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RESIDENTIAL LOCATION AND URBAN MOBILITY:

THE SECOND WAVE OF INTERVIEWS

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by

John B. Lansing

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## Introduction

### Purpose of the Research

Highway transportation in any metropolitan area necessarily has a close relationship with the area which it serves. In part highway transportation is influenced by the area since the demand for highway services depends upon the location of traffic generating points within the metropolis. In part the development of the area is influenced by the availability of highways. The purpose of the investigation part of which is reported here is to explore some of these reciprocal relationships as far as private families are concerned. The project is experimental in that the approach differs from that taken in the work done to date in the field and many of the relationships investigated are measured in a new way or measured for the first time by any method.

Where people locate their homes in urban areas and whether they live close together in densely populated communities or spread out in low density areas are of importance for transportation. In planning the total transportation system for the areas which will be newly urbanized in the coming decades it is possible to project total population with some degree of confidence. Where within the metropolitan regions this population will live is more difficult to forecast. Will people live in compact areas of moderate to high residential density, or will they spread out over wide areas? Much of this research is intended to increase understanding of this question.

The topic is one about which there is some controversy. There are social critics who find reason to object to "urban sprawl" or "spread city" and their implications for the community as a whole. This research is not intended to take a stand in any such controversy. The purpose is to examine existing trends and their reasons in people's preferences. Some information has been obtained about

the reasons for preferences which may be of interest to those who would like to consider what might be needed to change some of the preferences.

A special aspect of the demand for housing which is considered is the demand for vacation homes. Any rapid increase in the frequency of ownership and use of vacation homes would have obvious implications for weekend travel patterns and, hence, for the demand for highways.

The importance of the journey to work for the demand for highways is well understood. This project is intended to make a contribution to understanding of this journey, and especially of the choice between cars and public transportation. In this area the reciprocal relation between transportation and location is especially important. Transportation influences where people can live in relation to their jobs and their use of transportation depends upon what services are available where they live. The special contribution of this investigation to the study of the journey to work is based on intensive study of the journeys to work of members of the families studied. Questions were asked in detail about the characteristics of these journeys and about the reasons for using the method of transportation actually employed.

#### The Series of Reports

This report is the third in a series. The first two are:<sup>1</sup>

Residential Location and Urban Mobility, by John B. Lansing and Eva Mueller with Nancy Barth.

Residential Location and Urban Mobility: A Multivariate Analysis, by John B. Lansing and Nancy Barth.

This report is based on a second wave of data collection. The first report was based on a total of 824 interviews taken in September and early October 1963.

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<sup>1</sup>They may be purchased from the Publications Clerk, Institute for Social Research, University of Michigan, Ann Arbor, bound in paper, for \$2.00 each.

The second wave of data collection reported here is intended to add to that modest size of sample and, where appropriate, to incorporate additions to the list of objectives and refinements in questionnaire design. The larger purposes of the work remain the same.

The second report mentioned above contains a number of multivariate statistical calculations. No comparable work has yet been done with the new interviews.

### The Sample

The universe sampled in this survey consists of all families living in private dwellings in metropolitan areas in the United States exclusive of the New York area. A total of 740 interviews were taken in 32 areas, including the remaining 11 of the 12 largest standard metropolitan statistical areas and 21 other areas selected to represent the remaining standard metropolitan statistical areas. The basic sample was a sample of dwelling units. When a dwelling unit fell into the sample, all families living in that dwelling unit were designated for interview. In half of the families the head of the family was designated as respondent for the family, and in half, the wife of the head.

### Interviewing

Interviewing took place between September 9, 1965 and October 17, 1965. The response rate on the project was 84 per cent. That is, the interviewer successfully completed an interview with the designated respondent in that proportion of the families selected. No substitutions were allowed.<sup>2</sup>

### Acknowledgments

This study is a project of the Economic Behavior Program of the Survey Research Center, a division of the Institute for Social Research of The University of Michigan.

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<sup>2</sup>For a fuller discussion of interviewing see R.L. Kahn and C.F. Cannell, The Dynamics of Interviewing: Theory, Techniques, and Cases. New York: John Wiley, 1957.

The Director of the Program is George Katona; of the Center, Angus Campbell; and of the Institute, Rensis Likert. The sample selection was the responsibility of the Sampling Section of the Survey Research Center; the work was supervised by Irene Hess. Interviewing was conducted by the Field Section of the Survey Research Center and directed by Charles Cannell, who also participated actively in the construction of the questionnaire. Coding of the data was under the supervision of Joan Scheffler. The analysis staff who carried through the project included Gary Hendricks and Charles Wade Clifton. The study has benefitted greatly from suggestions made by members of the staff of the Bureau of Public Roads, especially Joseph Stowers, Michael Lash and Carl N. Swerdloff. This report was typed by Anita Grob.

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SUMMARY OF FINDINGS

- (1) All available evidence points in the direction of an increase in the proportion of families living in single family homes. As one proceeds up the income scale the proportion who live in single family homes increases, reaching 90 per cent of those with family incomes over \$15,000. Fully 85 per cent of all families state that their preference is to live in a single family home. In recent years there has been a trend toward shifting into single family homes.
- (2) The average size of lot for single family homes has been slowly increasing. It is reasonable to project a continuation of this trend. Median lot sizes rise with income and, hence, rising incomes are likely to lead to increased size of lot. The preferred lot size, cost considerations aside, is about 3/10 to 5/10 of an acre, which is larger than the present median lot size, which is about 2/10 of an acre. A dramatic jump in lot sizes, however, seems unlikely in view of two facts: people dislike the maintenance problem associated with large lots, and size of lot ranks well down on the priority list of features sought in new homes.
- (3) People overwhelmingly prefer a location well out from the center of a metropolitan area. Only 15 per cent would prefer a location close to the center of things. Taking where they are now as a point of reference, 25 per cent would like to live farther out, and only 9 per cent, closer in. About four out of ten would even prefer a house in the country to one in the suburbs. These preferences are based on dislike for noise, crowding, and confusion and on a desire for space for spare time activities.



- (4) People tend to like their neighborhoods if their friends live there.

Recent movers were asked which neighborhood they liked better, their old neighborhood or the new one. About seven out of ten based their response on social considerations.

- (5) The features recent movers were looking for in their new homes were related primarily to needs for space. For single family homes the three features most often rated as important are: floor plan, number of bedrooms, and size of rooms.

- (6) About 5 per cent of families in metropolitan areas own vacation homes. The typical distance to these homes is about 100 miles, and most people make more than 15 round trips a year. Of families with incomes over \$15,000 a year 15 per cent now own a vacation home and an additional 9 per cent feel they have a very good chance of acquiring one.

- (7) The average journey to work is about five miles in the cities studied. It takes about 20 minutes by car and about twice as long by common carrier. About half as many workers head away from the center of the metropolitan area as head toward it.

- (8) About half of all journeys to work could be made by common carrier if people chose to use the existing service. The exact proportion of trips for which common carrier service is available depends on how far people are willing to walk. Of those who now get to work by car 43 per cent report that there is common carrier service they could use if they were willing to use service up to ten minutes walk from their homes.

(9) Most people prefer to go to work by car rather than by common carrier.

If the time to get to work and the cost were the same, nine people out of ten would prefer to go by car. The main reason is the convenience and flexibility associated with private transportation. In addition, practically everyone considers a car more comfortable than a common carrier. A few people dislike the drive to work but this is a minority view. Of those who drive to work 86 per cent either enjoy the drive or neither enjoy nor dislike it.

## I. Residential Density

It is the purpose of this chapter to analyze the determinants of residential density. The basic goal is to be able to predict future residential densities. Attention will be directed to the logical foundations upon which such predictions may rest.

Much of the statistical treatment of density is expressed in terms of the number of people who live on a given area of land. Thus, one may speak of people per acre of land, or, more exactly, of people per acre of land in residential use. In sample surveys, however, people per acre is not an appropriate variable to use. It is not isolated, individual people who live in one location or another, but families. The interviews themselves and the analysis based upon them work with families as the natural unit of analysis. Families do not think in terms of densities per acre. Their thinking has two aspects. People consider, first, the type of dwelling in which they are to live. Shall it be a single family house, an apartment, or some other type of arrangement? The most common choice, of course, is the single family house. Those who live in a single family house then may choose between a house on a large or a small lot. The following discussion, therefore, proceeds in two stages which concern, first, the choice between single and multiple family dwellings, and, second, the determinants of size of lot.

### A. Choice Between Single and Multiple Family Dwellings

As indicated in the Summary the main finding of this survey with regard to type of dwelling is that people's preferences are in favor of more single family houses. The evidence in support of this generalization will be considered under three headings: the actual distribution of the population by type of housing, stated preferences for different types of housing, and patterns of change.

Actual distribution of the population by type of housing: The present distribution of the population by type of housing is the result of all the forces in the past history of the housing market including forces operating on the supply side of the market as well as the demand for housing. It is possible, however, to make inferences as to the dynamics of the market from the observed facts at one point in time. One simple approach to analysis of the market is to make such an inference with regard to the probable effect of future increases in income. We may assume that people who now enjoy a certain income foreshadow in their behavior the probable behavior of people who may be expected to enjoy comparable incomes in the future as the general level of incomes rises. The relation between present type of housing and family income in Table 1 may be examined with this approach in mind.

It appears that of all families in metropolitan areas other than New York about 69 per cent now live in single family houses. There are two other considerable groups, about 12 per cent in two family houses and about 10 per cent in apartments in buildings with five or more units, with the balance scattered among the row houses, three and four family houses and miscellaneous structures. The proportion living in single family houses rises considerably with income. Less than half of the families with incomes below \$4000 now live in single family houses. As one proceeds up the income scale the proportion rises steadily, reaching 90 per cent of those with incomes of \$15,000 and over. On the basis of this table one would expect a substantial shift to single family houses as incomes rise.

To consider only income, of course, is to oversimplify the complex housing market. The remainder of this section is concerned with some of the other basic characteristics of this market. As shown in Table 2 the type of housing which

Table 1

Type of Housing Now Occupied by Family Income

(Percentage distribution of dwelling units)

<u>Type of Housing Presently Occupied</u>	<u>Family Income</u>									
	<u>All</u>	<u>Under \$2000</u>	<u>\$2000 -2999</u>	<u>\$3000 -3999</u>	<u>\$4000 -4999</u>	<u>\$5000 -5999</u>	<u>\$6000 -7499</u>	<u>\$7500 -9999</u>	<u>\$10,000 -14,999</u>	<u>\$15,000 and Over</u>
Single family house	69	41	48	42	65	67	74	78	84	90
Two family house	12	22	10	21	15	15	13	10	7	6
Three-four family house	4	6	*	10	2	4	3	6	1	2
Row house	3	11	6	6	4	4	1	*	2	*
Apartment building of five units or more	10	18	32	19	8	10	5	5	4	2
Apartment in partly commercial structure	<u>2</u>	<u>2</u>	<u>4</u>	<u>2</u>	<u>6</u>	<u>*</u>	<u>4</u>	<u>1</u>	<u>2</u>	<u>*</u>
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of dwelling units	714	61	54	57	56	70	113	109	120	65

\* Less than one-half of one per cent.

Table 2

Type of Housing Now Occupied by Stage in Family Life Cycle

(Percentage distribution of dwelling units)

Stage in Family Life Cycle

Type of Housing Now Occupied	All	Young, Single	Young, Married, No Children	Married, Youngest Child 4 or Less	Married, Youngest Child 5-14	Married Youngest Child 15-18	Old, Married, No Children	Old, Single	Other <sup>1</sup>
Single family house	69	29	55	71	86	89	79	48	49
Two family house	12	8	24	14	7	8	11	13	21
Three-four family house	4	5	9	6	3	3	1	5	4
Row house	3	3	*	3	*	*	5	5	4
Apartment house of five units or more	10	50	9	5	4	*	3	23	18
Apartment in partly commercial structure	<u>2</u>	<u>5</u>	<u>3</u>	<u>1</u>	<u>*</u>	<u>*</u>	<u>1</u>	<u>6</u>	<u>4</u>
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of dwelling units	714	38	33	163	151	37	144	94	51

\* Less than one-half of one per cent.

<sup>1</sup> Includes unmarried persons with children.

a family occupies depends on its stage in the family life cycle. The middle stages when there are young children in the family are the years when people are most likely to live in a single family house. It is the single people who are likely to live in apartments. Half of the small group of young, single adults live in apartments and 23 per cent of the old, single people (the widows and widowers) live in apartments. The implication is that young people move into single family houses as they marry and start a family. Higher incomes might speed up this process so that people would move into single family homes at an earlier age. Older people whose children have left home are not likely to live in apartments, but some of them do move to apartments on the removal of one of the partners in the married couple. Higher incomes might slow down this process of shifting out of single family homes. We shall not here attempt a full analysis of the housing market contenting ourselves with having pointed out that there is no inconsistency between the importance of the life cycle and the importance of income in the market.

The life cycle variable does not take into account the number of adults in the family if the number exceeds two, but the number of adults is taken into account in Table 3. In this table the young, single adults and old, single adults are averaged together, as are the couples of all ages. The new information is that of the families with three or more adults 92 per cent live in single family homes. If higher incomes should lead to "undoubling" of these families, what type of housing would be required? A reasonable speculation may be that typically there would be a single adult living in an apartment and a couple which would continue to live in a single family home. In this case the increase in income would lead to no change in the number of single family homes required and an increase in the need for apartments.

Table 3

Type of Housing Now Occupied by Number of Adults in Family

(Percentage distribution of dwelling units)

<u>Type of Housing Now Occupied</u>	<u>All Dwelling Units</u>	<u>Number of Adults</u>		
		<u>One</u>	<u>Two</u>	<u>Three or More</u>
Single family house	69	39	75	92
Two-four family or row house	19	22	20	5
Apartment building <sup>1</sup>	<u>12</u>	<u>39</u>	<u>5</u>	<u>3</u>
Total	100%	100%	100%	100%
Number of dwelling units	714	145	472	97

Table 4

Type of Housing Now Occupied by Number of Children

(Percentage distribution of dwelling units)

<u>Type of Housing Now Occupied</u>	<u>All Dwelling Units</u>	<u>Number of Children</u>				
		<u>None</u>	<u>One</u>	<u>Two</u>	<u>Three</u>	<u>Four or More</u>
Single family house	69	61	71	77	79	83
Two-four family or row house	19	21	20	18	16	13
Apartment building <sup>1</sup>	<u>12</u>	<u>18</u>	<u>9</u>	<u>5</u>	<u>5</u>	<u>4</u>
Total	100%	100%	100%	100%	100%	100%
Number of dwelling units	714	313	114	136	80	71

<sup>1</sup>Includes apartments in partly commercial structures.



There is a tendency for the proportion of families living in single family houses to increase as the number of children increases (Table 4). The explanation would seem to be twofold: large families are more in need of the extra space in single family homes, and families with several children have had more time to save up the downpayment and buy a house.

In none of these relationships does there seem to be serious reason to question the basic inference from Table 1: that in general higher incomes will lead to more use of single family homes. A qualification might be inferred from the relationship shown in Table 5 between type of housing and population of the metropolitan area. The table shows that 23 per cent of families in the cities of 1,500,000 or more live in apartments compared to only 3 or 4 per cent of those in the smaller metropolitan areas. As more people live in large centers of population, there may be forces at work leading to more of a tendency to live in apartments. Note, however, that people in the very large cities are no more likely than those living elsewhere to prefer to live in apartments (Table 6). This observation introduces a new type of data, that concerning preferences, to the systematic consideration of which we may now turn.

Stated preferences for different types of housing: As pointed out in the previous section, one method of getting at what people want is to assume they want to behave like people with higher incomes. A more direct method is to ask them for their preferences. This method works best when people are familiar with the alternatives, and they may be assumed to be reasonably familiar with the choice between apartments and single family houses.

The question asked in 1965 and the distribution of responses appear in Table 7. In 1963 a similar but not identical question was asked, as is also shown in Table 7. The change was made to correct any possible bias toward single family homes because of the order in which the choices were presented.

Table 5

Type of Housing Now Occupied by Population of the Area

(Percentage distribution of dwelling units)

<u>Type of Housing Now Occupied</u>	<u>Population</u>			
	<u>All</u>	<u>Under 350,000</u>	<u>350,000-1,499,999</u>	<u>1,500,000 or More</u>
Single family house	69	69	79	59
Two family house	12	15	13	10
Three-four family house	4	6	2	3
Row house	3	2	2	5
Apartment building of five units or more	10	3	4	23
Apartment in partly commercial structure	<u>2</u>	<u>5</u>	<u>*</u>	<u>*</u>
Total	100%	100%	100%	100%
Number of dwelling units	714	191	261	262

Table 6

Preferred Type of Housing by Population of the Area

(Percentage distribution of respondents)

<u>Preference</u>	<u>Population</u>			
	<u>All</u>	<u>Under 350,000</u>	<u>350,000-1,499,999</u>	<u>1,500,000 or More</u>
Single family house	83	77	89	83
Apartment	14	20	7	16
No preference	<u>3</u>	<u>3</u>	<u>4</u>	<u>1</u>
Total	100%	100%	100%	100%
Number of respondents	744	271	272	201

The question was: If you could do as you please, would you prefer an apartment or a single family house?

Table 7

Preferred Type of Housing by Type of Housing Now Occupied

(Percentage distribution of dwelling units)

<u>1963 Survey</u>	<u>Type of Housing Now Occupied</u>			<u>Number of Preferences</u>
<u>Housing Preference</u>	<u>Single Family House</u>	<u>Multiple Family Dwelling</u>	<u>All</u>	
Single family house	63	20	83	687
Multiple family dwelling	3	13	16	129
Not ascertained	<u>1</u>	<u>*</u>	<u>1</u>	<u>8</u>
All	67%	33%	100%	
Number of dwelling units	553	271		824

1965 Survey

<u>Housing Preference</u>				
Single family house	63	20	83	614
Multiple family dwelling	3	11	14	103
No preference	<u>2</u>	<u>1</u>	<u>3</u>	<u>18</u>
All	68%	32%	100%	
Number of dwelling units	498	237		735

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\* Less than one-half of one per cent.

In 1963 the question was: If you could do as you please, would you live in a single family house, or an apartment house, or what?

In 1965 the question was: If you could do as you please, would you live in an apartment or a single family house?

The results were virtually identical. Of all families 20 per cent are living in multiple family houses and would prefer a single family house.

Another way of looking at the same basic data is to ask, of those now living in multiple family housing of different types, what proportion would prefer single family houses. As shown in Table 8, 64 per cent would prefer to change to a single family house. This preference is strongest among those in two, three or four family houses or row houses. Of those in apartment buildings some 46 per cent would prefer a single family house if they could do as they pleased. These findings offer strong support to the inference from the analysis of actual housing types by income. Most people prefer single family houses.

More detailed consideration of housing preferences does not change this impression. The relation between family income and housing preferences shows that single family homes are preferred by most people at every income level. Eighty-five to 90 per cent of those with incomes over \$5000 prefer single family homes (Table 9). Comparison with the data from the 1963 Survey, also shown in Table 9, indicates stability in the relationship. There are some fluctuations in reported percentages for individual income groups, but these fluctuations are the type of variation which may be easily attributed to random error in view of the sizes of the cells on which the percentages are based.

Housing preferences by people at different stages in the family life cycle are shown in Table 10 with the two surveys again compared. The results are again similar as between the two years. And, again, they are consistent with the general proposition that people prefer single family houses. Even of the young couples with no children 88 per cent would prefer a single family house. It will be recalled that only 55 per cent of these young people actually live in a single family house. At the other end of the cycle there is no comparable discrepancy in the reverse direction for the older couples. Thus,

Table 8

Preferred Type of Housing of Respondents Now Living in Multiple Family Housing Units

(Percentage distribution of multiple family dwelling units)

<u>Preferred Type of Housing</u>	<u>All Types of Multiple Family Housing</u>	<u>Type of Multiple Family Housing Now Occupied</u>		
		<u>Two Family House</u>	<u>Three-Four Family or Row House</u>	<u>Apartment Building<sup>1</sup></u>
Single family house	64	77	72	46
Apartment	33	20	26	52
No preference	<u>3</u>	<u>3</u>	<u>2</u>	<u>2</u>
Total	100%	100%	100%	100%
Number of multiple family dwelling units	216	86	47	83

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<sup>1</sup>Includes apartments in partly commercial structures.

The question was: If you could do as you please, would you live in an apartment or a single family house?

Table 9

Preferred Type of Housing by Family Income for the 1963 and 1965 Surveys of Residential Location and Urban Mobility

(Percentage distribution of respondents)

<u>1963 Survey</u>		<u>Family Income</u>								
<u>Housing Preference</u>	<u>All</u>	<u>Under \$2000</u>	<u>\$2000 -2999</u>	<u>\$3000 -3999</u>	<u>\$4000 -4999</u>	<u>\$5000 -5999</u>	<u>\$6000 -7499</u>	<u>\$7500 -9999</u>	<u>\$10,000 -14,999</u>	<u>\$15,000 or More</u>
Single family house	84	52	80	75	80	88	88	91	94	94
Apartment	14	42	20	23	10	10	11	8	5	6
2-4 family or row house	<u>2</u>	<u>6</u>	<u>*</u>	<u>2</u>	<u>10</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>0</u>
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of respondents	810	71	55	48	59	98	126	141	125	71

<u>1965 Survey</u>										
<u>Housing Preference</u>										
Single family house	83	59	58	75	79	85	90	88	90	96
Apartment	14	33	33	21	14	14	8	11	9	2
No preference	<u>3</u>	<u>8</u>	<u>9</u>	<u>4</u>	<u>7</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of respondents	744	64	54	57	58	72	113	111	120	65

\*Less than one-half of one per cent.

In 1963 the question was: If you could do as you please, would you live in a single family house, or an apartment house, or what?

In 1965 the question was: If you could do as you please, would you live in an apartment or a single family house?

Table 10

Preferred Type of Housing by Stage in Family Life Cycle for the  
1963 and 1965 Surveys of Residential Location and Urban Mobility

(Percentage distribution of respondents)

<u>1963 Survey</u>		<u>Stage in Family Life Cycle</u>					
<u>Housing Preference</u>	<u>All</u>	<u>Young, Single</u>	<u>Young, Married, No Children</u>	<u>Married with Children</u>	<u>Old, Married, No Children</u>	<u>Old, Single</u>	<u>Other<sup>1</sup></u>
Single family house	84	57	88	96	85	58	89
Apartment	14	40	10	3	13	38	11
2-4 family or row house	<u>2</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>4</u>	<u>*</u>
Total	100%	100%	100%	100%	100%	100%	100%
Number of respondents	816	53	58	378	175	115	28
 <u>1965 Survey</u>							
<u>Housing Preference</u>							
Single family house	83	50	91	96	84	54	81
Apartment	14	46	6	4	10	39	15
No preference	<u>3</u>	<u>4</u>	<u>3</u>	<u>*</u>	<u>6</u>	<u>7</u>	<u>4</u>
Total	100%	100%	100%	100%	100%	100%	100%
Number of respondents	744	52	35	353	146	103	52

\* Less than one-half of one per cent.

