HOUSTON: ADVANTAGES OF SUBURBAN SHOPPING CENTERS BY INCOME

Percentages of sample placing indicated advantages in first place

Advantages	Income Categories				
	Under $2000 (N = 53)	$2000–$3999 (N = 176)	$4000–$5999 (N = 158)	$6000–$7999 (N = 85)	$8000+ (N = 128)
Closer to home........	60.4	51.7	53.2	50.6	50.8
Less crowded.........	9.4	13.6	13.9	12.8	11.7
More convenient hours	1.9	3.9	3.8	2.4	3.1
Parking easy..........	1.9	7.9	13.3	9.4	9.3
Clean and modern stores...............	0.0	0.6	1.9	0.0	1.6
Friendly and courteous clerks...............	1.9	2.3	1.9	1.2	1.6
Do not have to dress up	15.1	16.5	10.8	20.0	17.2
Less noise and confusion.................	1.9	0.0	0.0	2.4	0.0
No advantages........	1.9	0.0	0.6	0.0	0.0
Other................	5.6	3.5	0.6	1.2	4.7
No data.............	0.0	0.0	0.0	0.0	0.0
Total..............	100.0	100.0	100.0	100.0	100.0

TABLE H-28
HOUSTON: ADVANTAGES OF SUBURBAN SHOPPING CENTERS BY NORTH-HATT OCCUPATIONAL RATING SCALE

Percentages of sample placing indicated advantages in first place

Advantages	North-Hatt Occupational Rating Categories				
	39–49 (N = 33)	50–59 (N = 101)	60–69 (N = 227)	70–79 (N = 152)	80–93 (N = 59)
Closer to home........	51.5	54.5	52.0	50.0	57.6
Less crowded.........	12.1	9.9	13.7	14.5	10.2
More convenient hours	3.0	3.0	4.0	2.6	3.4
Parking easy..........	3.0	9.9	10.6	9.2	6.8
Clean and modern stores...............	6.1	1.0	1.3	0.0	0.0
Friendly and courteous clerks...............	0.0	3.9	0.4	3.3	1.7
Do not have to dress up	15.2	12.9	15.0	17.1	18.6
Less noise and confusion...............	0.0	0.0	0.4	0.7	0.0
No advantages........	0.0	1.0	0.4	0.0	0.0
Other................	9.1	3.9	2.2	2.6	1.7
No data.............	0.0	0.0	0.0	0.0	0.0
Total..............	100.0	100.0	100.0	100.0	100.0

TABLE H-29
SEATTLE: ADVANTAGES OF SUBURBAN SHOPPING CENTERS BY EDUCATION
Percentages of sample placing indicated advantages in first place

Advantages	Education		
	Grammar school (N = 92)	High school (N = 297)	College (N = 209)
Closer to home	44.6	41.8	37.8
Less crowded	10.8	14.1	11.5
More convenient hours	1.1	3.0	2.4
Parking easy	7.6	10.4	15.3
Clean and modern stores	1.1	0.7	1.9
Friendly and courteous clerks	0.0	2.8	1.4
Do not have to dress up	16.3	17.5	21.1
Less noise and confusion	0.0	1.3	1.0
No advantages	3.3	2.4	1.9
Other	7.6	4.0	4.3
No data	7.6	2.0	1.4
Total	100.0	100.0	100.0

TABLE H-31
SEATTLE: ADVANTAGES OF SUBURBAN SHOPPING BY OCCUPATION
Percentages of sample placing indicated advantages in first place

Advantages	Occupational Categories				
	Professional (N = 84)	Managers and proprietors (N = 103)	Clerical (N = 89)	Skilled workers (N = 116)	Unskilled workers (N = 183)
Closer to home	32.1	37.8	44.9	41.4	45.4
Less crowded	11.9	14.6	12.4	8.7	13.7
More convenient hours	1.2	2.9	2.2	1.7	3.8
Parking easy	17.8	14.6	12.4	10.4	7.7
Clean and modern stores	1.2	1.9	1.1	1.7	0.5
Friendly and courteous clerks	2.4	1.0	1.1	3.4	1.6
Do not have to dress up	26.2	16.5	16.9	23.3	14.2
Less noise and confusion	1.2	1.0	0.0	0.9	1.6
No advantages	0.0	1.9	0.0	3.4	3.3
Other	3.6	4.9	5.6	1.7	6.6
No data	2.4	2.9	3.4	3.4	1.6
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-30
HOUSTON: ADVANTAGES OF SUBURBAN SHOPPING CENTERS BY EDUCATION
Percentages of sample placing indicated advantages in first place