<sup>1</sup> Includes unmarried persons with children.

In 1963 the question was: If you could do as you please, would you live in a single family house, or an apartment house, or what?

In 1965 the question was: If you could do as you please, would you live in an apartment or a single family house?

85 per cent of the older couples with no children prefer a single family house, which is about the same or slightly higher than the 79 per cent who actually live in such a house. There is no evidence that these couples are in a hurry to get out of their houses and into apartments. Even of the older single people a majority (54 to 58 per cent) prefer a single family home.

On consideration of these results from the 1963 survey the hypothesis was suggested that what people want may be not so much to live in a single family house as to own their own home. These desiderata can be separated since it is possible to own an apartment. Accordingly in the 1965 survey people who said they preferred a single family home or had no preference between a house and an apartment were asked the following sequence:

Considering your family situation, would you prefer to own your own home or to rent?

Nowadays some apartment houses are being set up so that instead of renting the apartment you live in you can buy just that one apartment for yourself. If you had the choice, would you prefer to own a single family house or own an apartment?

Of the 85 per cent who prefer a single family home or have no preference, 76 per cent replied to the first question that they would prefer to own. Of these, only 2 per cent replied to the second question that they would prefer to own an apartment rather than to own a single family house. It is the type of housing, not ownership, which is important to people.

Patterns of change: The third method of analyzing the preferences of the population as between different types of dwelling is to analyze patterns of change. The pattern of moves is shown in Table 11 for all those who moved from one dwelling to another within the five years prior to interview. Many people, of course, move out of one dwelling and into another of the same type. Thirty-four per cent of all moves were from one single family house to another, 10 per cent from one two-to-four family house to another, and 9 per cent from one apartment to another. Altogether about 53 per cent of all moves involved



Table 11

Pattern of Moves for All Who Moved Within the Last Five Years

(Percentage distribution of respondents who moved in the last five years)

<u>Type of Housing into Which People Moved</u>	<u>Type of Housing Out of Which People Moved</u>				<u>Total</u>
	<u>Single Family House</u>	<u>Two-Four Family House</u>	<u>Apartment Building</u>	<u>Other</u>	
Single family house	34	12	7	3	56
Two-four family or row house	8	10	7	*	25
Apartment building <sup>1</sup>	<u>6</u>	<u>3</u>	<u>9</u>	<u>1</u>	<u>19</u>
Total	48	25	23	4	100%
Number of respondents who moved	107	65	54	11	237

\* Less than one-half of one per cent.

<sup>1</sup> Includes apartments in partly commercial structures.

no change in structure types. There was a net gain, however, in single family housing. Fourteen per cent of the moves were out of single family houses into other types of dwelling but 22 per cent were out of other types of dwelling into single family homes. In particular, of the moves out of apartments about four out of ten are moves to single family homes. Trends in the recent past, thus, are consistent with the general finding that most people prefer single family homes.

Plans for the future are also consistent with this finding. Three out of four of those who plan to move at any time in the next five years anticipate that they will move to a single family house (Table 12). For those who do not plan to move in the next twelve months but do plan to move in the following period fully 82 per cent anticipate living in single family homes. In these long range expectations there may be some element of wishful thinking and the proportion of movers who do move into single family homes may well be lower than 82 per cent. As just shown in Table 11, of moves in the last five years only 56 per cent were into single family houses. The estimate made by those who expect to move in the next twelve months of 63 per cent moving into single family housing may be more realistic for the near future. But there is nothing in these data to contradict the proposition that more people would like to live in single family homes. And there is nothing here to suggest that fewer people will move into single family homes in the future. Over a long period with higher incomes what are now vague wishes may be translated into practical plans.

Conclusion: The analysis of present type of housing, preferred type of housing, and patterns of change all point in the direction of an increase in the proportion of families living in single family homes. The continued trend toward "undoubling" of families and increases in the numbers of single people may also lead to increased demand for apartments. The possibility of owning an apartment

Table 12

Anticipated Type of Housing for Those Who Plan  
to Move Within the Next Five Years

(Percentage distribution of respondents who have some  
plans to move in the next five years)

<u>Anticipated Type of Housing</u>	<u>All Who Plan to Move Anytime Within Next Five Years</u>	<u>Time Within Which People Plan to Move</u>	
		<u>Within Next Twelve Months</u>	<u>Within Next Five Years but Not in Next Twelve Months</u>
Single family housing	74	63	82
Multiple family housing	24	36	15
Other	<u>2</u>	<u>1</u>	<u>3</u>
Total	100%	100%	100%
Number of respondents with plans to move	307	131	176

The questions were: Do you think there is any chance you people will move  
in the next twelve months?

(If not planning to move in the next twelve months):

Do you think there is any chance you people will move in the next five years?

may appeal to a few people, but there does not seem to be much prospect that many people who now prefer single family homes will shift and prefer an apartment if they are offered the chance to buy it. The people who prefer to live in apartments are only about 14 per cent of all families.

#### B. Size of Lot

For people who live in single family homes residential density varies with the size of the lot. A critical question is, what will be the distribution by size of lot of the new residential areas to be built in the coming decades. Although the immediate decisions as to the dimensions of lots in new sub-divisions will not be made by consumers, what they want and are willing to pay for may be expected to be the controlling force in the market in the long run. Most of the evidence to be reported here points in the direction of gradually increasing lot sizes. There is evidence, however, that people see some disadvantages in large lots. The findings will be considered under two headings: the actual distribution of size of lot, and preferences for lot size.

Actual distribution of single family homes by size of lot: In this survey as in 1963 people living in single family homes were asked the shape and dimensions of their lots. Most people could provide this information without difficulty. The replies were used to estimate the area of each lot with the results shown in Table 13. The differences between the distributions for the two surveys are small, amounting to no more than two percentage points for any size of lot, and may reasonably be attributed to sampling error. About half the population of dwellers in single family houses in metropolitan areas other than New York live on lots of 2/10 of an acre or less. A few people, about 7 or 8 per cent of the total, live on lots of one acre or more.

Since people were asked when their home was built, it is possible to trace trends in the average size of lot for houses built at different dates (Table 14).

Table 13

Distribution of Lot Sizes for Those Respondents Living in Single Family Houses,

1963 and 1965 Surveys

(Per Cent of Lots)

<u>Lot Size</u>	<u>1963 Survey</u>	<u>1965 Survey</u>
	<u>Per Cent</u>	<u>Per Cent</u>
Less than 1/10 acre	9	11
1/10 up to 2/10 acre	38	40
2/10 up to 3/10 acre	21	21
3/10 up to 5/10 acre	16	15
5/10 up to 7/10 acre	5	4
7/10 up to 1 acre	3	2
1 to 1.9 acres	4	2
2 acres or more	<u>4</u>	<u>5</u>
Total	100%	100%
Number of lots	519	472

Table 14

Size of Lot by Age of Single Family House

(Percentage distribution of respondents who live in single family houses)

<u>Size of Lot</u>	<u>Year House was Built</u>						
	<u>All Lots</u>	<u>Before 1920</u>	<u>1920- 1939</u>	<u>1940- 1949</u>	<u>1950- 1954</u>	<u>1955- 1959</u>	<u>1960- 1965</u>
Less than 1/10 acre	11	38	17	7	8	4	6
1/10 to 2/10 acre	40	34	46	42	46	36	36
2/10 to 3/10 acre	21	11	10	34	20	23	24
3/10 to 5/10 acre	15	4	11	9	17	26	15
5/10 acre or more	<u>13</u>	<u>13</u>	<u>16</u>	<u>8</u>	<u>9</u>	<u>11</u>	<u>19</u>
Total	100%	100%	100%	100%	100%	100%	100%
Median lot size (acres)	.19	.14	.17	.21	.19	.24	.23
Number of lots	467	47	83	74	88	109	66
Per cent of lots under 2 acres	97	96	89	97	97	99	94
Mean lot size for lots under 2 acres (acres)	.26	.23	.20	.24	.25	.32	.29
Number of lots under 2 acres	451	45	74	72	85	108	62

The proportion of small lots has been falling over the decades while the proportion of lots of 3/10 to 5/10 acre generally has increased. The trend is not so clear, however, for the large lots, those of 5/10 acre or more. Some of the older houses are located on such lots as well as some of the newer ones. Mean lot size is strongly influenced by the small number of very large lots, those of 2 acres and over. The following discussion emphasizes median lot size, which is less influenced by the very large lots.

For houses built prior to 1920 the median size of lot is about .14 acres. For houses built from 1920 to 1939 the median size of lot is about .17 acre. For houses built since World War II lot sizes have been larger with a median of .23 in 1960-1965. There has been, thus, a long run trend in the direction of larger lots. On the basis of these data alone one might project that the median size of lot will increase to perhaps .25 acre for the decade 1966-1975. Would such a guess be consistent with the other available evidence?

Another approach to the problem is to look at the present distribution of size of lot by income (Table 15). There does exist a tendency for median size of lot to increase with family income. For those with incomes under \$5000 the median is .17 acre, but for those over \$15,000, .27 acres. People in the lower part of the income distribution, in other words, tend to live in the older houses which were built on smaller lots. It is worth noting, however, that the median size of lot is only .27 acre even for the people now in the highest income group. From this point of view a projection of .25 acre for the coming decade may seem on the high side. Yet new houses are built primarily for people in the upper part of the income distribution, not for people of average income or below. What is at issue is what these people want and will pay for.

Preferences for lot size: People in single family homes were asked in both the 1963 and 1965 Surveys how they feel about the size of their lot. An alternative

Table 15

Size of Lot by Family Income

(Percentage distribution of respondents who live in single family houses)

<u>Size of Lot</u>	<u>Family Income</u>					
	<u>All Lots</u>	<u>Under \$5000</u>	<u>\$5000 -7499</u>	<u>\$7500 -9999</u>	<u>\$10,000 -14,999</u>	<u>\$15,000 or More</u>
Less than 2/10 acre	51	62	60	53	44	29
2/10 acre or more	<u>49</u>	<u>38</u>	<u>40</u>	<u>47</u>	<u>56</u>	<u>71</u>
Total	100%	100%	100%	100%	100%	100%
Median lot size (acres)	.20	.17	.18	.19	.22	.27
Number of lots	467	97	122	81	98	59
Per cent of lots under 2 acres	97	92	97	95	97	95
Mean lot size for lots under 2 acres (acres)	.26	.26	.22	.26	.27	.34
Number of lots under 2 acres	451	89	119	77	95	56

Table 16

Size of Lot by Family Income for Those Who Are Satisfied with the Size of Their Lot

(Percentage distribution of respondents living in single family houses  
who are satisfied with the size of their lot)

<u>Size of Lot</u>	<u>Family Income</u>					
	<u>All Lots</u>	<u>Under \$5000</u>	<u>\$5000 -7499</u>	<u>\$7500 -9999</u>	<u>\$10,000 -14,999</u>	<u>\$15,000 or More</u>
Less than 2/10 acre	48	60	56	46	42	23
2/10 acre or more	<u>52</u>	<u>40</u>	<u>44</u>	<u>54</u>	<u>58</u>	<u>77</u>
Total	100%	100%	100%	100%	100%	100%
Median lot size (acres)	.22	.18	.19	.22	.23	.28
Number of lots	321	68	85	46	70	40



method of examining the relation between income and size of lot is to consider only those families who report that they are satisfied with the size of their lot. The results of such an analysis are shown in Table 16. Median lot sizes for those who are satisfied are slightly higher than the median lot sizes for everyone in each income group. For those who are satisfied the medians rise from .18 below \$5000 to .28 at the income level of \$15,000 or more. Thus, the increase in average lot size with income is paralleled by an increase with income in that lot size with which people report that they are satisfied.

More people feel that their lot is too small than that it is too large. As shown in Table 17, in both surveys two out of three people said they were satisfied with what they had, but more than twice as many said their lot was too small as said it was too large. The relation between the actual size of the lot and what people have to say about it is also shown in Table 17. The results of the two surveys are similar. The proportion who are satisfied is largest for lots of 3/10 to 5/10 of an acre. The proportion who say the lot is too small naturally declines as the size of the lot increases. The proportion who say, too small, exceeds the proportion who say, too large, up to lots of 3/10 to 5/10 of an acre.

This pattern of results should be interpreted jointly with the data previously discussed about actual lot sizes. The typical preferred size, it would appear, is larger than the typical actual size. There is a simple explanation for the existence of such a discrepancy. People may be unwilling to pay the cost of larger lots. It is not unusual for the ideally preferred size or quantity of an economic good to be larger than the size or quantity which people actually buy. It is important to realize that even the ideal size of lot is not extremely large.

The reasons people give for their feelings about the sizes of their lots are reported in Table 18. There appears to be ambivalence about large lots.

Table 17

Satisfaction with Size of Lot by Actual Lot Size for the  
1963 and 1965 Surveys of Residential Location and Urban Mobility

(Percentage distribution of respondents who live in single family houses)

<u>1963 Survey</u>	<u>Actual Lot Size</u>					
<u>Satisfaction with</u> <u>Size of Lot</u>	<u>All</u> <u>Lots</u>	<u>Less Than</u> <u>1/10 Acre</u>	<u>1/10-2/10</u> <u>Acre</u>	<u>2/10-3/10</u> <u>Acre</u>	<u>3/10-5/10</u> <u>Acre</u>	<u>5/10 Acre</u> <u>or More</u>
Lot is too small	24	36	35	21	10	10
Lot is about the right size	67	58	58	72	77	71
Lot is too large	<u>9</u>	<u>6</u>	<u>7</u>	<u>7</u>	<u>13</u>	<u>19</u>
Total	100%	100%	100%	100%	100%	100%
Number of lots	546	45	200	108	84	79
 <u>1965 Survey</u>						
<u>Satisfaction with</u> <u>Size of Lot</u>						
Lot is too small	22	38	28	20	7	10
Lot is about the right size	68	53	66	72	82	67
Lot is too large	<u>10</u>	<u>9</u>	<u>6</u>	<u>8</u>	<u>11</u>	<u>23</u>
Total	100%	100%	100%	100%	100%	100%
Number of lots	471	53	191	99	71	57

The question in both surveys was: How do you feel about the size of your lot,  
is it too big, too small or about the right size?

Table 18

Reasons for People's Feelings About the Size of Their Lot

(Percentage distribution of respondents who live in single family houses)

<u>Reasons for These Feelings</u>	<u>Feelings About the Size of the Lot</u>		
	<u>Too Big</u>	<u>About the Right Size</u>	<u>Too Small</u>
Maintenance work	90	42	*
Privacy	*	8	16
Space for garden, flowers	4	12	18
Space for children, pets	2	14	17
Space for other specific purposes	*	7	31
Space, purpose unspecified	2	15	17
Other	<u>2</u>	<u>2</u>	<u>1</u>
Total	100%	100%	100%
Number of lots	50	304	103

\*

Less than one-half of one per cent.

The great objection to large lots is the maintenance work involved in looking after them. The disadvantages of small lots, on the other hand, are more diverse. People like privacy, and 16 per cent of those who say their lot is too small refer to lack of privacy. For the most part, however, people have in mind space for activities, including space for children and pets, space for gardens and flowers, and space for a variety of other activities. People who feel their lot is about the right size mention maintenance work on the one hand and these other considerations on the other hand.

How much reliance can be placed on these expressions of preference for lots of different sizes? One way of checking on the meaningfulness of the replies is to look at the relation between satisfaction with the lot and plans to move. If the measure of satisfaction has validity, it ought to be correlated with plans to move. As shown in Table 19 there is evidence that those who think their lot is about the right size are less likely to plan to move than others. Of those satisfied with the lot, 55 per cent have no expectation of moving within the next five years, while of those who say their lot is too small, only 32 per cent have no plans to move. There are not many people who think their lot is too big, but those who do think so seem to be about as likely to stay where they are as those who feel the lot is the right size. It would appear, then, that the data about preferences for lot size do pass the test of being reasonably consistent with people's plans to move.

Conclusion: The data about preferences for lot size do not lead to an exact estimate of what the trend in lot sizes is likely to be. The data do point in the direction of increasing lot size. If the preferred size is taken to be the range in which complaints of "too large" and "too small" are equal in frequency, it is 3/10 to 5/10 of an acre. As noted above, extrapolation of the trend in lot sizes in recent decades suggests a median of perhaps .25 acres for

Table 19

Plans to Move by Satisfaction with Present Lot Size

(Percentage distribution of respondents who live in single family houses)

<u>Plans to Move</u>	<u>Satisfaction with Size of Lot</u>			
	<u>All Lots</u>	<u>Too Big</u>	<u>About Right Size</u>	<u>Too Small</u>
Within the next 12 months	18	22	16	24
Within the next 5 years <sup>1</sup>	32	26	29	44
No plans to move in next 5 years	<u>50</u>	<u>52</u>	<u>55</u>	<u>32</u>
Total	100%	100%	100%	100%
Number of lots	492	50	334	108

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<sup>1</sup>Excludes those who plan to move within the next 12 months.

new construction in the coming decade. The data about preferences suggest that there is an upper limit on how large people want their lots to be, a limit which arises out of the time needed to maintain the property. The further limitation imposed by the higher price of larger lots makes the data on preferred size seem reasonably consistent with the trends in actual median size of lot.

It is interesting to speculate as to just how strong a barrier to increasing lot size may be imposed by the maintenance problem in the decades ahead. The development of mechanical devices to make it easier to look after a large piece of land will tend to weaken the barrier. Every improvement in power driven lawn mowers, snow removers, and the like works in that direction. These considerations reinforce the main conclusion of the analysis of lot sizes: that the most likely course of events is a continuing gradual increase in average size of lot for single family homes.

This conclusion should be read in combination with the conclusion reached in the preceding section that the trend is toward an increasing proportion of the population living in single family homes. Taken together these trends imply a gradual reduction in population density.

## II. Locational Preferences

People's preferences for locations within metropolitan areas are in part a matter of residential density, as discussed in the preceding chapter. People also have preferences for living close to the center of the city or far from it, and they have attitudes toward neighborhoods. It is to these preferences and attitudes that we now turn.

Preferences for living close to the center or away from it are of interest in part because of their predictive value. People who prefer to live in a certain type of environment may actually succeed in doing so. Their behavior in the aggregate will determine how widely spread are the cities of the future. The origins of peoples' preferences and their distribution in the population are relevant both to attempts to assess their importance and to any assessment of what might lead the preferences to change.

Similar observations apply to attitudes toward neighborhoods. People are concerned about the neighborhood in which they live. Where they will prefer to live in a metropolitan area will depend in part upon where they can find a neighborhood with characteristics which appeal to them. What it is that people like and dislike about their neighborhoods is of importance for neighborhood planning.

### A. Living Close to the Center Versus Living Farther Out

Measures of locational preference: Most people who live in metropolitan areas are constrained to locate their homes somewhere within commuting radius of their place of work. In a modern city this requirement, however, still leaves a wide range of choice of location. Broadly speaking, there are two choices: people may seek to live close to the city's center for the purpose of enjoying easy access to its many and diverse attractions, or they may seek to live far

from the center for the purpose of avoiding the disagreeable features of urban living and enjoying the pleasures of suburban or even rural life. There are some individuals, of course, with each of these orientations. It is not possible to say a priori which of the two is the preference of the bulk of the population. Yet it is a matter of basic importance in urban planning whether the pull toward the center of the city is greater or smaller than the pull toward the countryside.

A series of three questions about location preferences were asked in this survey, expanding upon the list of questions asked in the 1963 Survey. The results are shown in Table 20. As in the earlier survey, the preponderance of the population prefer to live farther out toward the country than their present place of residence rather than closer in nearer the center of the city. Twenty-five per cent would prefer to live farther out, compared to 9 per cent, closer in. In a forced choice 59 per cent would prefer a house in the suburbs to a house in the country. Since 1963 both questions appear to show slight shifts toward more urban preferences but these shifts may be the result of sampling error.

In the current survey a new question was asked intended to give people a chance to respond specifically to the idea of living close to the center of a large city. The question was:

Some people like the excitement of living close to the center of things in a big city, where something is always going on, but others don't like all the hustle and bustle. How do you feel about this?

As shown in Table 20, only 15 per cent chose living close to the center of things, 8 per cent were indifferent or ambivalent, and 77 per cent had a negative attitude toward living near the center of the city.

It is instructive to examine the reasons people give for these preferences. The most frequent reason for wishing to be near the center of the city is the desire to be near specific urban facilities. Only 8 per cent of respondents



Table 20

Locational Preferences for the 1963 and 1965 Surveys of

Residential Location and Urban Mobility

(Per cent of respondents)

<u>Preferences</u>	<u>1963 Survey</u>	<u>1965 Survey</u>
	<u>Per Cent</u>	<u>Per Cent</u>
Closer to the center of the city	7	9
Just where we are	72	66
Farther from the center of the city	<u>21</u>	<u>25</u>
Total	100%	100%
House in the suburbs	54	59
House in the country	<u>46</u>	<u>41</u>
Total	100%	100%
Like the excitement of living close to the center	question	15
Indifferent or ambivalent	not	8
Don't like the hustle and bustle	asked	<u>77</u>
Total		100%
Number of respondents	824	748

The questions were:

If you could do as you please, would you like to live closer to the center of (NAME OF METRO AREA) or farther from the center of (NAME OF METRO AREA) or just where you are?

Suppose you had to choose between a house in the suburbs on a paved street with sidewalks and lawns, or a house in the country with woods or a field between you and the next house - which would you choose?

Some people like the idea of the excitement of living close to the center of things in a big city, where something is always going on, but others don't like all the hustle and bustle. How do you feel about this?

mention this consideration while only 5 per cent observe generally that there is more to do in a big city (Table 21).

The great objection to the city is that people like to be where it is quiet and like to live quietly. They object specifically to noise and traffic. A considerable number also object to crowds and crowding. Others find the pace of life in the city tiring. A comment made by only 4 per cent is interesting. They note that the facilities of an urban center may be available even if one does not live close to the center.

The exact percentage who give the different reasons for not wanting to live in the city no doubt reflects the wording of the question. The reference to "hustle and bustle" may have led people to think of their feelings about quiet. But there does not seem to be any reason to question that dislike of noise, crowding, and confusion are important in people's feelings about living near the center of a big city.

As might be expected, there is a relation between where people lived while they were growing up and whether they like living close to the center of a big city. The relation may be summarized as follows:

	<u>Type of Place Where Lived While Growing Up</u>			
	<u>Country</u>	<u>Small Town</u>	<u>Suburb</u>	<u>City</u>
Percent who like living close to the center	7	10	10	26
Number of interviews	187	206	59	274

If the several measures of preferences shown in Table 20 are tapping the same basic attitude, it should be true that the answers are intercorrelated. The relation between the first and second questions is shown in Table 22. Of those who would prefer to move closer to the city center, 85 per cent chose the house in the suburbs over the house in the country. Of those who would prefer to live farther out than they are now, only 41 per cent chose the house in the suburbs. Exact correspondence between these measures is hardly to be expected.

Table 21

Reason for Attitude Toward Living Near a Big City Center

(Percentage distribution of respondents)

<u>Reasons for Liking to Live in the Central City</u>	<u>Per Cent of Respondents</u>
Like to be near specific urban facilities	8
More to do in the city	5
Like being around people	2
Habit	2
Other reasons for liking to live in the city	2
<u>Reasons for Not Liking to Live in the Central City</u>	
Like to live quietly; like the quiet	26
Noise, traffic	17
Don't like crowds; over crowding	11
City pace too tiring, confusing; not able to relax	6
Habit	4
Urban facilities available even if don't live close	4
Like the children to be out of the city	3
Dirt	1
Other negative physical characteristics of the city	1
Other reasons for not liking to live in city	6
Reasons for having no preference	<u>2</u>
Total	100%
Number of respondents giving reasons	663

The question was: Some people like the idea of the excitement of living close to the center of things in a big city, where something is always going on, but others don't like all the hustle and bustle. How do you feel about this? Why is that?

Table 22

Whether Prefers a House in the Suburbs or the Country by  
Preference for Living Closer or Farther from the Center of the City  
(Percentage distribution of respondents)

<u>Prefers -</u>	<u>All</u>	<u>Prefers to Live -</u>		
		<u>Closer to the</u> <u>City Center</u>	<u>Same Distance</u> <u>As Now Lives</u>	<u>Farther from</u> <u>the City Center</u>
House in the suburbs	59	85	63	41
House in the country	<u>41</u>	<u>15</u>	<u>37</u>	<u>59</u>
Total	100%	100%	100%	100%
Number of respondents	732	65	479	188

The questions were:

Suppose you had to choose between a house in the suburbs on a paved street with sidewalks and lawns, or a house in the country with woods or a field between you and the next house - which would you choose?

If you could do as you please, would you like to live closer to the center of (NAME OF METRO AREA) or farther from the center of (NAME OF METRO AREA) or just where you are?

That there is association between the two measures helps to strengthen the case that people do have a general underlying attitude toward location.

Recent moves: An indirect way of looking for locational preferences is to examine recent trends in people's behavior and attempt to infer the preferences from the behavior. People who had moved in the five years prior to interview were asked if they had moved closer to the center or farther from the center. As Table 23 shows, of all recent movers about four out of ten have moved farther out, compared to two out of ten who have moved closer in. A minority has been moving closer in, but the net shift is outward. The results are very similar as between the 1963 and 1965 Surveys, 42 per cent of recent movers shifting farther out and 40 per cent, respectively.

In thinking about recent mobility it is important to have in mind which are the more mobile elements in the population. The relation between mobility and stage in the family life cycle, which is shown in Table 24, is basic. The mobility of young people is much greater than that of middle-aged and older people. Young single people and young couples with no children change residences frequently. Nearly half move in a single year. Of the families with children of 4 years of age or less only about 28 per cent move in a year, while for the later stages the rate is one in ten or less.

If one looks at mobility over a five year period instead of a one year period, it is still true that the younger people are more likely to move. For example, of the young couples with youngest child age 4 or less 78 per cent moved in 1961-1964 or 1965. Of the married couples with

Table 23

Direction of Most Recent Move of Intra-City Movers in the Last Five Years  
for the 1963 and 1965 Surveys of Residential Location and Urban Mobility

(Per cent of intra city movers)

	<u>1963 Survey</u>	<u>1965 Survey</u>
<u>Direction of Most Recent Move</u>	<u>Per Cent</u>	<u>Per Cent</u>
Closer to the center of the city	22	18
Same distance from center of the city	36	43
Farther from the center of the city	<u>42</u>	<u>39</u>
Total	100%	100%
Number of intra city moves	329	248

Table 24

Date of Last Move by Stage in Family Life Cycle

(Percentage distribution of respondents)

<u>Date of Last Move</u>	<u>Stage in Family Life Cycle</u>							
	<u>All</u>	<u>Young, Single</u>	<u>Young, Married, No Children</u>	<u>Married, Youngest Child 4 or Less</u>	<u>Married, Youngest Child 5 or Older</u>	<u>Old, Married, No Children</u>	<u>Old, Single</u>	<u>Other</u>
Before 1961	55	21	34	22	73	77	68	43
1961-1964	29	32	23	50	18	20	22	45
1965	<u>16</u>	<u>47</u>	<u>43</u>	<u>28</u>	<u>9</u>	<u>3</u>	<u>10</u>	<u>12</u>
Total	100%	100%	100%	100%	100%	100%	100%	100%
Number of respondents	727	38	35	166	188	148	97	51

youngest child 5 or over only 27 per cent moved in 1961-1965 and 73 per cent had been in the same location since before 1961. It is the young people who are the mobile element in the population.

Socio-economic characteristics and location preferences: In assessing the probable practical importance of locational preferences it is useful to know what differences in preferences exist among different elements in the population. As just shown, the preferences of younger people are especially relevant since they are most likely to move. The preferences of upper income groups are also of interest because of their ability to carry them out.

Young people, as shown in Table 25, are more likely than older people to prefer the country over the suburbs. Of the young single people and young couples, about six out of ten prefer the country. This percentage falls as one advances to the later stages in the life cycle reaching only three out of ten of the older single people. Thus, it is the mobile groups who prefer to live outside the city. The simple distribution of preferences is misleading. It understates the strength of the pressure toward a shift outward since it fails to take into account the fact that those who are most likely to translate preferences into action are the ones who prefer to leave the center of the city.

The relation between income and locational preferences is not so strong. Preference for a house in the country is lowest for those with income around \$3000. Those with higher incomes are somewhat more likely to prefer the rural setting, but the differences among income groups are moderate. The data do not create the impression that the most prosperous groups in the population are enthusiastic about moving farther out. The young people who do seem typically to be so disposed are mobile, but they are not yet at the years of their peak earning capacity.



Table 25

Preference for Suburban vs. Country Location

(Percentage distribution of respondents)

<u>Family Characteristics</u>	<u>House in Suburbs</u>	<u>House in Country</u>	<u>Total</u>	<u>Number of Respondents</u>
<u>ALL</u>	59	41	100%	731
<u>Family Life Cycle</u>				
Young, single	43	57	100%	49
Young, married, no children	40	60	100%	35
Married, youngest child 4 or less	55	45	100%	163
Married, youngest child 5-14	53	47	100%	148
Married, youngest child 15-17	62	38	100%	37
Old, married, no children	65	35	100%	146
Old, single	73	27	100%	100
Other <sup>1</sup>	69	31	100%	52
<u>Family Income</u>				
Under \$2000	57	43	100%	62
\$2000-2999	69	31	100%	54
\$3000-3999	71	29	100%	56
\$4000-4999	61	39	100%	59
\$5000-5999	61	39	100%	71
\$6000-7499	59	41	100%	109
\$7500-9999	57	43	100%	110
\$10,000-14,999	53	47	100%	118
\$15,000 or more	56	44	100%	64
<u>Type of Area Grew Up In</u>				
Country	44	56	100%	185
Small town	59	41	100%	204
Suburb	38	62	100%	58
City	74	26	100%	274

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<sup>1</sup>Includes unmarried persons with children.

The question was: Suppose you had to choose between a house in the suburbs on a paved street with sidewalks and lawns, or a house in the country with woods or a field between you and the next house - which would you choose?

One final point may be made about the correlates of the choice between suburbs and country. It is reasonable to anticipate that how people prefer to live is a result of their past experience. People were asked the type of community in which they grew up, and, in the last section of Table 25, the answers have been related to their preferences. As predicted, those who grew up in the country are much more likely to prefer it than those who grew up in the city. On the other hand, of those who grew up in a city only 26 per cent say they would prefer the house in the country. The consistency of this relationship with expectations may provide some further evidence of the validity of the measure of the attitude.

Spare time activities and locational preferences: The origin of locational preferences may reasonably be sought not just in people's past history but also in their current preferences among spare time activities. People who enjoy outdoor recreation of various kinds might reasonably be supposed to prefer to live in the outskirts of a city. We may examine the relation between what spare time activities people enjoy and their locational preferences as well as the relation between the activities they enjoy and where they presently live.

People were asked which of a list of spare time activities they and their family "really like to do", with the results shown in Table 26. "Watching television" leads the list, followed by "going for a drive in a car", and "gardening or working in the yard at home" are also popular.

People who would prefer a house in the country do turn out to be more likely to say they enjoy certain spare time activities. Of those who would prefer the house in the country 55 per cent enjoy fishing compared to 35 per cent of those who would prefer the house in the suburbs. It seems entirely consistent that those who like to fish also would like the country life. People who would prefer the house in the country also are more likely to enjoy hunting, gardening

Table 26

Spare Time Activities the Family Enjoys by Whether Would  
Prefer a House in the Suburbs or the Country

(Per cent of families with each preference who enjoy each activity)

<u>Per Cent Who</u> <u>Enjoy -</u>	<u>All</u>	<u>Prefer a House in</u> <u>the Suburbs</u>	<u>Prefer a House in</u> <u>the Country</u>
a. Watching television	87	89	84
b. Going for a drive in the car	67	68	66
c. Gardening or working in the yard	54	49	62
d. Going on picnics away from home	49	48	50
e. Cooking out in the yard	44	39	52
f. Fishing	43	35	55
g. Going to plays or concerts	32	32	32
h. Workshop hobbies	25	20	32
i. Hunting	24	17	33
j. Golf	16	15	18
Number of families	745	433	301

The question was: Suppose you had to choose between a house in the suburbs on a paved street with sidewalks and lawns, or a house in the country with woods or a field between you and the next house - which would you choose?

or working in the yard, cooking out in the yard, and workshop hobbies. The first three do make sense as outdoor activities that require space. It is less obvious why these people should be more likely to enjoy workshop hobbies. We may speculate that living in comparative isolation may seem more desirable to people who have developed manual skills and corresponding self-reliance about household problems.

The relation between spare time activities enjoyed and where people actually live at present is shown in Table 27. Of the first four activities mentioned above three again show differences in frequency associated with location: gardening or working in the yard, cooking out in the yard at home, and fishing. Hunting drops off the list, indicating that people who live near the center of a city are about as likely to go hunting as those who live farther out. This finding is reasonable in that hunting requires a special trip to the country from almost any location in a metropolitan area. Very few people can just walk out the door and begin to hunt. The activities which people can carry out on a reasonable sized lot are "gardening or working in the yard" and "cooking out in the yard at home"; these activities are enjoyed by many people; and desire to have a place for them does help to explain the distribution of people's homes by location.

We may say, then, in conclusion that most people prefer to live away from the center of large cities rather than close to the center. This general attitude is revealed by several different questions the answers to which are correlated with one another. The preference for living farther out is particularly strong among the younger people who are most likely to move. This preference is based in part on where people grew up and in part on the pattern of spare time activities which people presently enjoy.

Table 27

Spare Time Activities Families Enjoy by Type of Area in Which They Live

(Per cent of families in each area who enjoy each activity)

<u>Activity</u>	<u>All</u>	<u>Part of Metropolitan Area in Which Families Live</u>			
		<u>Central City</u>	<u>Suburb of 50,000 or More</u>	<u>Other Urbanized, Suburban Area</u>	<u>Rural Parts of Metro Areas</u>
a. Going for a drive in the car	67	66	71	67	73
b. Gardening or working in the yard	54	44	53	67	68
c. Cooking out in the yard at home	44	40	43	48	55
d. Fishing	43	39	38	47	54
e. Hunting	24	22	25	24	26
f. Golf	16	12	19	21	14
g. Workshop hobbies	25	23	26	29	19
Number of Families	745	354	99	221	69

## B. Attitudes Toward Neighborhoods

While people have general feelings about how close to the center of a city they want to live, they also have attitudes toward individual neighborhoods. Attitudes toward neighborhoods were approached in this study primarily by asking people about their own neighborhood. Recent movers were also asked to compare their present and former neighborhoods.

Attitudes toward the present neighborhood: People differ in how satisfied they are with their neighborhoods. In general, they are positive in their feelings, but not everyone is enthusiastic. The overall measure of satisfaction with neighborhood is distributed as follows:

	<u>Per Cent</u>
Like it very much	55
Like it moderately well	37
Dislike it	<u>8</u>
Total	100

Note that there is a dissatisfied minority, 8 per cent of the population.

How valid is this measure? One way to obtain some indication of validity is to relate overall satisfaction with the neighborhood with plans to move. It should be true that the less people like their neighborhood the more likely they will be to plan to move. Plans to move are known to be reasonably well correlated with actual mobility.

As shown in Table 28, there is a high degree of association between attitudes toward neighborhoods and plans to move. Of the small group who dislike their neighborhoods, fully 64 per cent plan to move within 12 months and an additional 24 per cent within five years. Of those who like the neighborhood very much only 15 per cent plan to move within 12 months and an additional 29 per cent within five years. By the criterion of whether they plan to move, it appears that those who say they are unenthusiastic about their neighborhoods

Table 28

Plans to Move by Overall Satisfaction with the Neighborhood

(Percentage distribution of respondents)

<u>Plans to Move</u>	<u>All</u>	<u>Satisfaction with Neighborhood</u>		
		<u>Like It Very Much</u>	<u>Like It Moderately Well</u>	<u>Dislike It</u>
In next 12 months	25	15	31	64
In next 5 years <sup>1</sup>	33	29	41	24
No plans to move in next 5 years	<u>42</u>	<u>56</u>	<u>28</u>	<u>12</u>
Total	100%	100%	100%	100%
Number of respondents	734	406	269	59

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<sup>1</sup>Excludes those who plan to move in the next 12 months.

really are dissatisfied.

What is it, then, which leads to satisfaction or lack of satisfaction with the neighborhood? To explore this question people were asked to rate their neighborhood as to convenience of location and to report whether their friends live there. They were also asked to scale the neighborhood on a series of four characteristics. As will be discussed below, nearly all of these dimensions turn out to be related to overall satisfaction with the neighborhood. The exception is convenience of location of the neighborhood to people's work, which seems to have little relation to whether people like the neighborhood.

Those who consider their neighborhood "very convenient" to stores, schools, and other neighborhood facilities are more likely to like the neighborhood. Sixty per cent of them like it very much, compared to 39 per cent of those who consider it not convenient to these facilities (Table 29).

The location of people's friends is a major factor in their attitude toward their neighborhood. It is unusual to find people all of whose friends live in the same neighborhood. A considerable group of people, however, report that most of their friends live in the neighborhood. Of this group 74 per cent like the neighborhood very much and only 3 per cent dislike it. There also is a considerable group of people none of whose friends live in the same neighborhood. Of this group only 37 per cent like it very much and 16 per cent dislike it. Of the three locational factors considered in Table 29, convenience of location to place of work, convenience to other neighborhood facilities, and closeness to friends, closeness to friends is clearly the most important. The importance to people of the social aspects of neighborhood life is further shown by people's comparisons of present and former neighborhoods, as will be discussed below.

The relation between four characteristics of the neighborhood itself and people's degree of liking of the neighborhood is shown in Table 30. Whether the



Table 29

Overall Satisfaction with Neighborhood by Ratings on  
Convenience of Location of Neighborhood

<u>Convenience of Location</u>	<u>Like it Very Much</u>	<u>Like it Moderately Well</u>	<u>Dislike it</u>	<u>Total</u>	<u>Number of Respondents</u>
<u>ALL</u>	55	37	8	100%	738
<u>To Work</u>					
Very convenient	59	33	8	100%	307
Fairly convenient	50	42	8	100%	200
Not convenient	48	46	6	100%	79
<u>To Stores, Schools and Other Neighborhood Facilities</u>					
Very convenient	60	33	7	100%	490
Fairly convenient	46	46	8	100%	202
Not convenient	39	39	22	100%	46
<u>Closeness to Friends</u>					
All live in neighborhood	70	13	17	100%	23
Most live in neighborhood	74	23	3	100%	177
Few live in neighborhood	54	40	6	100%	353
None live in neighborhood	37	47	16	100%	182

The question was: All in all, would you say you like this neighborhood very much,  
like it moderately well, or dislike it?

Table 30

Overall Satisfaction with Neighborhood by Ratings  
on Different Neighborhood Characteristics

<u>Neighborhood Characteristics</u>	<u>Satisfaction with Neighborhood</u>			<u>Total</u>	<u>Number of Respondents</u>
	<u>Like It Very Much</u>	<u>Like It Moderately Well</u>	<u>Dislike It</u>		
<u>ALL</u>	55	37	8	100%	732
<u>Noise Level</u>					
Noisy	32	37	31	100%	79
↓	32	54	14	100%	56
↓	44	49	7	100%	165
↓	52	43	5	100%	144
Quiet	73	24	3	100%	288
<u>How Well Maintained</u>					
Well Kept Up	72	25	3	100%	294
↓	51	45	4	100%	168
↓	42	50	8	100%	173
↓	34	46	20	100%	59
Poorly Kept Up	27	30	43	100%	37
<u>Attractiveness of Buildings</u>					
Attractive	77	21	2	100%	235
↓	55	41	4	100%	163
↓	42	51	7	100%	213
↓	35	52	13	100%	62
Unattractive	32	25	43	100%	56
<u>Crowding</u>					
Crowded	29	41	30	100%	69
↓	37	55	8	100%	85
↓	49	43	8	100%	148
↓	51	43	6	100%	97
Not Crowded	69	27	4	100%	334

neighborhood seems noisy or not makes a considerable difference to people. Of those who rate their neighborhood at the high end of the scale with regard to noise, 32 per cent dislike the neighborhood. Of those who rate their neighborhood at the quiet end of the scale, only 3 per cent dislike it. This finding is consistent with the finding that noise is important in people's feelings about living near the center of the city (see Table 21 above).

Whether the neighborhood is well kept up or poorly kept up is also correlated with people's feelings about it. Of those who rate the area well kept up, 72 per cent like it very much, compared to only 27 per cent of those who rate their neighborhood at the poorly kept up end of the scale.

The relation between the attractiveness of the buildings and how people like the neighborhood is similar. People who consider the buildings attractive are much more disposed to like the neighborhood.

Finally, whether the neighborhood seems crowded is associated with liking it. Again, the differences are large. Of those who ranked their neighborhood at the crowded end of the scale, 29 per cent like it very much, while of those who rank it at the not crowded end of the scale, 69 per cent like it very much.

To summarize: the neighborhoods people like are those they rate as quiet, well maintained, with attractive buildings, and not crowded. They also like neighborhoods convenient to stores, schools and other neighborhood facilities and they tend to like a neighborhood if that is where their friends live. People who do not like their neighborhoods and do not rate them favorably on these dimensions are likely to plan to move away.

Recent moves to new neighborhoods: The other approach taken to neighborhood preferences in this survey was to ask people who had moved within five years prior to the interview which they liked better, the old neighborhood or the new. The results were as follows:

	<u>Per Cent</u>
Like the new neighborhood better	64
About the same	19
Like the old neighborhood better	<u>17</u>
Total	100
Number of moves	232

About two out of three movers report that they like their new neighborhood better. Only about one out of six left the old neighborhood with regrets strong enough so that they still prefer it to the new. One might have argued, in the absence of information, that people would leave old neighborhoods reluctantly, driven by a need for an adjustment in their housing arrangements. Any such regrets seem to be small. In view of the relation just discussed between satisfaction with neighborhood and plans to move, a more common pattern seems to be that people often move from neighborhoods which they dislike or like only moderately.

Perhaps the most interesting aspect of people's comments about their change of neighborhoods is what they have to say about why they prefer one or the other. The reasons they give for their preferences, as shown in Table 31, are overwhelmingly social considerations. Whether they prefer the one or the other neighborhood is primarily a matter of their attitudes toward their neighbors in the two locations. This emphasis on social considerations is consistent with the finding mentioned above (Table 29) that whether people say they like a neighborhood depends on whether their friends live in that neighborhood or elsewhere. Locational considerations do enter into the evaluation of the two neighborhoods for some people, and the other characteristics of neighborhoods are also mentioned, but with much lower frequency than the social considerations.

These findings about attitudes toward neighborhoods certainly do not exhaust the possibilities of research on the subject. From the point of view, say, of

Table 31

Reasons for Liking Old or New Neighborhood Better

(Percentage distribution of respondents who moved in last five years)

<u>Reasons</u>	<u>Which Neighborhood Likes Better</u>	
	<u>Old Neighborhood</u>	<u>New Neighborhood</u>
Locational consideration	14	17
Social considerations	76	62
Other considerations	<u>10</u>	<u>21</u>
Total	100%	100%
Number of respondents who moved	58	175

The question was: Which do you like better, the neighborhood you are living in now or the neighborhood where you lived before? Why do you say so?

the city planner, many questions remain unanswered. The results do emphasize the importance of paying attention to the social interaction in the neighborhood as well as to its physical characteristics. Where people's friends live is important. This finding should be understood in the context of people's other preferences. The ideal is not to get as close to one's neighbors as possible. People don't like small lots, and they don't like crowding. They are interested in privacy. Nevertheless, whether they are friends with people in the neighborhood is important. There seem to be several physical characteristics which are also important. The evidence is particularly clear with regard to the importance of the noise level.

Conclusion: The main conclusion to which the data on locational preferences lead is that most people like to live where they have space in which to enjoy outdoor activities. For most people the advantages of central locations are outweighed by the disadvantages. Recent trends toward the dispersion of the population away from the cities thus are based on people's preferences as to how they want to live. For this reason these trends seem likely to continue. These preferences are consistent with the preferences for single family homes on good-sized lots discussed in the previous chapter.

There has been much sophisticated discussion of the possibilities of creating new types of urban environments to meet the needs of the expanding urban populations. The present analysis has been based on study of what is now happening and why it is happening. Any attempt to apply these findings to evaluate probable reactions to new situations must be speculative. It seems likely, however, that any new arrangements to be successful must take into account people's desires for privacy, for home ownership, and for space for outdoor activities such as children's play, gardening, and cooking out.

### III. Factors in Choosing a Home

One of the objectives of this survey was to learn more about the factors which are important to people in choosing a home. Consideration of this topic may help to place in proper perspective the discussion of the choice of the part of the metropolitan area and the choice of neighborhood. In an important sense the distinction made in this report among these three choices is artificial. In practice people at the same time select a house, a neighborhood, and a section of the metropolitan area. It is the total package which they accept or reject.