Advantages	Education		
	Grammar school (N = 94)	High school (N = 275)	College (N = 230)
Closer to home	52.1	52.7	52.2
Less crowded	12.8	12.7	13.0
More convenient hours	3.2	3.6	3.0
Parking easy	4.2	12.0	8.3
Clean and modern stores	1.1	0.4	1.7
Friendly and courteous clerks	4.2	0.7	2.2
Do not have to dress up	14.9	14.2	17.4
Less noise and confusion	1.1	0.0	0.9
No advantages	1.1	0.4	0.0
Other	5.3	3.3	1.3
No data	0.0	0.0	0.0
Total	100.0	100.0	100.0

TABLE H-32
HOUSTON: ADVANTAGES OF SUBURBAN SHOPPING BY OCCUPATION
Percentages of sample placing indicated advantages in first place

Advantages	Occupational Categories				
	Professional (N = 146)	Managers and proprietors (N = 90)	Clerical (N = 100)	Skilled workers (N = 137)	Unskilled workers (N = 99)
Closer to home	54.1	55.6	47.0	51.8	53.5
Less crowded	13.0	6.7	16.0	13.1	14.2
More convenient hours	3.4	4.4	4.0	3.6	1.0
Parking easy	6.2	7.8	14.0	11.7	7.1
Clean and modern stores	0.0	1.1	1.0	1.5	2.0
Friendly and courteous clerks	1.4	2.2	2.0	2.2	2.0
Do not have to dress up	18.5	18.9	13.0	13.9	13.1
Less noise and confusion	0.7	0.0	0.0	0.7	0.0
No advantages	0.0	0.0	1.0	0.0	1.0
Other	2.7	3.3	2.0	1.5	6.1
No data	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-33

SEATTLE: ADVANTAGES OF SUBURBAN SHOPPING CENTERS BY AREA

N = 150 in each area. Percentage of sample placing indicated advantages in first place

Advantages	Area			
	1	2	3	4
Closer to home	51.3	60.0	34.6	16.7
Less crowded	12.0	12.0	16.7	10.0
More convenient hours	1.3	0.7	4.7	3.3
Parking easy	8.7	7.3	13.3	17.3
Clean and modern stores	1.3	0.0	0.7	2.7
Friendly and courteous clerks	0.7	2.0	2.7	2.0
Don't have to dress up to go there	23.3	14.0	16.7	21.4
Less noise and confusion	0.7	0.7	1.3	1.3
No advantage	0.0	2.0	4.0	3.3
Other	0.7	1.3	3.3	13.3
No data	0.0	0.0	2.0	8.7
Total	100.0	100.0	100.0	100.0

TABLE H-34

HOUSTON: ADVANTAGES OF SUBURBAN SHOPPING CENTERS BY AREA

N = 150 in each area. Percentage of sample placing indicated advantages in first place

Advantages	Area			
	1	2	3	4
Closer to home	55.4	54.0	36.0	64.6
Less crowded	7.3	12.0	22.0	10.0
More convenient hours	3.3	3.3	6.0	0.7
Parking easy	5.3	13.4	14.0	4.7
Clean and modern stores	1.3	0.0	0.7	2.0
Friendly and courteous clerks	2.7	2.0	0.0	2.7
Don't have to dress up to go there	22.7	12.7	14.0	12.7
Less noise and confusion	0.0	1.3	0.7	0.0
No advantage	0.0	0.0	0.0	1.3
Other	2.0	1.3	6.6	1.3
No data	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0

TABLE H-35

SEATTLE: ADVANTAGES OF SUBURBAN SHOPPING CENTERS BY AGE

Percentages of sample placing indicated advantages in first place

Advantages	Age Cateogries			
	18–34 (N = 178)	35–49 (N = 184)	50–64 (N = 148)	65+ (N = 90)
Closer to home	43.8	46.2	31.8	37.8
Less crowded	15.2	11.4	8.1	17.8
More convenient hours	3.9	2.2	2.0	1.1
Parking easy	10.7	10.9	16.2	7.8
Clean and modern stores	2.2	0.2	1.4	1.1
Friendly and courteous clerks	1.7	0.0	4.1	2.2
Do not have to dress up	18.0	20.7	20.3	14.5
Less noise and confusion	1.7	1.6	0.0	0.0
No advantage	1.1	1.1	4.1	4.4
Other	1.1	3.7	7.4	8.9
No data	0.6	2.2	4.6	4.4
Total	100.0	100.0	100.0	100.0