#### A. Rankings of Features People Look for in a Dwelling

What is it that is important to people in selecting a dwelling? In this study this question was approached by developing a list of features, showing it to those who had moved within five years, and asking them to select the two which were most important to them. The results, shown separately for people who moved to apartments and to single family homes, appear in Table 32.

It is worth noting that the size of the lot ranks well down on the list. For people living in apartments there may be some uncertainty about the meaning of the size of the lot. Even of those moving to single family dwellings, however, only 17 per cent rank the size of lot as one of the two most important features. Other considerations take priority. This finding suggests that, even though people typically may prefer larger lots, many may be willing to sacrifice something in size of lot to gain in other respects. It is consistent with the finding in Chapter I that the preferred, ideal lot size is larger than the projected actual average lot size.

What, then, are the features most desired? For single family homes the three most often selected are the following:

- Floor plan
- Number of bedrooms
- Size of rooms

Table 32

Two Most Important Features in Choosing a Home for Recent Movers

(Per cent of respondents moving in the last five years who mentioned each feature)

<u>Home Features</u>	<u>Movers to Apartments</u>	<u>Movers to Single Family Houses</u>
Closet space	44	27
Floor plan	22	38
Number of bathrooms	4	11
Number of bedrooms	40	38
Size of rooms	50	37
Storage area	10	7
Garage or parking	14	5
Size of lot	4	17
Type of building materials	<u>12</u>	<u>20</u>
Total	200%*	200%*
Number of respondents who moved in the last 5 years	54	166

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\* Percentages add to 200% since each respondent was asked to mention two features.



Consideration of this list suggests that basically what is much on people's minds is space. They want adequate space to accomodate their families.

For apartments the three features most often mentioned are the following:

- Size of rooms
- Closet space
- Number of bedrooms

Here, again, space seems to be of basic concern. Size of rooms and number of bedrooms, it will be noted, appear on both lists. The floor plan drops to fourth place for apartments, but closet space ranks second, and closet space is surely another dimension of total space. In an apartment the closets are likely to be a larger fraction of total space than in a single family house, which may include a basement or attic for storage.

People in different income groups may have different features in mind. To examine this possibility the list of important features is shown separately for those in each of four income groups. Only recent movers into single family houses are considered. (There are not enough movers into apartments in the sample to permit a division into income groups.) There are two features which seem to be less important for upper income people than for lower income people: closet space and size of rooms (Table 33). The floor plan, on the other hand, is more likely to be ranked as important by upper income people. These results seem reasonable enough. Upper income people are, perhaps, more likely to take it for granted that there will be adequate closets in their homes and also that the rooms will be of adequate size. Their concern with the floor plan is more sophisticated and, thus, more understandable for people of higher socio-economic status. Concern with the floor plan, however, implies concern with what rooms there are, and, hence, is consistent with a basic concern about the amount of space in the house. The number of bedrooms is important to people at every income level.

Table 33

Two Most Important Features in Choosing a Home for Recent Movers Living in  
Single Family Houses Showing Differences Among Income Groups

(Per cent of respondents living in single family houses and moving  
in the last five years who mentioned each feature)

<u>Home Features</u>	<u>All</u>	<u>Family Income</u>			
		<u>Under \$5000</u>	<u>\$5000 -7499</u>	<u>\$7500 -9999</u>	<u>\$10,000 or More</u>
Closet space	27	27	40	21	15
Floor plan	38	22	27	50	55
Number of bathrooms	11	16	7	3	18
Number of bedrooms	38	38	42	41	32
Size of rooms	37	48	38	32	27
Storage area	7	*	13	9	5
Garage or parking	5	3	7	3	7
Size of lot	17	19	15	15	20
Type of building materials	<u>20</u>	<u>27</u>	<u>11</u>	<u>26</u>	<u>20</u>
Total	200%**	200%**	200%**	200%**	200%**
Number of respondents in single family houses who moved in the last 5 years					
	166	37	55	34	40

\* Less than one-half of one per cent.

\*\* Percentages add to 200% since each respondent was asked to  
mention two features.

B. More or Fewer Rooms

In view of the evidence that people are concerned about space, it is of interest to look at the history of recent movers in this respect. Some shifted to dwellings with more rooms or the same number of rooms, and some, to dwellings with fewer rooms. This type of adjustment is what might be expected as families pass through different stages in the family life cycle. As families expand with the birth and growth of children, housing needs also expand. As families contract with children leaving home and the removal of one of the partners, needs for housing decline. There is thus reason to predict a corresponding adjustment in the number of rooms at different stages in the life cycle. Overall one might expect a rough equality as between the number of moves to smaller and to larger quarters. The situation is complicated by the birth and death of family units and by new construction, however, so this expectation is only approximate.

The findings appear in Table 34. There is a somewhat larger number of reported shifts to quarters with more rooms than to quarters with fewer rooms (42 per cent of movers versus 28 per cent). This discrepancy is not unduly large in view of the complications just mentioned and the size of the sample. That is, it is possible for more moves to be to dwellings with more rooms in view of new construction and the occurrence of vacancies resulting from the giving up of independent homes by the aged.

As expected, married couples with children are typically moving into homes with more rooms. Of the people in this stage in the life cycle who moved in the last five years, 54 per cent report moving to a dwelling with more rooms. For the older people who no longer have children at home the most frequent type of move is to a smaller dwelling. Of movers in this group 46 per cent made such a move. It will be recalled, however, that the mobility rate for these people is low. Thus, the most common pattern is one of older people staying on in their

Table 34

Whether Family Has More or Fewer Rooms Than Before Its Most Recent Move  
By Stage In Family Life Cycle

(Percentage distribution of those who moved in the last five years)

<u>Whether More Or Fewer Rooms In Dwelling Unit Moved Into</u>	<u>Stage in Family Life Cycle</u>				
	<u>All Movers</u>	<u>Young, Single and Young Married With No Children</u>	<u>Married With Children</u>	<u>Old, Married With No Children And Old, Single</u>	<u>Other<sup>1</sup></u>
More Rooms	42	29	54	23	30
Same Number	30	25	30	31	37
Fewer Rooms	28	46	16	46	33
Total	100%	100%	100%	100%	100%
Number of families who moved in last 5 years	317	52	177	61	27

<sup>1</sup>Includes persons not now married with children.

former quarters, but, when they do move, typically moving to a dwelling with fewer rooms.

For the youngest group, the young, single people and young couples with no children, the results do not conform so well to expectations. Apparently more of them moved to dwellings with fewer than with more rooms. It will be recalled that this is a highly mobile age group, and it may be that by chance more movers to smaller dwellings fell into the sample. The main results in Table 34 conform reasonably well to expectations.

Conclusion: In part the discussion in this chapter of factors in choosing a home is devoted to a set of problems which are separate from those considered in chapters I and II. There is, however, some connection. The major inference from study of the rankings given to different features of a home is that people are concerned with space in the dwelling. They are also concerned with the quality of the dwelling, as represented by the type of building materials, and, to some degree, by the floor plan. The size of the lot ranks well down on the list of considerations. Other neighborhood and locational considerations were not ranked on the same list, but it is clear that people must consider these matters jointly with their requirements for a dwelling.

#### IV. Vacation Homes

Vacation homes are of general interest as a social and economic phenomenon. From the point of view of this project they are of special interest as generators of travel. People who own vacation homes, it seems reasonable to suppose, are likely to visit them. This discussion will be concerned with the present ownership of vacation homes, including how far away they are and how often people visit them. Expected future ownership will be considered in the same way. This report of people's expectations will be supplemented by analysis of the relation between people's income and their stage in the family life cycle and ownership of vacation homes.

##### A. Present Ownership and Use of Vacation Homes

At present 5 per cent of the families in metropolitan areas other than New York report that they own a vacation home. Although this proportion is not high, it implies a considerable number of vacation homes. These homes are located at considerable distances from people's regular residences. The typical distance is about 100 miles (Table 35). There is, however, a wide range of distances with some vacation homes located very nearby, but about one in ten located 300 miles or more away. These estimates are subject to considerable sampling error since there are only 36 owners of vacation homes in the sample.

People visit these homes with considerable frequency. The majority report more than 15 round trips a year. That many visits implies virtual commuting such as, for example, a round trip every weekend during the summer. The number of miles of driving implied is also impressive. Fifteen round trips to a vacation home 100 miles away would mean 3000 miles of driving during a year just getting back and forth.

The reason for all this driving is implied by the length of time people spend at their vacation home on their longest stay during the year. For most

Table 35

Characteristics Of Location And Use Of Vacation Homes

<u>Distance To Vacation Home</u>	<u>Per Cent Of Vacation Home Owners</u>	<u>Per Cent Of Potential Vacation Home Owners <sup>1</sup></u>
Under 25 miles	8	9
25 - 49 miles	6	17
50 - 74 miles	22	16
75 - 99 miles	11	12
100 - 149 miles	20	17
150 - 199 miles	14	9
200 - 299 miles	8	6
300 miles or more	<u>11</u>	<u>14</u>
Total	100%	100%
<u>Number of Times Family Will Visit Their Vacation Home in 1965</u>		
Once	8	
2 - 4 times	6	
5 - 9 times	8	
10 - 15 times	19	
More than 15 times	56	
No plans for a trip to vacation home in 1965	<u>3</u>	
Total	100%	
<u>Longest Planned Stay At Vacation Home in 1965</u>		
Less than 1 week	30	
1 - 2 weeks	53	
3 - 4 weeks	8	
5 - 6 weeks	3	
More than 6 weeks	<u>6</u>	
Total	100%	
Number of vacation home owners	36	

<sup>1</sup>Potential vacation home owners are those respondents who do not own a vacation home but have thought they would like to and feel they have a 50-50 chance or better of actually owning one. This group includes 158 respondents, 21% of those who do not now own vacation homes.

people the longest stay is two weeks or less. We may speculate that people would find it both frustrating and expensive to maintain a vacation home solely for a period of that length. To get much use out of it they must travel back and forth.

B. Expected Ownership of Vacation Homes

To what extent is there likely to be an increase in the ownership of vacation homes in future years? To obtain some idea of how interested people are in the subject those who do not own a vacation home were asked if they had ever thought they might like to own one. Forty-one per cent of the population said that they had (in addition to the 5 per cent of present owners). No doubt for a great many of these people the idea is no more than a vague fantasy. As a device for sorting out the more realistic expectations from the vague dreams people were asked: "What do you think the chances are that you actually will own a vacation home?" The results follow:

<u>Chances of Owning a Vacation Home</u>	<u>Per Cent</u>
Very good	4
Fairly good	7
Maybe; 50-50 chance	10
Not much chance	11
No chance at all	9
Not interested	54
Already owns	<u>5</u>
Total	100
Number of interviews	748

Fifty-four per cent reported no interest. About 20 per cent of the population reported that, though they might like the idea, they had little or no chance of buying a vacation home. The remaining 21 per cent thought they had a chance, including 4 per cent who felt they had a very good chance of owning one. These expectations apply to the indefinite future since the question was in terms of



"ever" owning one. Nevertheless they suggest a substantial potential increase in the frequency of owning a vacation home. A great many people respond positively to the idea.

People who said they had a 50-50 chance or better were asked how many miles they would be likely to go to get the type of vacation home they wanted. The distribution is shown in Table 35. It is broadly similar to the distribution of distances to vacation homes people now own. The implication is that the potential owners have a fairly realistic idea of how far people do travel to reach vacation homes. The typical distance estimate is just under 100 miles, which is similar to the average distance people now travel.

#### C. Family Income and Vacation Home Ownership

The relation between people's incomes and whether they own a vacation home is of basic interest since it provides a way of estimating the probable effect of rising incomes on future ownership of vacation homes. It appears in Table 36.

The proportion of families in the income groups below \$7500 who now own a vacation home is very small, on the order of 2 to 3 per cent. As incomes rise above \$7500, however, the proportion of families who now own a vacation home rises sharply. It is 5 per cent in the income bracket \$7500 to \$9999, 9 per cent in the bracket \$10,000 to \$14,999, and 15 per cent over \$15,000. In other words, vacation home ownership rises with income but more rapidly than income. It is one of the luxuries into which people in the upper income groups are likely to put their money.

The relation between income and expected ownership of vacation homes is also shown in Table 36. The proportion of the population who feel they have a "very good chance" of acquiring a vacation home rises with income more or less in the same way as the proportion who actually own one. This relation suggests

Table 36

Present and Potential Vacation Home Ownership by Family Income

(Percentage distribution of respondents)

<u>Vacation Home Ownership Expectations</u>	<u>Family Income</u>						
	<u>All</u>	<u>Under \$3000</u>	<u>\$3000 -4999</u>	<u>\$5000 -7499</u>	<u>\$7500 -9999</u>	<u>\$10,000 -14,999</u>	<u>\$15,000 or More</u>
<u>Now owns a vacation home</u>	<u>5</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>9</u>	<u>15</u>
<u>Do not but would like to own a vacation home</u>	<u>41<sup>a</sup></u>	<u>24</u>	<u>30</u>	<u>47</u>	<u>51</u>	<u>52</u>	<u>46</u>
Very good chance	4	3	*	2	4	8	9
Fairly good chance	7	3	2	8	12	10	6
Maybe; 50-50 chance	11	4	5	15	15	13	12
Not much or no chance	20	14	23	22	20	21	19
<u>Not interested in owning a vacation home</u>	<u>54</u>	<u>74</u>	<u>68</u>	<u>50</u>	<u>44</u>	<u>39</u>	<u>39</u>
Total	100%	100%	100%	100%	100%	100%	100%
Number of respondents	746	119	116	184	111	120	65

\*Less than one-half of one per cent

<sup>a</sup>Detail does not add to total owing to rounding

The questions for those who do not own vacation homes were: Have you ever thought you might like to own a vacation home? (IF YES) What do you think the chances are that you actually will own a vacation home?

that these expectations are reasonably realistic. It seems sensible that 9 per cent of families with incomes over \$15,000 have a very good chance of owning a vacation home.

#### D. Stage in the Family Life Cycle and Ownership of Vacation Homes

Whether people now own a vacation home is not necessarily correlated with their present stage in the family life cycle. They may have acquired the property at an earlier stage. The data do not show any particular association between stage in the life cycle and ownership (Table 37). If anything, ownership increases with the passage of time with those in the later stages more likely to own a vacation home. There is enough random variation in the data so that this conclusion cannot be stated with any great degree of confidence.

What does change with stage in the life cycle is people's expectations about acquiring a vacation home if they do not now own one. It is the younger people who are likely to wish to own a vacation home, and also it is the young people who are likely to think they have a very good chance of acquiring one. Thus, 11 to 12 per cent of the young single people and young couples with no children feel they have a very good chance of acquiring a vacation home compared to 2 per cent or less of the older married couples with no children at home and the old single people. If the young people are right, the proportion of the population owning a vacation home will increase sharply as they fulfill their expectations.

We may conclude that all the evidence points in the direction of increased ownership of vacation homes and concomitantly an increased volume of travel to and from those homes. People's own desires and expectations point in that direction. These expectations are associated with income in a reasonable manner. It is primarily younger people who expect to acquire vacation homes, which also seems reasonable. And the relation between income and vacation home ownership at present suggests that as incomes gradually rise in the future an increasing share of those incomes will go into acquiring vacation homes.

Table 37

Present and Potential Vacation Home Ownership by Family Life Cycle

(Percentage distribution of respondents)

Stage in Family Life Cycle

<u>Vacation Home Ownership Expectations</u>	<u>All</u>	<u>Young, Single</u>	<u>Young, Married, No Children</u>	<u>Married, Youngest Child 4 or Less</u>	<u>Married, Youngest Child 5-14</u>	<u>Married, Youngest Child 15-18</u>	<u>Old, Married, No Children</u>	<u>Old, Single</u>	<u>Other<sup>1</sup></u>
<u>Now owns a vacation home</u>	<u>5</u>	<u>4</u>	<u>9</u>	<u>3</u>	<u>4</u>	<u>14</u>	<u>7</u>	<u>4</u>	<u>2</u>
<u>Do not but would like to own a vacation home</u>	<u>41<sup>a</sup></u>	<u>54</u>	<u>54</u>	<u>56</u>	<u>47</u>	<u>42</u>	<u>31</u>	<u>16</u>	<u>35</u>
Very good chance	4	12	11	4	5	3	2	*	*
Fairly good chance	7	19	14	11	6	3	2	1	2
Maybe; 50-50 chance	11	10	20	17	15	5	5	4	8
Not much or no chance	20	13	9	24	21	31	22	11	25
<u>Not interested in owning a vacation home</u>	<u>54</u>	<u>42</u>	<u>37</u>	<u>41</u>	<u>49</u>	<u>44</u>	<u>62</u>	<u>80</u>	<u>63</u>
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of respondents	746	52	35	165	151	36	148	103	52

\*Less than one-half of one per cent.

<sup>1</sup>Includes persons not now married with children.<sup>a</sup>Detail does not add to total owing to rounding.

## V. The Journey to Work

It is one purpose of this investigation to consider intensively a limited number of journeys to work. The basic concern is with the choice between travel by auto and by common carrier. This chapter reports the answers which were obtained to a series of detailed questions about the journey to work which were framed with this choice in mind.

The material in this chapter is organized into six sections and there is a related appendix. The first of the six sections is concerned with the sequence of choice between selection of where people live and where they work. The question at issue is the extent to which people can be thought of as adjusting their place of residence to where they work. The second section turns to the journey to work itself and attempts a general description of all journeys to work in terms of such characteristics as distance, whether they are toward or away from the city center, and who is making the trip. The third section is the first to raise explicitly the question of mode choice. It is concerned with the question of whether people have a choice of mode and how they choose. The three remaining sections of the chapter are concerned with three of the basic determinants of choice of mode: the speed of travel to work by auto and common carrier; the cost of travel by auto and common carrier; and preferences as between auto and common carrier, especially preferences when speed and cost are the same. Appendix A contains results of a special mail survey of common carriers who were asked to describe the service they had available for a sample of specified actual journeys to work.

### A. The Sequence of Choice: Place of Residence and Place of Work

People can be thought of as adjusting their place of residence to their place of work only if their place of work does not change too often. If the

place of work changed frequently peoples' location problem would be one of selecting a place of residence which is accessible to many potential places of employment. A question was asked to check on the situation. The question was put with regard to each worker who has a regular place of work, "Since you have been living here has (this worker) always gone to this address to start on (his) job or has there been a change in the address where he works?" To this question 72 per cent replied that there had been no change in place of work since the family had been living at that address. The implication is that most people do have the opportunity to adjust their place of residence to a fixed place of work.

How this adjustment is made, then, is a reasonable topic of investigation. A series of questions were asked of those who have moved in the last five years. Of all families 44 per cent had moved in the last five years. Of these, 36 per cent said that when they started looking for a place to live they had in mind some sort of time limit on how long the head of the family was willing to spend to get to work. Thus, about two movers out of three had no time limit in mind. The median of the limits given by the people who did report a limit was 32 minutes. Table 38 shows the distribution of these time limits. For comparison the distribution of actual time spent journeying to work by all those who had moved in the last five years is also shown.

Typically, it would appear the time limits were loose. This impression is further borne out by the fact that of these people who had a time limit in mind when they were selecting a home, 92 per cent said they either met or stayed under their limit. The 23 minute median time spent getting to work by recent movers is 9 minutes below the median limit time given. Most movers seem to be having no difficulty in locating at an entirely acceptable distance from their work. The time limits people have in mind are not now constraining them very much in their selection of homes. Presumably the matter of time to get to work was not salient

Table 38

Comparison of Time Limits for the Journey to Work Which People Had in Mind

Before They Moved and Actual Time Taken to Get to Work by People Who Have Moved Recently

<u>Minutes</u>	<u>Limits Given by 36% of Those Who Moved Recently</u>	<u>Actual Time Spent Getting to Work by All Those Who Moved Recently</u>
1-4	*	1%
5-9	5%	12%
10-14	7%	12%
15-19	20%	20%
20-29	14%	17%
30-44	42%	23%
45-59	6%	9%
60 or more	<u>6%</u>	<u>6%</u>
Total	100%	100%
Median	32 min.	23 min.
Number of journeys to work	119	312

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\* Less than one-half of one per cent.

to people who had no time limit in mind. They did not have to think about the subject because they anticipated no problem in locating within tolerable commuting radius.

Another approach to the same problem leads to a similar conclusion. Movers were asked the date of their last move. Then, in another context, the distance involved was ascertained for all journeys to work. If people when they move usually are making an effort to move closer to their work, those who have moved recently should on the average be closer. The data, which are shown in Table 39, show no relation between date of move and distance to work.

There must be a limit on how far people can live from their work. Most people, however, seem to be within a tolerable range. Getting closer to work does not seem to be a major factor in residential location. The need to live within a tolerable distance from one's work is not likely to be a barrier which will tend to prevent people from moving farther away from the center of urban areas.

#### B. Description of the Journey to Work

Characteristics of all journeys to work: In discussing the journey to work it is obviously necessary to confine attention to people who work, and who work away from home. Some people, of course, do not work, and others are employed on the same premises where they reside. The people who do work away from home may include the head of the family or other members. As shown in Table 40, about 69 per cent of journeys to work are for the main job of the head of the family. Other journeys to work are of substantial importance. The most numerous are journeys by the wife of the head, which are here estimated to be 18 per cent of all journeys to work.

For analytical purposes it is convenient to focus on the journeys to work of people who go every day to the same address to work, omitting those who



Table 39

Distance Of Journey To Work By Date Of Last Move

(Percentage distribution of journeys to work)

<u>Distance Of Journey To Work</u>	<u>Date Of Last Move</u>				
	<u>All Journeys</u>	<u>Before 1961</u>	<u>1961-62</u>	<u>1963-64</u>	<u>1965</u>
Less than 1 mile	12	11	11	15	12
1.0 - 1.9 miles	9	9	11	9	8
2.0 - 3.9 miles	20	22	9	20	20
4.0 - 5.9 miles	18	18	17	18	19
6.0 - 9.9 miles	16	16	19	16	15
10.0 - 14.9 miles	12	14	15	7	10
15 miles or over	13	10	18	15	16
Total	100%	100%	100%	100%	100%
Number of journeys to work	740	416	75	130	103

sometimes go to different addresses. As shown in Table 40, 90 per cent of journeys to work meet this test. The subsequent analysis is concerned with these journeys.

In this investigation an attempt was made to determine the approximate direction of peoples' journeys to work. The following question was asked: "To get to (his) present place of work, does (the worker) head toward downtown (name of metropolitan area), away from the downtown area, or is the job about as far out from downtown as here?" Some 18 per cent of all journeys to work were reported to be about as far from downtown as the worker's home (Table 41). The remainder split about two to one with the larger group headed toward the center of the metropolitan area. In other words by this measure about half as many people head out from the center as in. This phenomenon of commuting away from the city is sometimes referred to as reverse commuting.