TABLE H-36

HOUSTON: ADVANTAGES OF SUBURBAN SHOPPING CENTERS BY AGE

Percentage of sample placing indicated advantages in first place

Advantages	Age Categories			
	18–34 (N = 221)	35–49 (N = 220)	50–64 (N = 119)	65+ (N = 40)
Closer to home	52.9	54.1	49.6	50.0
Less crowded	15.4	11.8	11.8	7.5
More convenient hours	5.4	1.4	2.5	5.0
Parking easy	10.0	9.1	9.3	7.5
Clean and modern stores	0.9	1.4	0.0	2.5
Friendly and courteous clerks	0.5	2.7	2.5	2.5
Do not have to dress up	12.7	15.0	21.8	15.0
Less noise and confusion	0.5	0.5	0.0	2.5
No advantage	0.0	0.5	0.8	0.0
Other	1.7	3.5	1.7	7.5
No data	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0

TABLE H-37
SEATTLE: DISADVANTAGES OF SUBURBAN SHOPPING CENTERS BY INCOME
Percentages of sample placing indicated disadvantages in first place

Disadvantages	Income Categories				
	Under $2000 (N = 80)	$2000-$3999 (N = 134)	$4000-$5999 (N = 194)	$6000-$7999 (N = 93)	$8000+ (N = 97)
Poor public transportation	7.5	6.0	7.2	5.4	5.2
Lack of large selection	37.5	52.2	52.1	43.0	51.5
Not all kinds of businesses	8.8	10.4	12.9	10.7	7.2
Too far to go	8.8	3.8	4.1	7.5	14.4
Prices high	3.7	6.0	7.7	6.5	3.1
Bus fare too high	5.0	3.0	2.6	2.2	0.0
Hard to get credit	0.0	0.8	0.0	1.1	0.0
Poor delivery service	2.5	2.2	4.1	7.5	6.2
No disadvantages	3.7	1.5	0.0	0.0	2.1
Other	22.5	11.9	8.2	11.8	9.3
No data	0.0	2.2	1.1	4.3	1.0
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-39
SEATTLE: DISADVANTAGES OF SUBURBAN SHOPPING CENTERS BY NORTH-HATT OCCUPATIONAL RATING SCALE
Percentages of sample placing indicated disadvantages in first place

Disadvantages	North-Hatt Occupational Rating Categories				
	39-49 (N = 41)	50-59 (N = 123)	60-69 (N = 240)	70-79 (N = 121)	80-93 (N = 50)
Poor public transportation	2.4	8.1	6.7	5.0	8.0
Lack of large selection	51.2	50.4	48.8	46.3	48.0
Not all kinds of businesses	12.3	6.5	7.9	16.5	14.0
Too far to go	2.4	9.8	5.4	8.3	6.0
Prices high	7.3	4.9	6.7	5.8	2.0
Bus fare too high	2.4	1.6	3.3	2.5	2.0
Hard to get credit	0.0	0.0	0.4	0.0	0.0
Poor delivery service	0.0	2.4	4.6	6.6	6.0
No disadvantages	0.0	2.4	0.8	0.0	4.0
Other	22.0	12.3	13.3	7.4	8.0
No data	0.0	1.6	2.1	1.6	2.0
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-38
HOUSTON: DISADVANTAGES OF SUBURBAN SHOPPING CENTERS BY INCOME
Percentages of sample placing indicated disadvantages in first place

Disadvantages	Income Categories				
	Under $2000 (N = 53)	$2000-$3999 (N = 176)	$4000-$5999 (N = 158)	$6000-$7999 (N = 85)	$8000+ (N = 128)
Poor public transportation	13.2	6.8	5.7	16.5	5.5
Lack of large selection	43.4	50.0	47.5	49.4	54.7
Not all kinds of businesses	1.9	7.9	13.9	8.2	8.6
Too far to go	1.9	2.3	0.6	0.0	1.6
Prices high	13.2	15.9	9.5	5.8	3.9
Bus fare too high	0.0	1.7	1.3	1.2	0.0
Hard to get credit	0.0	0.6	0.0	0.0	0.0
Poor delivery service	5.7	2.3	2.5	0.0	5.5
No disadvantages	1.9	1.1	1.3	1.2	3.1
Other	18.8	11.4	17.7	16.5	16.4
No data	0.0	0.0	0.0	1.2	0.7
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-40
HOUSTON: DISADVANTAGES OF SUBURBAN SHOPPING CENTERS BY NORTH-HATT OCCUPATIONAL RATING SCALE
Percentages of sample placing indicated disadvantages in first place