A final basic characteristic of all journeys to work is the distance covered. This distance was estimated by respondents and the results are tabulated in Table 41. The median distance reported was 5.0 miles. In this respect there is no difference between journeys toward downtown and away from downtown. The median distance travelled is slightly over 5 miles in either case. Trips to places of work which are as far from downtown as people's places of residence tend to be shorter: the median length of these trips is only about 2 miles. The frequency distribution of trips by length, however, is one which shows rather wide dispersion. About one journey in five is for less than two miles but one in seven is for 15 miles or more.

It is, perhaps, a fair general characterization to say that there are a variety of different types of journey to work. Most are journeys of the head of the family to his main job, but three out of ten are not. Most are toward the center of the metropolitan area, but nearly half are not. A typical distance is five miles, but many are much shorter or much longer.

Table 40

Characteristics of the Journey to Work

<u>Who Has a Journey to Work</u>	<u>Per Cent of Journeys to Work</u>
Head for main job	69
Head for second job	3
Wife of head	18
Son or daughter of head	8
Other relative of head	<u>2</u>
Total	100%
 <u>Whether Worker Goes to the Same Address to Start on His Job Each Day</u>	
Goes to the same address every day	90
Different address on some or all days	<u>10<sup>a</sup></u>
Total	100%
Number of journeys to work	848
 <u>Direction of Journey to Work</u>	
Toward downtown	55
Away from downtown	27
As far from downtown as worker's home	<u>18</u>
Total	100%
Number of journeys to work	754

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<sup>a</sup> No further questions were asked about these 81 journeys to work.

Table 41

Distance Of The Journey To Work By Direction  
(Percentage distribution of journeys to work)

<u>Distance Journey To Work</u>	<u>Direction of Journey to Work</u>			
	<u>All Journeys</u>	<u>Toward Downtown</u>	<u>Away From Downtown</u>	<u>As Far From Downtown As Worker's Home</u>
Less than 1 mile	12	5	10	33
1.0 - 1.9 miles	9	7	11	15
2.0 - 3.9 miles	20	21	16	20
4.0 - 5.9 miles	18	20	17	14
6.0 - 9.9 miles	16	18	18	7
10.0 - 14.9 miles	12	15	14	4
15. 0 miles or more	<u>13</u>	<u>14</u>	<u>14</u>	<u>7</u>
Total	100%	100%	100%	100%
Median distance (miles)	5.0	5.7	5.2	2.2
Number of journeys to work	740	401	199	128

### C. Choice of Mode

There are two basic questions about the choice of mode of travel to get to work: what is the method people actually use and what choice do they have? These questions must be considered before the analytical question can be raised, what are the factors which lead people to select one method of travel rather than another?

The split between modes: The easier question to answer is how people do get to work and it will be convenient to consider the answers to this question before tackling the more subtle question of what choices are open to them. People were asked the method or methods of transportation which they actually use in the following language:

How does (the worker) make the trip to work - does (he) always go by car, sometimes by car and sometimes by public transportation, always by public transportation, or does (he) get to work some other way?

The results were as follows:

<u>Mode Used for Journey to Work</u>	<u>Per Cent</u>
Always by car	79
Sometimes by car and sometimes by common carrier	6
Always by common carrier	7
Other	<u>8</u>
Total	100
Number of journeys to work	764

Thus, for 13 per cent of the journeys to work taken by people in the metropolitan areas studied a common carrier is used at least part of the time. Only 7 per cent always go by common carrier.

Whether people have a choice: Whether people who do not use common carrier service have it available to them is difficult to state with precision. Availability is clearly a matter of degree. To explore the matter people were asked if there

was a stop where they could catch a bus or other common carrier to work within ten minutes walk of their homes. Ten minutes, of course, is arbitrary. At three miles an hour it represents a distance of about half a mile. It was chosen as representing what was judged to be close to the maximum distance people are likely to be willing to walk. By this standard public transportation is available for 36 per cent of the journeys to work in addition to those for which it is now used. Including those journeys now made by common carrier at least part of the time, about half (49 per cent) of the journeys to work could be made by common carrier (see Table 42).

We may note that this estimate makes no allowance for the fact that a considerable number of people use their cars in their work. Of those who report that they could go to work by common carrier but do not now use this way to get to work, 21 per cent state they use their car in their work. The estimate that half of all journeys to work could be made by common carrier ignores this consideration.

What happens if the maximum walking time to the common carrier stop is taken to be less than ten minutes? To make possible such an estimate the 36 per cent who said there was service within ten minutes walk were asked how long it would take to walk to the place where the common carrier stops. As shown in Table 42, 15 per cent said a minute or two and 9 per cent, three or four minutes. These people, it will be recalled, are not users of the common carrier. Thus 24 per cent of the journeys to work are made by car in spite of the fact that people themselves report there is a common carrier stop with service which they could use to get to work within a few minutes walk of their home.

What can be said about the nature of the common carrier service available to these numerous potential users? Roughly half of them would have to change vehicles in order to get to work. In general the trips would be rather slow.

Table 42

Description of the Common Carrier Service Available to Workers Who Do Not Use  
Public Transportation for Their Journeys to Work

<u>Whether Worker Uses Common Carrier for Journey to Work</u>	<u>Per Cent of All Journeys to Work</u>
Sometimes or always uses the common carrier	13
Does not use the common carrier	<u>87</u>
Total	100%
<u>Whether Common Carrier Service is Available for Workers Who Do Not Use the Common Carrier</u>	
Service is available within 10 minutes walking distance	36
No service within 10 minutes walking distance	49
Worker lives within 10 minutes walk of work	<u>2</u>
Total	87%
<u>Walking Time to the Common Carrier Stop for Workers with Service within Ten Minutes Walk</u>	
A minute or two	15
Three or four minutes	9
Five or six minutes	6
Seven to ten minutes	<u>6</u>
Total	36%
<u>Whether Worker, Served by a Common Carrier, Would Have to Transfer if He Rode the Common Carrier</u>	
Have to change common carriers	16
No transfer	17
Not ascertained	<u>3</u>
Total	36%

The questions were:

How does (Worker) make the trip to work - does (he) always go by car, sometimes by car and sometimes by public transportation, always by public transportation, or does (he) get to work some other way?

Is there a stop where (Worker) could catch a bus or rapid transit or train to work within ten minutes walk of your home?

About how long would it take to walk to the place where the (Common Carrier) stops?

Would (Worker) take the same (Common Carrier) all the way to work or would he have to change or transfer?

The most common estimate is that the door-to-door time would be in the range from 30 to 44 minutes (Table 43). That length of time seems long in contrast, say, to the typical trip by auto. The subject of the length of time to get to work by different modes will be treated below in more detail. The typical fare would be in the neighborhood of 20¢-29¢ for the potential users of common carrier. The common carriers, thus, could claim the full additional 36 per cent of all journeys to work only if people were prepared to walk up to ten minutes at one or both ends of the journey and take a trip which in about half the cases would involve a transfer.

These statements are based upon people's own reports. Their estimates may be inaccurate as contrasted to engineering estimates of time and distance. Yet people's own reports are of interest for the understanding of their behavior. An attempt to get the common carriers' estimates of approximately similar facts is reported in Appendix A.

If some people could travel by common carrier but fail to do so, it is appropriate to consider also whether others may not have the choice of getting to work by car but prefer the common carrier. As shown in Table 44 about 14 per cent of all journeys to work are by other means than by car. The 14 per cent who do not go to work by car were asked if they could make the entire trip by car or by car pool if they had to. Note that the question was framed in such a way as to ask for a maximum estimate of the number for whom automobile transportation is available. About half of the 14 per cent reported that they could go by car if they had to. The remainder, it would appear, are those for whom there is no real alternative to common carrier service. Most of the people who could manage to travel by car, 4 of the 7 per cent, would do so by getting a ride with someone. The remainder would either drive themselves or set up a car pool arrangement. It does not appear that the time it would take to get to work under these arrangements



Table 43

Time and Cost of Common Carrier Service Available to Workers Who Do Not Use

Public Transportation for Their Journeys to Work

(Percentage of trips)

<u>Door to Door Time</u>	<u>Per Cent of Potential Journeys to Work</u>
Less than 10 minutes	5
10-14 minutes	5
15-19 minutes	9
20-29 minutes	15
30-44 minutes	29
45-59 minutes	14
60 minutes or more	<u>23</u>
Total	100%
Number of journeys to work	241
<u>Cost of One-Way Fare</u>	
Less than 20¢	6
20¢-29¢	57
30¢-39¢	21
40¢-49¢	6
50¢-74¢	6
75¢ or more	<u>4</u>
Total	100%
Number of journeys to work	241

Table 44

Description of the Journey to Work by Car for Workers

Who Do Not Travel to Work by Car but Could Do So

<u>Whether Worker Goes to Work by Car</u>	<u>Per Cent of All Journeys to Work</u>
Sometimes or always goes by car	86
Does not go by car	<u>14</u>
Total	100%
<u>Whether Workers Who Do Not Go by Car Could Make the Journey by Car</u>	
Could go by car if had to	7
Could not go by car	6
Not ascertained	<u>1</u>
Total	14%
<u>Whether Worker Would Drive if Went by Car</u>	
Drive	2
Ride with someone	4
Both ride and drive	<u>1</u>
Total	7%
<u>Estimated Door to Door Time for Workers Who Could Go by Car</u>	
Less than 5 minutes	1
5-9 minutes	2
10-14 minutes	1
15-19 minutes	1
20-29 minutes	1
30-44 minutes	1
45 minutes or more	<u>*</u>
Total	7%
Number of journeys to work	764

The questions were:

How does (Worker) make the trip to work - does (he) always go

Description of the Journey to Work by Car for Workers

Who Do Not Travel to Work by Car - Cont.

by car, sometimes by car and sometimes by public transportation, always by public transportation, or does (he) get to work some other way?

Could (Worker) make the entire trip to work by car or car pool if he had to?

If (Worker) did go by car, would (he) drive to work, or ride with someone else?

How long would it take, door to door, for (Worker) to get to work by car?

would be excessive. The typical estimate is 15 minutes or less, door-to-door. We may speculate, however, that there might be reluctance to impose on one's friends or acquaintances to ask for a ride to work.

We may summarize our findings as to whether people have a choice by repeating, first, that whether there is a choice depends upon what one is prepared to consider as constituting a choice. Taking a fairly extreme view of what people could do to get to work if they had to, there is a choice for nearly half of all journeys to work whether they are now taken by car or by common carrier (Table 45). Given a strong enough incentive no doubt more people could change how they get to work. People could walk more than half a mile to a common carrier stop or could arrange rides in ways which have not now occurred to them, but such devices are not likely to be important in a normal situation. Even without such expedients the main facts are that many people do have a choice, and most of them choose to go to work by car.

#### D. Time to Get to Work and the Speed of Travel by Auto and Common Carrier

We turn now to the consideration of some of the determinants of choice of mode. Only three will be considered in this chapter out of all possible influences on choice of mode, namely, speed, cost, and people's attitudes toward travel by auto and by public transportation.

One of the basic characteristics of any type of transportation is its speed. In this survey special attention has been paid to the length of time it takes people to get to work by auto and by common carrier. The approach taken starts from the proposition that people have a reasonably accurate idea of when they leave for work, when they get there, and how long it takes them. Questions were asked on these points and the results of these questions are discussed first. There follows a set of estimates of the speed of the journey to work based on these

Table 45

Whether Worker Has A Choice Between Car And Common CarrierBy Mode Used For The Journey To Work

(Percentage distribution of journeys to work)

<u>Whether Worker Has a Choice</u>	<u>All Journeys</u>	<u>Mode Used for Journey to Work</u>			
		<u>Car</u>	<u>Sometimes Car and Sometimes Common Carrier</u>	<u>Common Carrier</u>	<u>Other</u>
Has choice	44	43	100	49	16
No choice	<u>56</u>	<u>57</u>	<u>-</u>	<u>51</u>	<u>84</u>
Total	100%	100%	100%	100%	100%
Number of journeys to work	753	602	44	49	58

estimates of time taken together with people's estimates of distance. The estimates of distance and, hence, of speed, must be regarded as approximations.

The median length of time it takes people from when they leave home to when they get to work is about 20 minutes if they travel by car and about 39 minutes by common carrier (Table 46). Whether people are driving toward the center of the metropolitan area or away from it does not make much difference. If anything, trips toward downtown take longer, with median time 23 minutes versus 19 minutes in the opposite direction. In view of the heavier volume of in-bound traffic this difference seems reasonable. Trips by car toward a job about as far from downtown as home are shorter, with median length 14 minutes. As noted above, these trips are for shorter distances.

There are enough observations to permit consideration of whether the length of time to drive to work varies with income. The data show little or no difference in median time to get to work by car from one income group to the next. One might perhaps have supposed that people in the upper income groups would arrange to live closer to their jobs, but on the average they are no closer or farther than others.

Given that the length of time en route is twice as long for trips by common carrier as by car, it is not surprising to find that the median speed of travel is twice as fast by car, 19 miles per hour as opposed to 10 miles per hour. This speed, it should be kept in mind, is based on the time between leaving home and getting to work. Thus, time spent waiting for a bus or parking the car is included. On the average, getting to work by common carrier is clearly much slower. That fact can hardly fail to be important as an explanation of why most journeys to work are by car.

An attempt has been made to carry the analysis one step farther and examine the relation between median speed and distance for auto and common carrier

Table 46

Door To Door Time For the Journey To Work

A. Door To Door Time For A One-Way Journey To Work	Per Cent of Car Journeys To Work	Per Cent Of Common Carrier Journeys To Work
Less than 9 minutes	13	1
10 - 14 minutes	15	4
15 - 19 minutes	22	12
20 - 29 minutes	19	13
30 - 44 minutes	21	28
45 - 59 minutes	7	23
60 minutes or longer	<u>3</u>	<u>19</u>
Total	100%	100%
Median Time for a one-way trip	20 minutes	39 minutes
Number of journeys to work	637	94

Median Time of Journey To Work By Car

By Family Income

B. Family Income	Median Time of Journey To Work By Car (Minutes)	Number of Journeys To Work By Car
Under \$4000	17	47
\$4000 - \$4999	20	45
\$5000 - \$5999	20	65
\$6000 - \$7499	22	102
\$7500 - \$9999	21	112
\$10,000 - \$14,999	20	157
\$15,000 and over	19	91

C. Direction of Journey to Work	Median Time of Journey to Work By Car (Minutes)	Number of Car Journeys To Work	Median Time Of The Journey To Work By Common Carrier (Minutes)	Number of Common Carrier Journeys to Work
Toward Downtwon	23	354	40	63
Away from downtown	19	178	45	30
As Far from downtown as worker's home	14	97		

separately. The calculations show a powerful effect of distance on speed (Table 47). The median speed is 13 miles per hour for trips by car to jobs 2.0 - 3.9 miles away compared to 24 miles per hour for jobs 10.0 - 14.9 miles away. The estimates for common carrier cannot be carried out for as many distance brackets, but roughly speaking at all distances speeds by common carrier seem to be about half of those by auto or slightly less than half.

Is this relation between speed and distance reasonable? There is undoubtedly some time spent at each end of the journey to work getting started and getting from the means of transportation to where one wants to be. Waiting for a bus, walking to the corner, parking a car, walking from car to job, all take time. This time does not depend on distance. Hence, overall speed in miles per hour should be faster for longer trips. Furthermore, the first part of a trip may well be slow because it is spent in travel on residential streets rather than arterial streets or freeways. A bus may spend time collecting a load. At the other end of a trip there may be delay due to the reverse process. The bus, for example, may make several stops in order to distribute its load. It does make sense that longer trips should show a better record in average number of miles covered per unit time.<sup>1</sup>

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<sup>1</sup>It should be noted that in the very long and very short distance categories there is probably some false positive correlation between speed and distance. While people probably are accurate in their estimates of the time it takes them to get to work, they may not be able to give the distance of this trip so well. When they take a trip, say, of 2 miles and misclassify it as a trip of 1 mile, it will seem as if their speed was only half what it really was. At the other extreme, if a 14 mile trip is misclassified as a 15 or 16 mile trip the speed will seem greater than it actually was. This same effect is present if a 20 mile trip is misclassified as a 25 mile trip. But except for the shortest and longest distance categories the effects of distance misclassification will tend to cancel out. There will be some underestimates but also some overestimates of speed. Thus, the average speed-distance relationship is probably close to correct for most of the range of distances. There is a possibility of bias in the speed estimates for very short and very long trips, however.



Table 47  
Speed Of The Journey To Work

A. <u>Speed</u>	<u>Per Cent Of Those Who Go By Car</u>	<u>Per Cent Of Common Carrier Riders</u>
Under 4 mph	4	13
5 - 9 mph	11	38
10 - 14 mph	21	32
15 - 19 mph	18	10
20 - 24 mph	21	6
25 - 34 mph	16	*
35 - 44 mph	6	*
45 mph or faster	<u>3</u>	<u>1</u>
Total	100%	100%
Median Speed	19 mph	10 mph
Number of respondents	599	84

B. <u>Distance Of The Journey To Work</u>	<u>Median Speed Of The Journey To Work By Car (mph)</u>	<u>Number of Journeys To Work By Car</u>
Less than 2 miles	10	86
2.0 - 3.9 miles	13	126
4.0 - 5.9 miles	17	105
6.0 - 9.9 miles	22	106
10.0 - 14.9 miles	24	78
15 miles or more	31	88

C. <u>Distance Of The Journey To Work</u>	<u>Median Speed Of Journey To Work By Common Carrier (mph)</u>	<u>Number Of Journeys To Work By Common Carrier</u>
Less than 6 miles	6	26
6 - 14.9 miles	9	35
15 miles or more	14	22

D. <u>Direction Of The Journey To Work</u>	<u>Median Speed Of Journey To Work By Car (mph)</u>	<u>Number Of Journeys To Work By Car</u>	<u>Median Speed Of Journey To Work By Common Carrier</u>	<u>Number of Journeys To Work By Common Carrier</u>
Toward Downtown	19	339	10	59
Away from downtown	21	165	11	24
As far from downtown as worker's home	15	88		

Some increase in average speed with distance, therefore, is to be expected. For reasons cited in footnote 1 the estimates of speed in Table 47 may not be accurate for the very short and the very long trips. There is no reason, however, to question the main conclusion that average speeds from the time of leaving one's home to the time of arriving at the job are much better by car.

#### E. Cost of Travel by Auto and Common Carrier

The cost of going to work by auto and by common carrier must play a part in any economic analysis of choice of mode for the journey to work. There is, however, a basic difficulty in estimating the cost of the journey by auto. As shown in the report of the 1963 Survey, most people never have estimated what it costs them to drive to work. Those who have done so report estimates which are very widely dispersed and seem in many instances to be unrealistic. In the present survey a new attempt was made to obtain from people information on the cost of driving to work. In this survey the objective was made more narrow and more specific. The question asked was the following:

About how much does it cost (the worker) to drive (ride) to work one-way, including only gas and oil and any tolls he may have to pay?

The distribution of costs reported is shown in Table 48. These costs have been converted to cost per mile using again the respondents' estimates of distance.

The resulting distribution again seems unreasonable. A median cost of 6 cents per mile seems high. Costs of 8 cents per mile for gas and oil (and tolls in a few instances) as reported for 33 per cent of the journeys seem especially unlikely to be accurate. The most likely interpretation is that most people do not know what they spend on gas and oil to get to work. That conclusion fits the results of the 1963 Survey as well. Estimates of the expenses of driving to work probably can be made with greater accuracy from the special studies of the cost of driving automobiles than from questions asked of respondents.

Table 48

Cost Of The Journey To Work For Workers Who Go By Car  
And Workers Who Ride The Common Carrier

<u>Total Cost One-Way Of The Journey To Work</u>	<u>Per Cent Of Workers Who Go By Car<sup>1</sup></u>	<u>Per Cent Of Common Carrier Riders</u>
Less than 20¢	23	3
20¢ - 29¢	27	48
30¢ - 39¢	17	32
40¢ - 49¢	5	6
50¢ - 74¢	18	6
75¢ - 99¢	4	4
\$1.00 or more	<u>6</u>	<u>1</u>
Total	100%	100%
Median Cost one-way (cents)	30¢	30¢
Number of Journeys To Work	520	79

<u>Cost Per Mile</u>	<u>Per Cent Of Workers Who Go By Car</u>	<u>Per Cent Of Common Carrier Riders</u>
1¢	2	1
2¢	11	11
3¢	16	10
4¢	15	15
5¢	11	13
6¢	8	10
7¢	4	13
8¢ or more	<u>33</u>	<u>27</u>
Total	100%	100%
Median Cost per mile (cents)	6¢	6¢
Number of Respondents	520	79

<sup>1</sup>Respondents were asked to include only gas, oil and tolls in their estimates of the cost one-way of driving to work.

The conclusion that people do not know what it costs to drive to work is of more than methodological interest. The implication is that people do not greatly care exactly what it costs to drive to work.

It is much easier to obtain reasonable answers to questions about the fares paid to common carriers. People are conscious of this amount because they must pay it directly and do so repeatedly. The distribution of responses to a question as to the one-way fare is shown in Table 48. The median fare reported is 30 cents. On a cost per mile basis, the median fare by common carrier is about 6 cents. Full average cost per mile of driving a car is undoubtedly much higher, but if a car is already owned and available for use, the marginal cost per mile of driving it to work is probably lower than 6 cents per mile.

Is it the marginal cost of driving the car to work or the full cost which is relevant? People who own a car were asked the following question:

Is this car used mainly to get to work, or for shopping or for what?

Those who said that the car was used to get to work were asked:

Would you still keep this car even if you didn't use it to get to work?

The answers may be distinguished according to whether the family's first, second, or third car is being considered.

	<u>First Car</u>	<u>Second Car</u>	<u>Third Car</u>
<u>Used mainly to get to work</u>	<u>41</u>	<u>46</u>	<u>36</u>
Would be kept even if not used to get to work	38	35	10
Would not be kept for purposes other than getting to work	3	11	26
<u>Used mainly for other purposes or has multiple uses</u>	<u>59</u>	<u>54</u>	<u>64</u>
Total	100	100	100
Number of cars	615	261	39

Thus, of all first cars only 3 per cent are maintained just to get to work. Even of the second cars only 11 per cent are maintained just to get to work. It is only for these cars that the relevant cost for comparison with the cost of common carrier service is the full average cost. As noted above, common carrier fares frequently equal or exceed the marginal cost of operating a car.

F. Preferences for Auto and Common Carrier

Choice of mode depends upon relative speed and, at least to some extent, upon relative cost. It also depends upon people's preferences. As found in the 1963 Survey, people's preferences tend to be in favor of the auto. A number of unfavorable comments were made, however, to the questions asked in that survey about disagreeable aspects of driving to work, "fighting traffic", and the like. To explore more fully people's feelings about this topic a direct question was asked of those who do drive to work about whether or not they enjoy it.

About one out of three express a neutral feeling on the subject (Table 49). They neither particularly like nor dislike driving to work. Of those who do express a feeling one way or another, most enjoy the drive. About four times as many say they enjoy the drive as say that they don't like it. Most motorists are not dissatisfied. No doubt it would be an exaggeration to say that people find it a great pleasure to drive to work - the large number of neutral responses suggests the contrary - but most people find the drive mildly pleasant. The discontented group are a minority.

As the length of the daily drive increases it would be reasonable to expect it to become more of a burden. Only about 5 to 8 per cent of the drivers say they dislike the drive up to a distance of about 6 miles. As the distance to work rises over 6 miles the proportion who don't like to drive rises gradually, reaching 28 per cent for trips of 15 miles or more. Even in this distance bracket, however, 47 per cent like to drive against the 28 per cent who do not.

These relaxed attitudes toward the drive to work are consistent with the findings reported earlier about the latitude in distance from work in people's choices of residential location. If the drive to work were more of a burden, it would be likely that people would make more of an effort to reduce it.

Table 49

Whether Those Who Drive Enjoy The Drive To  
Work By Distance Of The Journey To Work

(Percentage distribution of workers who drive to work)

<u>Whether Enjoy The Drive To Work</u>	<u>All Journeys</u>	<u>Distance of the journey to work</u>						
		<u>Less Than 1 Mile</u>	<u>1.0 - 1.9 Miles</u>	<u>2.0 - 3.9 Miles</u>	<u>4.0 - 5.9 Miles</u>	<u>6.0 - 9.9 Miles</u>	<u>10.0 - 14.9 Miles</u>	<u>15 Miles or more</u>
Enjoy the drive to work	53	71	52	63	51	53	39	47
Neither enjoy nor dislike the drive	34	23	40	32	41	32	42	25
Don't like to drive	13	6	8	5	8	15	19	28
Total	100%	100%	100%	100%	100%	100%	100%	100%
Number of journeys to work by car	560	39	52	107	99	100	69	81

The question was: Some people enjoy the drive to work while others don't like to drive. Does (WORKER) enjoy it or not?

In this survey all those judged to have any choice between car and common carrier were asked a further question:

How does this trip by (common carrier) compare with going by car in terms of comfort?

The distribution of responses follows:

<u>Relative Comfort</u>	<u>Per Cent</u>
Car is more comfortable	88
Car and common carrier equal in comfort	9
Common carrier more comfortable	<u>3</u>
Total	100%
Number of journeys to work	305

The distribution certainly shows that people are overwhelmingly of the opinion that the car is more comfortable. Only 3 per cent think of the common carrier as more comfortable.

In the 1963 Survey those who said they had a choice between auto and common carrier were asked which they would prefer if the alternative methods took the same amount of time and cost the same. This question was repeated in this survey using the revised system of classifying people as to whether they had a choice. The effect of broadening the group judged to have a choice was to make the results if anything even more favorable to the auto. The results follow:

<u>Choice If Time and Cost Were the Same</u>	<u>1963 Survey</u>	<u>1965 Survey</u>
Car	86	90
Common carrier	<u>14</u>	<u>10</u>
Total	100%	100%
Number of respondents	181	305

Only for about one journey to work in ten would the common carrier be preferred even if it were as fast as the auto and cost the same.



People were further asked to state the most important reason for their preferences in this respect with the results shown in Tables 50 and 51. Consideration of these comments may be helpful in assessing where it is that the strength of each mode may be found. The reasons for preferring the car refer primarily to convenience and scheduling. Two out of three comments refer to such factors as the convenience of the car on the one hand or the waiting, walking, and transferring required by the common carrier on the other. The basic convenience of private transportation is the major reason so many people prefer to drive to work.

Considerations of comfort and quality of ride rank second in importance, but account for only 15 per cent of the reasons given. As just shown, most people judge the car to be more comfortable, and that is one factor in their choice.

Enjoying driving the car is a poor third among the reasons for preferring to drive. As discussed above, most people do feel mildly positive about the drive to work, but that is not the basic reason why they drive.

Some people would prefer to go by common carrier, and the reasons they give are presented in Table 51. As we might expect, convenience is barely mentioned. The number one category of reasons is the disadvantages of driving including both driving itself and parking. The second important set of considerations have to do with the comfort of the common carrier. Thus, although most people find the auto more comfortable, those who feel the other way are important to the common carriers.

It is difficult to study the answers people give to questions about their preferences for the journey to work without feeling that the common carriers face a difficult struggle as they seek to maintain or expand their share of this market. They are at a basic disadvantage in terms of speed. Private transportation is inherently more convenient, and, finally, virtually everyone judges it to be more comfortable.

Table 50

Reasons For Preferring To Go To Work By Car Even If Common CarrierTakes Same Amount Of Time And Costs The Same

(Percentage distribution of reasons of workers who have a  
choice and prefer going by car)

<u>Reasons For Preferring To Go By Car</u>	<u>Per Cent of Reasons</u>
<u>Enjoyment</u>	<u>6</u>
Enjoy driving	3
Enjoy riding with friends	3
<u>Convenience and scheduling</u>	<u>67</u>
Car is more convenient, unspecified in what way	21
Car is more convenient for errands	6
Car is more convenient for other specified reasons	3
Common Carrier does not have a convenient schedule	5
Common Carrier requires too much waiting	17
Common carrier requires too much walking	6
Common carrier requires a transfer	4
Dislike being tied to the common carrier (lack freedom of movement)	4
Common carrier gets off schedule	1
<u>Comfort and quality of the ride</u>	<u>15</u>
Car is more comfortable	9
Common carrier is crowded	3
Common carrier ride is uncomfortable	1
Other specific comfort features	2
<u>Other reasons</u>	<u>12</u>
Car needed on the job, used in connection with job	5
Car avoids contact with unattractive people	1
Other reasons for preferring car	6
Total	<u>100%</u>
Number of reasons	344

The questions were: Imagine that these two ways to get to work took the same amount of time and cost the same. Which way would (WORKER) go? What would you say is the most important reason for (WORKER'S) preference?

Table 51

Reasons For Preferring To Go To Work By Common Carrier Even If Car  
And Common Carrier Cost The Same And Take The Same Amount of Time

(Percentage distribution of reasons of workers who have a choice  
and prefer going by common carrier)

<u>Reasons For Preferring To Go By Common Carrier</u>	<u>Per Cent Of Reasons</u>
<u>Disadvantages of driving</u>	<u>48</u>
Dislike driving, fighting traffic	34
Too hard to find a parking place	14
<u>Comfort of common carrier</u>	<u>32</u>
Common Carrier is more comfortable in general	17
Common carrier is air conditioned	5
Can read on the common carrier	5
Other specific comfort features of the common carrier	5
<u>Convenience and accessibility of the common carrier</u>	<u>3</u>
<u>Other reasons for preferring common carrier</u>	<u>17</u>
Total	100%
Number of reasons	36

The questions were: Imagine that these two ways to get to work took the same amount of time and cost the same. Which way would (WORKER) go? What would you say is the most important reason for (WORKER'S) preference?



Appendix A. Characteristics of Common Carrier Service Based on Company Reports

A special effort was made in this study to obtain information from transit companies to combine with the data from respondents about the same journeys to work. It was felt to be especially important to obtain an estimate from the companies of the availability of common carrier service. People who do not use the common carriers to get to work may not be well informed about the available service.

The basic strategy used was to send to the appropriate common carriers a form requesting information about specific journeys to work. The form specified the approximate address of the worker and the approximate address of his place of work as well as the time of day of starting work. The addresses were in the form of the names of the two streets at the nearest intersection as reported in the personal interviews. Thus, the inquiries to the companies referred to a sample of specific actual journeys to work. The information was sought only for people living in metropolitan areas with population of 350,000 or above (exclusive of New York). There were 24 such metropolitan areas in the sample.

The first step following completion of the personal interviews was to obtain from the interviewers the names of the transit companies serving each of the small areas in the survey. The addresses in the sample were in small clusters of about four dwelling units. In the 24 metropolitan areas there were 185 such clusters. As shown in Appendix Table 1, 18 per cent of these areas were not served by any transit company. These areas are taken to have no available service.

When a transit company could be identified forms were sent to that company requesting information about the journeys to work of all heads of families in the sample in the area served by the company. Cooperation from the companies was

excellent. Information was obtained for 82 per cent of the journeys to work for which information was asked (Part B of Appendix Table 1). (It is a coincidence that transit companies could be located for 82 per cent of the areas and that transit companies returned information for 82 per cent of the journeys about which information was sought from them.)

For 3 per cent of the journeys to work the companies reported that the worker lives so close to his job as to make it unreasonable to use the service. The distance to the nearest bus stop, for example, may be greater than the distance to his place of work. For 21 per cent of the journeys the company reported no service which could get the worker to his job and get him there on time. Either the place of residence or the place of work was too far from the nearest stop, or, in some instances, there was no service at the time of day the worker had to make the trip. For the balance of the journeys to work, amounting to about 58 per cent of all journeys to work by heads of families, the companies do report that they have service provided the worker would be prepared to walk up to half a mile at each end of the trip.

The distance of half a mile, of course, is arbitrary. It has been used as a criterion on the basis of a judgment that few people are willing to walk farther than that distance as a regular routine. To obtain some idea of the sensitivity of the conclusion about availability of service to the distance to be walked, the companies were also asked if they had service if the worker was prepared to walk only two blocks at each end of the trip. According to the reports received the effect of this rather drastic reduction in walking distance is to cut the proportion of journeys for which service is available from 58 per cent to 50 per cent. Thus, the best estimate based on this inquiry is that for about 50 to 60 per cent of journeys to work in cities of 350,000 or more exclusive of New York there is a possibility of using existing common carrier service.

Appendix Table 1

Estimates Based on Reports from Common Carriers of Availability of Common Carrier Service  
for Journeys to Work by Heads of Families in Metropolitan Areas Over 350,000 in Population

A. <u>Whether a Transit Company Could be Located to Which a Letter of Inquiry Could be Sent</u>	<u>Per Cent</u>
Clusters for which interviewer could locate no transit company	18
Clusters for which a transit company could be located which might provide service	<u>82</u>
Total	100%
Total number of small clusters in the sample in the 23 metropolitan areas considered	185
B. <u>Response from Transit Companies to Request for Report of Whether They Had Service</u>	<u>Per Cent of Journeys to Work</u>
Reported whether service available	82
Did not report whether service available	<u>18</u>
Total	100%
C. <u>Whether Journey to Work Could be Made by Common Carrier if Person Will Walk Half a Mile</u>	<u>Per Cent of All Journeys to Work</u>
1. No transit company could be found which serves the area (See A above)	<u>18</u>
2. A transit company serves the area and it reports:	<u>82</u>
a. Worker lives so close to work it would be unreasonable to use the service	3
b. The company has no service which could get the worker to work on time	21
c. The company does have service by which this person could get to work provided he is willing to walk as much as half a mile at each end of the trip	58
The company does have service if the person is willing to walk only two blocks at each end of the trip	50
The company has service only if the worker is willing to walk up to half a mile	<u>8</u>
Total	100%
Number of journeys to work for which reports were obtained as to availability of service from the transit companies	280

If all the people who have this choice did decide to use the common carriers, no doubt the supply of equipment would prove inadequate to meet the increased load. Each individual, however, considered separately, does have the choice.

This estimate may be roughly compared to an estimate based on the personal interviews. They show that 44 per cent of all workers have both car and common carrier service available (Table 46). In addition about 3 per cent use common carrier service and report they have no choice. Altogether according to the personal interviews about 47 per cent of all workers have common carrier service available. This estimate is based on all journeys to work including those in cities with population below 350,000 where common carrier service is less pervasive than in the larger metropolitan areas. Thus, the estimates from personal interviews and common carrier reports are reasonably consistent.

Two additional items of information are available from the reports made by the carriers. As shown in Appendix Table 2 the distribution of their estimates of the length of time the trips would take has a median of 29 minutes. Thirty per cent of the trips would take 45 minutes or more. The fare for the trip on a one-way basis is also shown in Appendix Table 2. The most common fare is 20 or 25 cents. About half of the fares would be 30 cents or more for the trip.

To date no joint analysis has been carried out combining the reports from the common carriers with the data obtained in the personal interviews. The work done, however, demonstrates the feasibility of this approach to the study of the journey to work. It is possible to start with a cross-section sample of the population of an area, obtain from that cross-section information about the characteristics of a cross-section of all journeys to work, and then obtain from transit companies data about those same journeys. The method appears to offer promise as a way to obtain data for intensive study of the journey to work.



Appendix Table 2

Characteristics of Common Carrier Service, Based on Company Reports

A. Number of Minutes Trip Would Take

<u>Minutes</u>	<u>Per Cent</u>
1-4	2
5-9	10
10-14	10
15-19	9
20-29	20
30-44	19
45-59	21
60 or more	<u>9</u>
Total	100%
Number of journeys to work	201
Median (minutes)	29

B. Amount of One-Way Trip Fare

<u>Amount</u>	<u>Per Cent</u>
Less than 20¢	2
20-29¢	46
30-39¢	27
40-49¢	14
50-74¢	9
75-99¢	<u>2</u>
Total	100%
Number of journeys to work	198

## Appendix B. Sampling Error

Properly conducted sample interview surveys yield useful estimates but they do not yield exact values. Errors arise from several sources: sampling, non-response, reporting and processing. Each source of error may be important in evaluating the accuracy of information. The present discussion is limited to sampling errors.

Sampling statistics reflect the random variations arising from interviewing only a fraction of the population. The distribution of individuals selected for a sample will usually differ by an unknown amount from that of the population from which the sample is drawn. The value which would have been obtained if the entire population had been designated to be interviewed by the same survey procedures will be referred to as the population value. If different samples were used under the same survey conditions, some of the estimates would be larger than the population value and some would be smaller. The sampling error is a measure of the chance deviation of a sample statistic from the corresponding population value. The sampling error does not measure the actual error of a particular sample estimate; rather, it leads to statements in terms of confidence intervals that are correct in a specified proportion of cases in the long run. Each statement declares that the range of the sampling error on either side of the sample estimate includes the population value.

"Sampling error" as used here is to be interpreted as two standard errors; it is the range, on either side of the sample estimate, chosen frequently in social research in order to obtain the 95 per cent "level of confidence". If one requires a greater degree of confidence than this, a wider range than two standard errors should be used. On the other hand, most of the time the actual

error of sampling will be less than the sampling error defined above; in about 68 cases of every 100 the population value can be expected to lie within a range of one-half the sampling error (one standard error) of the sample estimates.

Sampling errors themselves are products of the sampling processes and are subject to the effects of random fluctuations. Therefore, a range, rather than a single value, has been used in the table which follows. The upper limits are based on computations of data from earlier surveys which involved similar sampling methods but different subject matter. They are not averages but values on the high or conservative side. The smaller values were computed by use of the formula for simple random samples which can be viewed as the lower bound to the Survey's sampling errors.

Approximate Sampling Errors of Percentages

(Expressed in percentages)

<u>Reported Percentage</u>	<u>Number of Interviews</u>					
	<u>700</u>	<u>500</u>	<u>400</u>	<u>300</u>	<u>200</u>	<u>100</u>
50	3.8	4.5	5.0	5.8	7.1	10.0
	5.3	6.1	6.7	7.6	9.1	12.7
30 or 70	3.5	4.1	4.6	5.3	6.5	9.2
	4.8	5.6	6.1	6.9	8.4	11.6
20 or 80	3.0	3.6	4.0	4.6	5.7	8.0
	4.2	4.9	5.3	6.0	7.3	10.2
10 or 90	2.3	2.7	3.0	3.5	4.2	6.0
	3.2	3.6	4.0	4.5	5.5	7.6
5 or 95	1.6	1.9	2.2	2.5	3.1	4.4
	2.3	2.7	2.9	3.3	4.0	5.5

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SURVEY RESEARCH CENTER  
THE UNIVERSITY OF MICHIGAN  
PROJECT 749  
September, 1965

Budget Bureau # 41-6542  
Approval Exp. April 30, 1966

RESIDENTIAL LOCATION AND URBAN MOBILITY - II

Sample Book No. \_\_\_\_\_

Place Codes \_\_\_\_\_

Do not write in above spaces

1. INTERVIEWER'S LABEL

2. Date: \_\_\_\_\_

3. Your Interview Number: \_\_\_\_\_ 4. Length of Interview \_\_\_\_\_ (min.)

INTERVIEWER:

List below all adults living in the Dwelling Unit. (List all persons age 18 and over, and everyone who is married, regardless of age.)

(Col. 1) Adults by Relationship or Connection to Head	(Col. 2) Sex	(Col. 3) Age	(Col. 4) Family Unit No.	(Col. 5) Indicate R. by (✓)
HEAD of Dwelling Unit				

INTERVIEWER:

- (a) Interview the person indicated on the cover sheet by a red ✓; it will be either Head of the Family Unit OR the wife of the Head. Make no substitutions.
- (b) A Family Unit consists of all persons related by blood, marriage, or adoption. All persons not so related belong in unrelated secondary Family Units.
- (c) For unrelated secondary Family Units, copy the complete Dwelling Unit composition in the listing box above onto the first page of another questionnaire, and use a green, secondary family cover sheet to select the respondent.

1. Are there children under 18 living here? ☐ YES ☐ NO - (GO TO Q. 2)

1a. How many? \_\_\_\_\_

1b. How old are they? \_\_\_\_\_

1c. How many go to school here in the local community? \_\_\_\_\_

2.

2. Is (HEAD) working now? ☐ YES ☐ NO - (GO TO Q. 2b)

2a. How convenient is the location of this neighborhood to (HEAD'S) work? Would you say it's very convenient, fairly convenient, or not convenient?

VERY CONVENIENT / FAIRLY CONVENIENT / NOT CONVENIENT

2b. How convenient is the location of this neighborhood to other places you people need to go like stores, schools, church, and so forth? Would you say it's very convenient, fairly convenient, or not convenient?

VERY CONVENIENT / FAIRLY CONVENIENT;  
CONVENIENT TO SOME,  
NOT TO OTHERS / NOT CONVENIENT

2c. Thinking of your (and your SPOUSE'S) close friends, do they all live here in this neighborhood, most live here, only a few live here, or none live here?

ALL LIVE HERE / MOST LIVE HERE / FEW LIVE HERE / NONE LIVE HERE

3. I have some words here (HAND R CARD 1) which I would like you to use to describe this neighborhood as it seems to you. For example, if you think the neighborhood is noisy, please put a check right next to the word "noisy"; if you think it is "quiet", please put a check right next to the word "quiet"; if you think it is somewhere in between, please put the check where you think it belongs.

4. All in all, would you say you like this neighborhood very much, like it moderately well, or dislike it?

☐ LIKE IT VERY MUCH ☐ LIKE IT MODERATELY WELL ☐ DISLIKE IT



5. If you could do as you please, would you live in an apartment or a single family house? Would you say you strongly prefer (it) or moderately prefer (it)?

- ☐ STRONGLY PREFER AN APARTMENT - (GO TO Q. 7)
- ☐ MODERATELY PREFER AN APARTMENT - (GO TO Q. 7)
- ☐ HAVE NO PREFERENCE
- ☐ MODERATELY PREFER A SINGLE FAMILY HOUSE
- ☐ STRONGLY PREFER A SINGLE FAMILY HOUSE

- 5a. Considering your family situation, would you prefer to own your own home or to rent?

- ☐ PREFER TO RENT - (GO TO Q. 7)
- ☐ PREFER TO OWN

6. Nowadays some apartment houses are being set up so that instead of renting the apartment you live in you can buy just that one apartment for yourself. If you had the choice, would you prefer to own a single family house or own an apartment?

- ☐ SINGLE FAMILY HOUSE                      ☐ APARTMENT

6a. Why do you say so? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

7. If you could do as you please, would you like to live closer to the center of (...METRO AREA...) or farther from the center of (...METRO AREA...) or just where you are?

- ☐ CLOSER TO                      ☐ JUST WHERE                      ☐ FARTHER FROM
- ☐ THE CENTER                      ☐ WE ARE                      ☐ THE CENTER

8. Suppose you had to choose between a house in the suburbs on a paved street with sidewalks and lawns, or a house in the country with woods or a field between you and the next house - which would you choose?

- ☐ HOUSE IN SUBURBS                      ☐ HOUSE IN COUNTRY

9. Do you own a summer cottage or a vacation home of some kind?

☐ YES

☐ NO - (GO TO Q. 10)



9a. How many miles is it from your usual home to your vacation home?

Under  
25

25-  
49

50-  
74

75-  
99

100-  
149

150-  
199

200-  
299

300 or  
over

9b. How many times altogether in 1965 will your family go back and forth to your vacation home - just once, two to four times, five to nine times, ten to fifteen times, or more than fifteen times?

NONE

1

2-4

5-9

10-15

more than 15

9c. This year how long will be your longest stay at your vacation home?

\_\_\_\_\_

(GO TO PAGE 5, Q. 11)

10. Have you ever thought you might like to own a vacation home?

☐ YES

☐ NO - (GO TO PAGE 5, Q. 11)



10a. What do you think the chances are that you actually will own a vacation home?

VERY  
GOOD

FAIRLY  
GOOD

MAYBE;  
50-50  
CHANCE

NOT  
MUCH  
CHANCE

NO CHANCE  
AT ALL



(GO TO PAGE 5, Q. 11)

10b. How many miles from here do you think you would be likely to go to get the type of vacation home you want?

Under  
25

25-  
49

50-  
74

75-  
99

100-  
149

150-  
199

200-  
299

300 or  
over

INTERVIEWER: CHECK ONE

11. Type of structure in which respondent lives:

PRIMARY FAMILY UNIT LIVING IN:

- ☐ DETACHED SINGLE FAMILY HOUSE - (GO TO PAGE 6, Q. 12)
- ☐ 2 FAMILY HOUSE, 2 UNITS SIDE-BY-SIDE
- ☐ 2 FAMILY HOUSE, 2 UNITS ONE ABOVE THE OTHER
- ☐ DETACHED 3-4 FAMILY HOUSE
- ☐ ROW HOUSE (3 or more units in an attached row)
- ☐ APARTMENT HOUSE (5 or more units, 3 stories or less)
- ☐ APARTMENT HOUSE (5 or more units, 4 stories or more) → (GO TO PAGE 6, Q. 14)
- ☐ APARTMENT IN A PARTLY COMMERCIAL STRUCTURE
- ☐ OTHER (specify) \_\_\_\_\_ - (SKIP TO PAGE 7, Q. 16)
- ☐ THIS RESPONDENT IS A ROOMER OR OTHER UNRELATED SECONDARY FAMILY -  
(SKIP TO PAGE 10, Q. 34)

(LIVES IN SINGLE FAMILY HOUSE)

12. What is the shape of the lot occupied by your home here? \_\_\_\_\_

(INTERVIEWER: GET BEST POSSIBLE ESTIMATE)

(IF  
RECTANGULAR  
OR SQUARE)

12a. How many feet wide and how many feet deep is the lot?