Disadvantages	North-Hatt Occupational Rating Categories				
	39-49 (N = 33)	50-59 (N = 101)	60-69 (N = 227)	70-79 (N = 152)	80-93 (N = 59)
Poor public transportation	6.1	5.0	8.4	9.2	5.1
Lack of large selection	45.5	49.5	50.0	54.6	49.2
Not all kinds of businesses	9.1	12.9	5.3	11.2	16.9
Too far to go	3.0	0.0	2.2	0.0	0.0
Prices high	12.1	12.9	10.1	7.9	8.5
Bus fare too high	3.0	1.0	1.2	0.7	0.0
Hard to get credit	0.0	1.0	0.0	0.0	0.0
Poor delivery service	0.0	2.0	1.2	3.3	6.8
No disadvantages	3.0	1.0	1.8	1.3	3.4
Other	18.2	14.7	19.4	11.8	8.5
No data	0.0	0.0	0.4	0.0	1.6
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-41

SEATTLE: DISADVANTAGES OF SUBURBAN SHOPPING CENTERS
BY EDUCATION

Percentages of sample placing indicated disadvantages in first
place

Disadvantages	Education		
	Grammar school (N = 92)	High school (N = 297)	College (N = 209)
Poor public transportation	4.3	6.4	7.2
Lack of large selection	43.5	51.5	46.9
Not all kinds of businesses	3.3	12.1	11.5
Too far to go	5.4	5.4	9.6
Prices high	6.5	5.7	5.7
Bus fare too high	7.6	1.3	1.9
Hard to get credit	0.0	0.4	0.5
Poor delivery service	1.1	4.0	6.2
No disadvantages	3.3	0.4	0.9
Other	20.7	11.1	9.1
No data	4.3	1.7	0.5
Total	100.0	100.0	100.0

TABLE H-42

HOUSTON: DISADVANTAGES OF SUBURBAN SHOPPING CENTERS
BY EDUCATION

Percentages of sample placing indicated disadvantages in first
place

Disadvantages	Education		
	Grammar school (N = 94)	High school (N = 275)	College (N = 230)
Poor public transportation	7.4	6.5	10.5
Lack of large selection	46.8	52.0	47.8
Not all kinds of businesses	6.4	7.3	12.6
Too far to go	1.1	2.2	0.4
Prices high	14.9	10.5	7.4
Bus fare too high	1.1	1.5	0.4
Hard to get credit	0.0	0.4	0.0
Poor delivery service	3.2	1.8	4.3
No disadvantages	3.2	1.1	1.8
Other	15.9	16.7	13.9
No data	0.0	0.0	0.9
Total	100.0	100.0	100.0

TABLE H-43

SEATTLE: DISADVANTAGES OF SUBURBAN SHOPPING CENTERS
BY OCCUPATION

Percentages of sample placing indicated disadvantages in first
place

Disadvantages	Occupational Categories				
	Professional (N = 84)	Managers and proprietors (N = 103)	Clerical (N = 89)	Skilled workers (N = 116)	Unskilled workers (N = 183)
Poor public transportation	4.8	5.8	13.5	4.3	5.5
Lack of large selection	46.4	48.5	41.6	49.1	53.0
Not all kinds of businesses	17.9	7.8	11.2	10.3	7.7
Too far to go	8.3	6.8	7.9	5.2	6.6
Prices high	4.8	3.9	5.6	6.9	6.6
Bus fare too high	1.2	1.9	2.2	4.3	2.7
Hard to get credit	0.0	0.0	1.1	0.0	0.0
Poor delivery service	5.9	10.7	3.4	2.6	1.6
No disadvantages	2.4	0.0	0.0	0.9	2.2
Other	5.9	11.7	10.1	15.5	13.6
No data	2.4	2.9	3.4	0.9	0.5
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-44

HOUSTON: DISADVANTAGES OF SUBURBAN SHOPPING CENTERS
BY OCCUPATION

Percentages of sample placing indicated disadvantages in first
place

Disadvantages	Occupational Categories				
	Professional (N = 146)	Managers and proprietors (N = 90)	Clerical (N = 100)	Skilled workers (N = 137)	Unskilled workers (N = 99)
Poor public transportation	6.8	5.6	11.0	9.5	4.0
Lack of large selection	52.1	57.8	47.0	45.3	53.6
Not all kinds of businesses	15.7	5.6	9.0	6.6	9.1
Too far to go	0.0	1.1	1.0	2.2	1.0
Prices high	6.2	6.7	9.0	17.4	9.1
Bus fare too high	0.7	0.0	0.0	2.2	2.0
Hard to get credit	0.0	0.0	0.0	0.0	1.0
Poor delivery service	5.5	2.2	2.0	1.5	0.0
No disadvantages	1.4	2.2	2.0	0.7	3.0
Other	10.9	18.8	18.0	14.6	17.2
No data	0.7	0.0	1.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