\_\_\_\_\_  
(GO TO Q. 13)(IF NOT  
RECTANGULAR  
OR SQUARE)12b. We're interested in the  
size and shape of the lot  
which your home occupies.  
Would you please draw the  
general shape of your lot  
and tell me how long it is  
on each side?

(DRAW SHAPE OF LOT HERE)

(GO ON WITH Q. 13)

13. How do you feel about the size of your lot, is it too big, too small, or  
about the right size?☐ TOO BIG☐ ABOUT RIGHT SIZE☐ TOO SMALL

13a. Why do you feel this way? \_\_\_\_\_

\_\_\_\_\_  
(GO TO PAGE 7, Q. 16)(LIVES IN  
AN APARTMENT)14. How many apartments are there in  
this building? \_\_\_\_\_15. Is there parking space that goes with  
the building which is available for you?AVAILABLE;  
AVAILABLE IF  
PAY EXTRANOT  
AVAILABLE

16. Do you own this home (apartment) or pay rent or what?

- ☐ PAYS RENT      ☐ OWNS OR IS BUYING - (GO TO Q. 18)  
☐ NEITHER OWNS NOR RENTS - (GO TO Q. 19)

(IF PAYS  
RENT)

17. About how much rent do you pay a month? \_\_\_\_\_

(GO TO Q. 20)

(IF OWNS  
OR IS  
BUYING)

18. Could you tell me what the present value of this home is - I mean about what would it bring if you sold it today?

(GO TO Q. 20)

(IF  
NEITHER  
OWNS NOR  
RENTS)

19. How is that? \_\_\_\_\_

(GO ON WITH Q. 20)

20. How many rooms are there in this house (apartment), not counting bathrooms?

\_\_\_\_\_

21. When was this house (building) built?

- |                                      |                                    |                                    |                               |
|--------------------------------------|------------------------------------|------------------------------------|-------------------------------|
| <input type="checkbox"/> BEFORE 1920 | <input type="checkbox"/> 1940-1949 | <input type="checkbox"/> 1960-1961 | <input type="checkbox"/> 1964 |
| <input type="checkbox"/> 1920-1929   | <input type="checkbox"/> 1950-1954 | <input type="checkbox"/> 1962      | <input type="checkbox"/> 1965 |
| <input type="checkbox"/> 1930-1939   | <input type="checkbox"/> 1955-1959 | <input type="checkbox"/> 1963      |                               |

22. About when did you (Head) move into this house (apartment)?

☐ BEFORE 1961 - (SKIP TO PAGE 10, Q. 34)

☐ 1961    ☐ 1962    ☐ 1963    ☐ 1964    ☐ 1965

23. Just before you moved to this address, were you living here in (...METRO AREA...) or somewhere else?

☐ HERE IN (...METRO AREA...) - (GO TO PAGE 8, Q. 23a)

☐ SOMEWHERE ELSE - (GO TO PAGE 8, Q. 24)

8.

23a. Were you living closer to the center of (...METRO AREA...) or farther out?

CLOSER TO CENTER / SAME DISTANCE FROM CENTER / FARTHER OUT /

23b. About how many miles is it from your former home to here? \_\_\_\_\_

24. Before you moved, were you living in a detached single family house; a house for two, three or four families; or an apartment house?

SINGLE FAMILY HOUSE / APARTMENT HOUSE (FIVE OR MORE FAMILIES) /

TWO-FOUR FAMILY HOUSE / OTHER / - (specify) \_\_\_\_\_

25. How many rooms did you have in your former house (apartment), not counting bathrooms?

\_\_\_\_\_

26. Comparing what you spend on housing now with what you spent on housing before the move, would you say you are spending much more on housing now, a little more, the same, a little less, or a lot less?

SPENDING MUCH MORE NOW / SPENDING A LITTLE MORE NOW /

SPENDING THE SAME / SPENDING A LITTLE LESS NOW /

SPENDING MUCH LESS NOW /

27. (HAND CARD 2 TO R) Here is a list of some of the features which are important to people when they look for a place to live. Which two of these features were most important to you?

☐ a. Closet space

☐ f. Storage area

☐ b. Floor plan

☐ g. Garage or other parking

☐ c. Number of bathrooms

☐ h. Size of lot

☐ d. Number of bedrooms

☐ i. Type of building materials used

☐ e. Size of rooms

28. Which do you like better, the neighborhood you are living in now or the neighborhood where you lived before?

☐ LIKE NEW NEIGHBORHOOD BETTER

☐ ABOUT THE SAME

☐ LIKE OLD NEIGHBORHOOD BETTER

28a. Why do you say so? \_\_\_\_\_

29. When you people moved, did you feel that you had had enough time to look around for a new home, or did you have to choose a new home more quickly than you wanted to?

☐ ENOUGH TIME - (GO TO Q. 30)

☐ MORE QUICKLY THAN WANTED

29a. Why did you have to choose more quickly than you wanted? \_\_\_\_\_

30. Before you decided to move here, did you know anyone living within walking distance of this address?

☐ YES

☐ NO

31. When you started out to look for a place to live, did you have in mind some sort of time limit on how long (HEAD) was willing to spend to get to work?

☐ YES

☐ NO

/ HEAD WAS NOT WORKING / - (GO TO PAGE 10, Q. 33)

(GO TO PAGE 10, Q. 33)

32. About how much time was (HEAD) willing to spend to get to work?

32a. To get what you wanted in a place to live did you have to go beyond this time limit, or did you just meet the limit, or even stay under the limit?

/ BEYOND LIMIT /

/ MET LIMIT /

/ UNDER LIMIT /

10.

33. All things considered, how do you feel now about the move - was it a good idea or a poor idea to move here?

☐ GOOD IDEA      ☐ INDIFFERENT;  
HARD TO SAY      ☐ POOR IDEA

34. Do you think there is any chance you people will move in the next twelve months?

☐ SOME CHANCE      ☐ NO CHANCE - (GO TO PAGE 11, Q. 40)

35. Would you say you definitely will move, you probably will, or are you uncertain?

☐ DEFINITELY WILL MOVE      ☐ PROBABLY WILL MOVE      ☐ UNCERTAIN

36. Why are you thinking of moving? \_\_\_\_\_

37. Do you expect to stay in the (...METRO AREA...) if you do move?

☐ YES; PROBABLY WILL STAY      ☐ NO - (GO TO PAGE 11, Q. 46)

38. Will you move closer to the center of (...METRO AREA...) than you are now or farther out?

☐ CLOSER TO      ☐ SAME DISTANCE      ☐ FARTHER  
CENTER      FROM CENTER      OUT

39. Would you be more likely to move to a single family house, an apartment, or what?

☐ SINGLE FAMILY HOUSE      ☐ APARTMENT      ☐ OTHER (specify) \_\_\_\_\_

(GO TO PAGE 11, Q. 46)



(IF NOT  
PLANNING  
TO MOVE  
IN THE  
NEXT  
TWELVE  
MONTHS)

40. Do you think there is any chance you people will move in the next five years?

☐ SOME CHANCE                      ☐ NO CHANCE - (GO TO Q. 46)

↓

41. Would you say you definitely will move, you probably will, or are you uncertain?

☐ DEFINITELY                      ☐ PROBABLY                      ☐ UNCERTAIN  
WILL MOVE                      WILL MOVE

42. Why are you thinking of moving? \_\_\_\_\_

43. Do you expect to stay in the (...METRO AREA...) if you do move?

☐ YES; PROBABLY                      ☐ NO - (GO TO Q. 46)  
WILL STAY

↓

44. Would you be more likely to move closer to the center of (...METRO AREA...) than you are now, or farther out?

☐ CLOSER TO                      ☐ SAME DISTANCE                      ☐ FARTHER  
CENTER                      FROM CENTER                      OUT

45. Would you be more likely to move to a single family house, an apartment, or what?

☐ SINGLE FAMILY                      ☐ APARTMENT                      ☐ OTHER (specify)  
HOUSE

(GO ON WITH Q. 46)

46. Now we would like to talk about cars. How many cars or trucks do you people have for family use?

- ☐ NONE - (GO TO PAGE 12, Q. 47)
- ☐ ONE
- ☐ TWO
- ☐ THREE
- ☐ FOUR
- ☐ FIVE OR MORE
- (GO TO PAGE 12, Q. 50)



56. (ASK IF NECESSARY) Is (HEAD) working now, unemployed or laid off, retired, or what?

☐ HEAD IS RETIRED; DISABLED

☐ HEAD IS STUDENT

☐ HEAD IS HOUSEWIFE, KEEPING HOUSE

☐ HEAD IS WORKING NOW

☐ HEAD IS UNEMPLOYED OR LAID OFF

→ (GO TO PAGE 14, Q. 59)

→ (GO TO Q. 57)

57. What is (HEAD'S) usual occupation? \_\_\_\_\_

57a. What kind of business is that in? \_\_\_\_\_

57b. Does (HEAD) usually work for himself or for someone else?

☐ SELF-EMPLOYED

☐ SOMEONE ELSE

57c. (ASK ONLY IF NOT CLEAR) Does (HEAD) usually do this work at home or somewhere else?

☐ AT HOME

☐ SOMEWHERE ELSE

58. Does (HEAD) have a second job?

☐ YES

☐ NO - (GO TO PAGE 14, Q. 59)

58a. What sort of work does (he) do?

58b. (ASK ONLY IF NOT CLEAR) Does (HEAD) usually do this work at home or somewhere else?

☐ AT HOME

☐ SOMEWHERE ELSE

14.

INTERVIEWER: CHECK ONE

59.

- ☐ ONLY ONE ADULT IN FAMILY - (GO TO PAGE 15, Q. 62)  
☐ TWO OR MORE ADULTS IN FAMILY - (GO TO Q. 60)

60. Does anyone else in the family work now?

☐ YES

☐ NO - (GO TO PAGE 15, Q. 62)

61. Who?	FAMILY MEMBER _____	FAMILY MEMBER _____	FAMILY MEMBER _____
61a. What does (he) do?			
61b. (ASK ONLY IF NOT CLEAR) Does (he) do this work at home?	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO

INTERVIEWER: CHECK ONE

62.

- ☐ ONE OR MORE FAMILY MEMBERS WORK AWAY FROM HOME - (GO TO Q. 63)
- ☐ NO FAMILY MEMBER WORKS AWAY FROM HOME - (SKIP TO PAGE 30, Q. 101)

63. Now I would like to ask some questions about the trip to work for each family member who works away from home. Let's see, in your family, that would include:

INTERVIEWER: ENTER EACH MEMBER WHO WORKS AWAY FROM HOME ON A  
SEPARATE LINE BELOW.

---

---

---

---

INTERVIEWER:

ASK QUESTIONS 64-100a FOR EACH PERSON, USING EXTRA QUESTIONNAIRES, IF NECESSARY

16.

64. THIS REPORT IS FOR: (FILL IN SPACES ABOVE COLUMNS. ALLOW ONE COLUMN FOR EACH FAMILY MEMBER WHO WORKS AWAY FROM HOME. ASK QUESTIONS 65-100a FOR EACH PERSON.)

IF HEAD HAS A REGULAR SECOND JOB, FILL OUT ANOTHER COLUMN AND TITLE IT "HEAD - SECOND JOB". ASK QUESTIONS 65-100a FOR THAT JOB.

65. Does (WORKER) usually go to the same address to start on (his) job?

65a. Does (he) go to a different address every time or what?

66. What are the names of the two streets at the intersection nearest to (WORKER'S) place of work?

66a. What town is that in?

67. Since you have been living here has (WORKER) always gone to this address to start on (his) job or has there been a change in the address where (he) works?

67a. Since you have been living here how many changes has (WORKER) had in the address where (he) goes to work?

68. To get to (his) present place of work, does (WORKER) head toward downtown (...METRO AREA...), away from the downtown area, or is the job about as far out from downtown as you are here?

69. How far is it from your home to (WORKER'S) place of work?  
(Estimate number of miles)

HEAD (MAIN JOB)		
<input type="checkbox"/> YES - (GO TO Q. 66)	<input type="checkbox"/> YES - (GO TO Q. 66)	<input type="checkbox"/> YES - (GO TO Q. 66)
<input type="checkbox"/> NO ↓	<input type="checkbox"/> NO ↓	<input type="checkbox"/> NO ↓
(SKIP TO PAGE 30, Q. 101 FOR THIS JOURNEY TO WORK)	(SKIP TO PAGE 30, Q. 101 FOR THIS JOURNEY TO WORK)	(SKIP TO PAGE 30, Q. 101 FOR THIS JOURNEY TO WORK)
<input type="checkbox"/> NO CHANGE - (GO TO Q.68)	<input type="checkbox"/> NO CHANGE - (GO TO Q.68)	<input type="checkbox"/> NO CHANGE - (GO TO Q.68)
<input type="checkbox"/> HAS CHANGED ADDRESS WHERE WORKS ↓	<input type="checkbox"/> HAS CHANGED ADDRESS WHERE WORKS ↓	<input type="checkbox"/> HAS CHANGED ADDRESS WHERE WORKS ↓
/ ONE /    / TWO /	/ ONE /    / TWO /	/ ONE /    / TWO /
/ THREE - FOUR /	/ THREE - FOUR /	/ THREE - FOUR /
/ FIVE OR MORE /	/ FIVE OR MORE /	/ FIVE OR MORE /
<input type="checkbox"/> TOWARD DOWNTOWN	<input type="checkbox"/> TOWARD DOWNTOWN	<input type="checkbox"/> TOWARD DOWNTOWN
<input type="checkbox"/> AWAY FROM DOWNTOWN	<input type="checkbox"/> AWAY FROM DOWNTOWN	<input type="checkbox"/> AWAY FROM DOWNTOWN
<input type="checkbox"/> JOB IS ABOUT AS FAR OUT FROM DOWNTOWN AS WE ARE HERE	<input type="checkbox"/> JOB IS ABOUT AS FAR OUT FROM DOWNTOWN AS WE ARE HERE	<input type="checkbox"/> JOB IS ABOUT AS FAR OUT FROM DOWNTOWN AS WE ARE HERE

70. How does (WORKER) make the trip to work - does (he) always go by car, sometimes by car and sometimes by public transportation, always by public transportation, or does (he) get to work some other way?

70a. Could (WORKER) make the entire trip by car or car pool, if (he) had to?

71. If (WORKER) did go by car, would (he) drive to work, or ride with someone else?

72. Would (WORKER) keep the car at work if he drove?

72a. Would (WORKER) park on the street, in a lot, or where?

72b. Would (WORKER) have to pay to park at work?

73. How long would it take, door to door, for (WORKER) to get to work by car?

74. About how much would it cost (WORKER) to drive (ride) to work one-way, including only gas and oil and any tolls (he) might have to pay?



## HEAD (MAIN JOB)

<input type="checkbox"/> ALWAYS BY CAR - (GO TO PAGE 20, Q. 75)  <input type="checkbox"/> SOMETIMES BY CAR, (GO TO SOMETIMES BY PAGE 20, COMMON CARRIER Q. 75)  <input type="checkbox"/> ALWAYS BY PUBLIC TRANSPORTATION  <input type="checkbox"/> OTHER - (specify) _____ 	<input type="checkbox"/> ALWAYS BY CAR - (GO TO PAGE 20, Q. 75)  <input type="checkbox"/> SOMETIMES BY CAR, (GO TO SOMETIMES BY PAGE 20, COMMON CARRIER Q. 75)  <input type="checkbox"/> ALWAYS BY PUBLIC TRANSPORTATION  <input type="checkbox"/> OTHER - (specify) _____ 	<input type="checkbox"/> ALWAYS BY CAR - (GO TO PAGE 20, Q. 75)  <input type="checkbox"/> SOMETIMES BY CAR, (GO TO SOMETIMES BY PAGE 20, COMMON CARRIER Q. 75)  <input type="checkbox"/> ALWAYS BY PUBLIC TRANSPORTATION  <input type="checkbox"/> OTHER - (specify) _____ 
<input type="checkbox"/> NO - (SKIP TO PAGE 24, Q. 82)  <input type="checkbox"/> YES 	<input type="checkbox"/> NO - (SKIP TO PAGE 24, Q. 82)  <input type="checkbox"/> YES 	<input type="checkbox"/> NO - (SKIP TO PAGE 24, Q. 82)  <input type="checkbox"/> YES 
<input type="checkbox"/> DRIVE <input type="checkbox"/> BOTH RIDE OR DRIVE  <input type="checkbox"/> RIDE WITH SOMEONE 	<input type="checkbox"/> DRIVE <input type="checkbox"/> BOTH RIDE OR DRIVE  <input type="checkbox"/> RIDE WITH SOMEONE 	<input type="checkbox"/> DRIVE <input type="checkbox"/> BOTH RIDE OR DRIVE  <input type="checkbox"/> RIDE WITH SOMEONE 
<input type="checkbox"/> NO - (GO TO Q. 73)  <input type="checkbox"/> YES 	<input type="checkbox"/> NO - (GO TO Q. 73)  <input type="checkbox"/> YES 	<input type="checkbox"/> NO - (GO TO Q. 73)  <input type="checkbox"/> YES 
<input type="checkbox"/> STREET  <input type="checkbox"/> LOT  <input type="checkbox"/> OTHER 	<input type="checkbox"/> STREET  <input type="checkbox"/> LOT  <input type="checkbox"/> OTHER 	<input type="checkbox"/> STREET  <input type="checkbox"/> LOT  <input type="checkbox"/> OTHER 
<input type="checkbox"/> YES - How much per day? _____  <input type="checkbox"/> NO 	<input type="checkbox"/> YES - How much per day? _____  <input type="checkbox"/> NO 	<input type="checkbox"/> YES - How much per day? _____  <input type="checkbox"/> NO 
_____ MINUTES 	_____ MINUTES 	_____ MINUTES 
_____ TOTAL _____ GAS AND OIL _____ TOLLS (SKIP TO PAGE 24, Q. 82)	_____ TOTAL _____ GAS AND OIL _____ TOLLS (SKIP TO PAGE 24, Q. 82)	_____ TOTAL _____ GAS AND OIL _____ TOLLS (SKIP TO PAGE 24, Q. 82)

## (IF WORKER ACTUALLY GOES BY CAR)

75. Does (WORKER) drive to work, or does (he) ride with someone else, or does (he) do both when he goes by car?

75a. Some people enjoy the drive to work while others don't like to drive. Does (WORKER) enjoy it or not?

76. Does (WORKER) keep the car at work when (he) drives?

76a. Does (WORKER) use the car in (his) work?

76b. Does (WORKER) park on the street, in a lot, or where?

76c. Does (WORKER) have to pay to park at work?

77. How many others usually ride to work in the car with (WORKER)?

77a. How many of these people are members of (WORKER'S) immediate family?

77b. How is the cost of driving to work divided?

HEAD (MAIN JOB)		
<input type="checkbox"/> ALWAYS RIDES WITH SOMEONE- (GO TO Q. 77)  <input type="checkbox"/> BOTH RIDES AND DRIVES  <input type="checkbox"/> ALWAYS DRIVES	<input type="checkbox"/> ALWAYS RIDES WITH SOMEONE- (GO TO Q. 77)  <input type="checkbox"/> BOTH RIDES AND DRIVES  <input type="checkbox"/> ALWAYS DRIVES	<input type="checkbox"/> ALWAYS RIDES WITH SOMEONE- (GO TO Q. 77)  <input type="checkbox"/> BOTH RIDES AND DRIVES  <input type="checkbox"/> ALWAYS DRIVES
<input type="checkbox"/> ENJOY DRIVE  <input type="checkbox"/> DON'T CARE; PRO-CON  <input type="checkbox"/> DON'T LIKE TO DRIVE	<input type="checkbox"/> ENJOY DRIVE  <input type="checkbox"/> DON'T CARE; PRO-CON  <input type="checkbox"/> DON'T LIKE TO DRIVE	<input type="checkbox"/> ENJOY DRIVE  <input type="checkbox"/> DON'T CARE; PRO-CON  <input type="checkbox"/> DON'T LIKE TO DRIVE
<input type="checkbox"/> YES <input type="checkbox"/> NO - (GO TO Q. 77)  <input type="checkbox"/> SOMETIMES	<input type="checkbox"/> YES <input type="checkbox"/> NO - (GO TO Q. 77)  <input type="checkbox"/> SOMETIMES	<input type="checkbox"/> YES <input type="checkbox"/> NO - (GO TO Q. 77)  <input type="checkbox"/> SOMETIMES
<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/> STREET  <input type="checkbox"/> LOT  <input type="checkbox"/> OTHER	<input type="checkbox"/> STREET  <input type="checkbox"/> LOT  <input type="checkbox"/> OTHER	<input type="checkbox"/> STREET  <input type="checkbox"/> LOT  <input type="checkbox"/> OTHER
<input type="checkbox"/> NO  <input type="checkbox"/> YES - How much does (he) have to pay per day?	<input type="checkbox"/> NO  <input type="checkbox"/> YES - How much does (he) have to pay per day?	<input type="checkbox"/> NO  <input type="checkbox"/> YES - How much does (he) have to pay per day?
<input type="checkbox"/> NO ONE ELSE - (GO TO PAGE 22, Q. 79)  <input type="checkbox"/> ONE OTHER  <input type="checkbox"/> TWO OTHERS  <input type="checkbox"/> THREE OTHERS  <input type="checkbox"/> FOUR OR MORE	<input type="checkbox"/> NO ONE ELSE - (GO TO PAGE 22, Q. 79)  <input type="checkbox"/> ONE OTHER  <input type="checkbox"/> TWO OTHERS  <input type="checkbox"/> THREE OTHERS  <input type="checkbox"/> FOUR OR MORE	<input type="checkbox"/> NO ONE ELSE - (GO TO PAGE 22, Q. 79)  <input type="checkbox"/> ONE OTHER  <input type="checkbox"/> TWO OTHERS  <input type="checkbox"/> THREE OTHERS  <input type="checkbox"/> FOUR OR MORE
<input type="checkbox"/> ALL - (GO TO PAGE 22, Q.78)  <input type="checkbox"/> SOME <input type="checkbox"/> NONE	<input type="checkbox"/> ALL - (GO TO PAGE 22, Q.78)  <input type="checkbox"/> SOME <input type="checkbox"/> NONE	<input type="checkbox"/> ALL - (GO TO PAGE 22, Q.78)  <input type="checkbox"/> SOME <input type="checkbox"/> NONE

-----CONTINUED ON NEXT PAGE-----

78. Are all the people who usually ride in the car going to the same place, or do some have to be dropped off at other places?

79. About how much does it cost (WORKER) to drive (ride) to work one-way, including only gas and oil and any tolls (he) may have to pay?