TABLE H-45

SEATTLE: DISADVANTAGES OF SUBURBAN SHOPPING CENTERS BY AREA

N = 150 in each area. Percentages of sample placing indicated disadvantages in first place

Disadvantages	Area			
	1	2	3	4
Poor public transportation....	14.6	2.7	3.3	4.7
Lack of large selection........	50.7	58.6	51.4	34.0
Not all kinds of businesses...	10.0	6.7	15.3	10.0
Too far to go.................	0.7	1.3	0.0	25.4
Prices high..................	4.0	6.7	8.0	4.7
Bus fare too high.............	1.3	4.0	3.3	1.3
Hard to get credit............	0.7	0.7	0.0	0.0
Poor delivery service.........	5.3	3.3	3.3	5.3
No disadvantage.............	0.7	0.7	2.0	1.3
Other.......................	12.0	15.3	10.7	9.3
No data.....................	0.0	0.0	2.7	4.0
Total.....................	100.0	100.0	100.0	100.0

TABLE H-46

HOUSTON: DISADVANTAGES OF SUBURBAN SHOPPING CENTERS BY AREA

N = 150 in each area. Percentages of sample placing indicated disadvantages in first place

Disadvantages	Area			
	1	2	3	4
Poor public transportation....	7.3	7.3	13.3	4.7
Lack of large selection........	46.0	42.7	55.3	54.6
Not all kinds of businesses....	7.3	16.0	9.3	4.0
Too far to go.................	0.7	4.0	0.7	0.0
Prices high..................	4.0	16.0	10.0	10.0
Bus fare too high.............	0.0	1.3	1.3	1.3
Hard to get credit............	0.0	0.0	0.0	0.7
Poor delivery service.........	6.0	4.0	0.7	1.3
No disadvantage.............	2.7	0.7	0.7	2.7
Other.......................	24.7	8.0	8.7	20.7
No data.....................	1.3	0.0	0.0	0.0
Total.....................	100.0	100.0	100.0	100.0

TABLE H-47

SEATTLE: DISADVANTAGES OF SUBURBAN SHOPPING CENTERS BY AGE

Percentages of sample placing indicated disadvantages in first place

Disadvantages	Age Categories			
	18–34 (N = 178)	35–49 (N = 184)	50–64 (N = 148)	65+ (N = 90)
Poor public transportation....	6.7	8.7	3.4	5.6
Lack of large selection........	53.9	51.2	41.2	45.6
Not all kinds of businesses...	14.6	8.2	10.1	7.8
Too far to go.................	5.1	4.3	8.8	12.2
Prices high..................	5.6	8.7	4.7	2.2
Bus fare too high.............	2.2	0.5	4.7	3.3
Hard to get credit............	0.6	0.5	0.0	0.0
Poor delivery service.........	2.8	4.3	8.1	1.1
No disadvantage.............	0.6	1.1	1.4	2.2
Other.......................	7.9	10.3	14.2	18.9
No data.....................	0.0	2.2	3.4	1.1
Total.....................	100.0	100.0	100.0	100.0

TABLE H-48

HOUSTON: DISADVANTAGES OF SUBURBAN SHOPPING CENTERS BY AGE

Percentages of sample placing indicated disadvantages in first place

Disadvantages	Age Categories			
	18–34 (N = 221)	35–49 (N = 220)	50–64 (N = 119)	65+ (N = 40)
Poor public transportation....	9.5	6.4	7.6	12.5
Lack of large selection........	48.4	53.6	51.4	30.0
Not all kinds of businesses...	14.0	7.7	5.1	2.5
Too far to go.................	0.0	0.9	2.5	7.5
Prices high..................	14.9	6.4	6.7	12.5
Bus fare too high.............	0.9	0.9	0.8	2.5
Hard to get credit............	0.5	0.0	0.0	0.0
Poor delivery service.........	2.3	3.2	2.5	7.5
No disadvantage.............	0.0	3.2	0.8	5.0
Other.......................	9.5	17.3	21.8	20.0
No data.....................	0.0	0.4	0.8	0.0
Total.....................	100.0	100.0	100.0	100.0

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