80. What time does (WORKER) leave home to go to work?

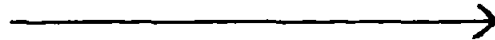
81. What time does (WORKER) get to work?

81a. Then it takes (WORKER) about (...MINUTES) to get to work - is that right?

HEAD (MAIN JOB)		
ALL GO TO SAME PLACE  SOME HAVE TO BE DROPPED OFF	<input type="checkbox"/> ALL GO TO SAME PLACE  <input type="checkbox"/> SOME HAVE TO BE DROPPED OFF	<input type="checkbox"/> ALL GO TO SAME PLACE  <input type="checkbox"/> SOME HAVE TO BE DROPPED OFF
_____ TOTAL  _____ GAS AND OIL  _____ TOLLS	_____ TOTAL  _____ GAS AND OIL  _____ TOLLS	_____ TOTAL  _____ GAS AND OIL  _____ TOLLS
_____ AM or PM  _____ AM or PM  _____ MINUTES  CORRECT ABOVE TIME(S) IF NECESSARY (GO ON WITH Q. 82)	_____ AM or PM  _____ AM or PM  _____ MINUTES  CORRECT ABOVE TIME(S) IF NECESSARY (GO ON WITH Q. 82)	_____ AM or PM  _____ AM or PM  _____ MINUTES  CORRECT ABOVE TIME(S) IF NECESSARY (GO ON WITH Q. 82)

(CHECK Q. 82 FOR EACH PERSON)

82. INTERVIEWER: CHECK ONE



83. Thinking of other possible ways to get to work, is there a stop where (WORKER) could catch a bus or rapid transit or train to work within ten minutes walk of your home?

83a. Which?

(IF MENTIONS TWO OR MORE - (Which would be the best?))

84. About how long would it take to walk to the place where the (COMMON CARRIER) stops - just a minute or two, three or four minutes, five or six minutes, or seven to ten minutes?

85. How often does the (COMMON CARRIER) go when (WORKER) leaves for work?

86. Once (WORKER) got on the (COMMON CARRIER) would (WORKER) usually be able to get a seat, or would (WORKER) have to stand?

87. Would (WORKER) take the same (COMMON CARRIER) all the way to work, or would he have to change or transfer?

88. How long would it take, door to door, for (WORKER) to get to work?

89. What would be the total cost of the one-way trip to work by (COMMON CARRIER)?

HEAD (MAIN JOB)		
<input type="checkbox"/> WORKER SOMETIMES OR ALWAYS USES PUBLIC TRANSPORTATION- (GO TO PAGE 26, Q. 90) <input type="checkbox"/> WORKER DOES NOT GO BY PUBLIC TRANSPORTATION ↓	<input type="checkbox"/> WORKER SOMETIMES OR ALWAYS USES PUBLIC TRANSPORTATION- (GO TO PAGE 26, Q. 90) <input type="checkbox"/> WORKER DOES NOT GO BY PUBLIC TRANSPORTATION ↓	<input type="checkbox"/> WORKER SOMETIMES OR ALWAYS USES PUBLIC TRANSPORTATION- (GO TO PAGE 26, Q. 90) <input type="checkbox"/> WORKER DOES NOT GO BY PUBLIC TRANSPORTATION ↓
<input type="checkbox"/> NO - (SKIP TO PAGE 28, Q. 97) <input type="checkbox"/> YES ↓	<input type="checkbox"/> NO - (SKIP TO PAGE 28, Q. 97) <input type="checkbox"/> YES ↓	<input type="checkbox"/> NO - (SKIP TO PAGE 28, Q. 97) <input type="checkbox"/> YES ↓
<input type="checkbox"/> BUS <input type="checkbox"/> RAPID TRANSIT <input type="checkbox"/> RAILROAD	<input type="checkbox"/> BUS <input type="checkbox"/> RAPID TRANSIT <input type="checkbox"/> RAILROAD	<input type="checkbox"/> BUS <input type="checkbox"/> RAPID TRANSIT <input type="checkbox"/> RAILROAD
<input type="checkbox"/> A MINUTE OR TWO <input type="checkbox"/> THREE OR FOUR MINUTES <input type="checkbox"/> FIVE OR SIX MINUTES <input type="checkbox"/> SEVEN TO TEN MINUTES	<input type="checkbox"/> A MINUTE OR TWO <input type="checkbox"/> THREE OR FOUR MINUTES <input type="checkbox"/> FIVE OR SIX MINUTES <input type="checkbox"/> SEVEN TO TEN MINUTES	<input type="checkbox"/> A MINUTE OR TWO <input type="checkbox"/> THREE OR FOUR MINUTES <input type="checkbox"/> FIVE OR SIX MINUTES <input type="checkbox"/> SEVEN TO TEN MINUTES
<input type="checkbox"/> GET A SEAT <input type="checkbox"/> STAND <input type="checkbox"/> DO BOTH	<input type="checkbox"/> GET A SEAT <input type="checkbox"/> STAND <input type="checkbox"/> DO BOTH	<input type="checkbox"/> GET A SEAT <input type="checkbox"/> STAND <input type="checkbox"/> DO BOTH
<input type="checkbox"/> SAME COMMON CARRIER <input type="checkbox"/> HAVE TO CHANGE OR TRANSFER	<input type="checkbox"/> SAME COMMON CARRIER <input type="checkbox"/> HAVE TO CHANGE OR TRANSFER	<input type="checkbox"/> SAME COMMON CARRIER <input type="checkbox"/> HAVE TO CHANGE OR TRANSFER
_____ MINUTES	_____ MINUTES	_____ MINUTES
(SKIP TO PAGE 28, Q. 97)	(SKIP TO PAGE 28, Q. 97)	(SKIP TO PAGE 28, Q. 97)

## (IF WORKER ACTUALLY GOES BY COMMON CARRIER)

90. About how long does it take to get to the place where the (COMMON CARRIER) stops - just a minute or two, three to four minutes, five or six minutes, seven to ten minutes or over ten minutes?

91. How often does the (COMMON CARRIER) go when (WORKER) leaves home for work?

92. Once (WORKER) gets on (COMMON CARRIER) is (WORKER) usually able to get a seat, or does (WORKER) have to stand?

93. Does (WORKER) take the same (COMMON CARRIER) all the way to work, or does he have to change or transfer?

94. What time does (WORKER) leave home to go to work by (COMMON CARRIER)?

95. What time does (WORKER) get to work?

95a. Then it takes (WORKER) about (...MINUTES) to get to work -  
is that right?

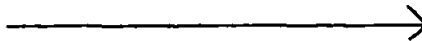
96. What is the total cost of the one-way trip to work by (COMMON CARRIER)?



HEAD (MAIN JOB)		
<input type="checkbox"/> A MINUTE OR TWO <input type="checkbox"/> THREE OR FOUR MINUTES <input type="checkbox"/> FIVE OR SIX MINUTES <input type="checkbox"/> SEVEN TO TEN MINUTES <input type="checkbox"/> OVER TEN MINUTES	<input type="checkbox"/> A MINUTE OR TWO <input type="checkbox"/> THREE OR FOUR MINUTES <input type="checkbox"/> FIVE OR SIX MINUTES <input type="checkbox"/> SEVEN TO TEN MINUTES <input type="checkbox"/> OVER TEN MINUTES	<input type="checkbox"/> A MINUTE OR TWO <input type="checkbox"/> THREE OR FOUR MINUTES <input type="checkbox"/> FIVE OR SIX MINUTES <input type="checkbox"/> SEVEN TO TEN MINUTES <input type="checkbox"/> OVER TEN MINUTES
<input type="checkbox"/> GETS A SEAT <input type="checkbox"/> STANDS <input type="checkbox"/> BOTH	<input type="checkbox"/> GETS A SEAT <input type="checkbox"/> STANDS <input type="checkbox"/> BOTH	<input type="checkbox"/> GETS A SEAT <input type="checkbox"/> STANDS <input type="checkbox"/> BOTH
<input type="checkbox"/> SAME COMMON CARRIER <input type="checkbox"/> HAS TO CHANGE OR TRANSFER	<input type="checkbox"/> SAME COMMON CARRIER <input type="checkbox"/> HAS TO CHANGE OR TRANSFER	<input type="checkbox"/> SAME COMMON CARRIER <input type="checkbox"/> HAS TO CHANGE OR TRANSFER
_____ AM or PM _____ AM or PM _____ MINUTES CORRECT ABOVE TIME(S) IF NECESSARY	_____ AM or PM _____ AM or PM _____ MINUTES CORRECT ABOVE TIME(S) IF NECESSARY	_____ AM or PM _____ AM or PM _____ MINUTES CORRECT ABOVE TIME(S) IF NECESSARY
(GO ON WITH Q. 97)	(GO ON WITH Q. 97)	(GO ON WITH Q. 97)

(CHECK Q. 97 FOR EVERYONE)

97. INTERVIEWER: CHECK ONE



98. How does this trip by (COMMON CARRIER) compare with going by car in terms of comfort?

99. Imagine that these two ways to get to work took the same amount of time and cost the same. Which way would (WORKER) go?

100. What would you say is the most important reason for (WORKER'S) preference?

100a. Anything else?

HEAD (MAIN JOB)		
<input type="checkbox"/> WORKER HAS A CHOICE BETWEEN CAR AND COMMON CARRIER TO GET TO WORK - (GO TO Q. 98)  <input type="checkbox"/> WORKER DOES <u>NOT</u> HAVE A CHOICE BETWEEN CAR AND COMMON CARRIER - (GO TO PAGE 30, Q.101)	<input type="checkbox"/> WORKER HAS A CHOICE BETWEEN CAR AND COMMON CARRIER TO GET TO WORK - (GO TO Q. 98)  <input type="checkbox"/> WORKER DOES <u>NOT</u> HAVE A CHOICE BETWEEN CAR AND COMMON CARRIER - (GO TO PAGE 30, Q.101)	<input type="checkbox"/> WORKER HAS A CHOICE BETWEEN CAR AND COMMON CARRIER TO GET TO WORK - (GO TO Q. 98)  <input type="checkbox"/> WORKER DOES <u>NOT</u> HAVE A CHOICE BETWEEN CAR AND COMMON CARRIER - (GO TO PAGE 30, Q.101)
<input type="checkbox"/> CAR IS MORE COMFORTABLE  <input type="checkbox"/> CAR AND COMMON CARRIER EQUAL IN COMFORT  <input type="checkbox"/> COMMON CARRIER MORE COMFORTABLE	<input type="checkbox"/> CAR IS MORE COMFORTABLE  <input type="checkbox"/> CAR AND COMMON CARRIER EQUAL IN COMFORT  <input type="checkbox"/> COMMON CARRIER MORE COMFORTABLE	<input type="checkbox"/> CAR IS MORE COMFORTABLE  <input type="checkbox"/> CAR AND COMMON CARRIER EQUAL IN COMFORT  <input type="checkbox"/> COMMON CARRIER MORE COMFORTABLE
<input type="checkbox"/> BY CAR  <input type="checkbox"/> BY COMMON CARRIER	<input type="checkbox"/> BY CAR  <input type="checkbox"/> BY COMMON CARRIER	<input type="checkbox"/> BY CAR  <input type="checkbox"/> BY COMMON CARRIER

(GO BACK TO PAGE 16,  
Q. 64 FOR NEXT WORKER  
AND HEAD'S SECOND JOB)

(GO BACK TO PAGE 16,  
Q. 64 FOR NEXT WORKER)

(GO BACK TO PAGE 16,  
Q. 64 FOR NEXT WORKER)

101. Now I'd like to know about all the trips taken by people in this family yesterday. By a trip I mean one way - driving to a store and back would be two trips.

(INTERVIEWER: REPEAT QS. 102-106 FOR EACH TRIP BY ANY FAMILY MEMBER AGED 5 AND OVER. USE ONE COLUMN FOR EACH FAMILY MEMBER OVER 5 YEARS OF AGE. DO NOT COUNT WALKING TRIPS EXCEPT WALKING TO WORK.)

101a. Did (FAMILY MEMBER) go to work or go anywhere by car or public transportation yesterday?

☐ YES - (GO ON WITH Q. 102)

☐ NO - (REPEAT Q. 101a FOR NEXT FAMILY MEMBER)

☐ NO FAMILY MEMBER TOOK ANY TRIP YESTERDAY - (SKIP TO PAGE 36, Q.107)

INTERVIEWER: LIST ALL FAMILY MEMBERS AGED 5 AND OVER.

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(WHO IS THIS TRIP FOR? 'ENTER EACH PERSON BY RELATIONSHIP TO HEAD)	Family Member _____ Trip Number _____	Family Member _____ Trip Number _____
102. Where did (you) begin (your) trip (your next trip)?	<input type="checkbox"/> WORK (PRIORITY)-(GO TO Q.104) <input type="checkbox"/> HOME - (GO TO Q.104) <input type="checkbox"/> FRIEND'S OR RELATIVE'S HOUSE <input type="checkbox"/> STORE, RESTAURANT, BANK <input type="checkbox"/> DOCTOR'S OFFICE, HOSPITAL <input type="checkbox"/> SCHOOL <input type="checkbox"/> OTHER	<input type="checkbox"/> WORK (PRIORITY)-(GO TO Q.104) <input type="checkbox"/> HOME - (GO TO Q.104) <input type="checkbox"/> FRIEND'S OR RELATIVE'S HOUSE <input type="checkbox"/> STORE, RESTAURANT, BANK <input type="checkbox"/> DOCTOR'S OFFICE, HOSPITAL <input type="checkbox"/> SCHOOL <input type="checkbox"/> OTHER
103. (INT'R: FILL IN, ASK IF NECESSARY) Why were (you) at (the place where this trip began)?	<input type="checkbox"/> WORK <input type="checkbox"/> SHOPPING <input type="checkbox"/> OTHER <input type="checkbox"/> PERSONAL BUSINESS; MEDICAL OR DENTAL <input type="checkbox"/> ATTEND SCHOOL <input type="checkbox"/> EAT MEAL <input type="checkbox"/> SOCIAL OR RECREATIONAL <input type="checkbox"/> TO TAKE SOMEONE SOMEWHERE (SERVE A PASSENGER) <input type="checkbox"/> TO CHANGE MODE OF TRAVEL	<input type="checkbox"/> WORK <input type="checkbox"/> SHOPPING <input type="checkbox"/> OTHER <input type="checkbox"/> PERSONAL BUSINESS; MEDICAL OR DENTAL <input type="checkbox"/> ATTEND SCHOOL <input type="checkbox"/> EAT MEAL <input type="checkbox"/> SOCIAL OR RECREATIONAL <input type="checkbox"/> TO TAKE SOMEONE SOMEWHERE (SERVE A PASSENGER) <input type="checkbox"/> TO CHANGE MODE OF TRAVEL
104. What was the purpose of this trip?	<input type="checkbox"/> TO GO HOME - (GO TO Q.106) <input type="checkbox"/> GET TO WORK -(GO TO Q.106) <input type="checkbox"/> SHOPPING <input type="checkbox"/> OTHER <input type="checkbox"/> PERSONAL BUSINESS; MEDICAL OR DENTAL <input type="checkbox"/> ATTEND SCHOOL <input type="checkbox"/> EAT MEAL <input type="checkbox"/> SOCIAL OR RECREATIONAL <input type="checkbox"/> TO TAKE SOMEONE SOMEWHERE (SERVE A PASSENGER) <input type="checkbox"/> TO CHANGE MODE OF TRAVEL	<input type="checkbox"/> TO GO HOME - (GO TO Q.106) <input type="checkbox"/> GET TO WORK -(GO TO Q.106) <input type="checkbox"/> SHOPPING <input type="checkbox"/> OTHER <input type="checkbox"/> PERSONAL BUSINESS; MEDICAL OR DENTAL <input type="checkbox"/> ATTEND SCHOOL <input type="checkbox"/> EAT MEAL <input type="checkbox"/> SOCIAL OR RECREATIONAL <input type="checkbox"/> TO TAKE SOMEONE SOMEWHERE (SERVE A PASSENGER) <input type="checkbox"/> TO CHANGE MODE OF TRAVEL
105. Where did (you) go?	<input type="checkbox"/> HOME <input type="checkbox"/> SCHOOL <input type="checkbox"/> OTHER <input type="checkbox"/> FRIEND'S OR RELATIVE'S HOUSE <input type="checkbox"/> STORE, RESTAURANT, BANK <input type="checkbox"/> DOCTOR'S OFFICE, HOSPITAL	<input type="checkbox"/> HOME <input type="checkbox"/> SCHOOL <input type="checkbox"/> OTHER <input type="checkbox"/> FRIEND'S OR RELATIVE'S HOUSE <input type="checkbox"/> STORE, RESTAURANT, BANK <input type="checkbox"/> DOCTOR'S OFFICE, HOSPITAL
106. How did (you) travel? (IF BY CAR): Did you drive?	<input type="checkbox"/> SUBURBAN RAILROAD <input type="checkbox"/> RAPID TRANSIT <input type="checkbox"/> BUS <input type="checkbox"/> AUTO DRIVER <input type="checkbox"/> TAXI <input type="checkbox"/> AUTO PASSENGER <input type="checkbox"/> OTHER <input type="checkbox"/> WALK TO WORK	<input type="checkbox"/> SUBURBAN RAILROAD <input type="checkbox"/> RAPID TRANSIT <input type="checkbox"/> BUS <input type="checkbox"/> AUTO DRIVER <input type="checkbox"/> TAXI <input type="checkbox"/> AUTO PASSENGER <input type="checkbox"/> OTHER <input type="checkbox"/> WALK TO WORK

INTERVIEWER: (REPEAT QUESTIONS 102-106 FOR EACH TRIP. INCLUDE TRIPS BY ANY  
FAMILY MEMBER AGED 5 AND OVER.)

WHO IS THIS TRIP FOR? (ENTER EACH PERSON BY RELATIONSHIP TO HEAD)	Family Member _____ Trip Number _____	Family Member _____ Trip Number _____
102. Where did (you) begin (your) trip (your next trip)?	<input type="checkbox"/> WORK (PRIORITY)-(GO TO Q.104) <input type="checkbox"/> HOME - (GO TO Q.104) <input type="checkbox"/> FRIEND'S OR RELATIVE'S HOUSE <input type="checkbox"/> STORE, RESTAURANT, BANK <input type="checkbox"/> DOCTOR'S OFFICE, HOSPITAL <input type="checkbox"/> SCHOOL <input type="checkbox"/> OTHER	<input type="checkbox"/> WORK (PRIORITY)-(GO TO Q.104) <input type="checkbox"/> HOME - (GO TO Q.104) <input type="checkbox"/> FRIEND'S OR RELATIVE'S HOUSE <input type="checkbox"/> STORE, RESTAURANT, BANK <input type="checkbox"/> DOCTOR'S OFFICE, HOSPITAL <input type="checkbox"/> SCHOOL <input type="checkbox"/> OTHER
103. (INT'R: FILL IN, ASK IF NECESSARY) Why were (you) at (the place where this trip began)?	<input type="checkbox"/> WORK <input type="checkbox"/> SHOPPING <input type="checkbox"/> OTHER <input type="checkbox"/> PERSONAL BUSINESS; MEDICAL OR DENTAL <input type="checkbox"/> ATTEND SCHOOL <input type="checkbox"/> EAT MEAL <input type="checkbox"/> SOCIAL OR RECREATIONAL <input type="checkbox"/> TO TAKE SOMEONE SOMEWHERE (SERVE A PASSENGER) <input type="checkbox"/> TO CHANGE MODE OF TRAVEL	<input type="checkbox"/> WORK <input type="checkbox"/> SHOPPING <input type="checkbox"/> OTHER <input type="checkbox"/> PERSONAL BUSINESS; MEDICAL OR DENTAL <input type="checkbox"/> ATTEND SCHOOL <input type="checkbox"/> EAT MEAL <input type="checkbox"/> SOCIAL OR RECREATIONAL <input type="checkbox"/> TO TAKE SOMEONE SOMEWHERE (SERVE A PASSENGER) <input type="checkbox"/> TO CHANGE MODE OF TRAVEL
104. What was the purpose of this trip?	<input type="checkbox"/> TO GO HOME - (GO TO Q.106) <input type="checkbox"/> GET TO WORK - (GO TO Q.106) <input type="checkbox"/> SHOPPING <input type="checkbox"/> OTHER <input type="checkbox"/> PERSONAL BUSINESS; MEDICAL OR DENTAL <input type="checkbox"/> ATTEND SCHOOL <input type="checkbox"/> EAT MEAL <input type="checkbox"/> SOCIAL OR RECREATIONAL <input type="checkbox"/> TO TAKE SOMEONE SOMEWHERE (SERVE A PASSENGER) <input type="checkbox"/> TO CHANGE MODE OF TRAVEL	<input type="checkbox"/> TO GO HOME - (GO TO Q.106) <input type="checkbox"/> GET TO WORK - (GO TO Q.106) <input type="checkbox"/> SHOPPING <input type="checkbox"/> OTHER <input type="checkbox"/> PERSONAL BUSINESS; MEDICAL OR DENTAL <input type="checkbox"/> ATTEND SCHOOL <input type="checkbox"/> EAT MEAL <input type="checkbox"/> SOCIAL OR RECREATIONAL <input type="checkbox"/> TO TAKE SOMEONE SOMEWHERE (SERVE A PASSENGER) <input type="checkbox"/> TO CHANGE MODE OF TRAVEL
105. Where did (you) go?	<input type="checkbox"/> HOME <input type="checkbox"/> SCHOOL <input type="checkbox"/> OTHER <input type="checkbox"/> FRIEND'S OR RELATIVE'S HOUSE <input type="checkbox"/> STORE, RESTAURANT, BANK <input type="checkbox"/> DOCTOR'S OFFICE, HOSPITAL	<input type="checkbox"/> HOME <input type="checkbox"/> SCHOOL <input type="checkbox"/> OTHER <input type="checkbox"/> FRIEND'S OR RELATIVE'S HOUSE <input type="checkbox"/> STORE, RESTAURANT, BANK <input type="checkbox"/> DOCTOR'S OFFICE, HOSPITAL
106. How did (you) travel? (IF BY CAR): Did you drive?	<input type="checkbox"/> SUBURBAN RAILROAD <input type="checkbox"/> RAPID TRANSIT <input type="checkbox"/> BUS <input type="checkbox"/> AUTO DRIVER <input type="checkbox"/> TAXI <input type="checkbox"/> AUTO PASSENGER <input type="checkbox"/> OTHER <input type="checkbox"/> WALK TO WORK	<input type="checkbox"/> SUBURBAN RAILROAD <input type="checkbox"/> RAPID TRANSIT <input type="checkbox"/> BUS <input type="checkbox"/> AUTO DRIVER <input type="checkbox"/> TAXI <input type="checkbox"/> AUTO PASSENGER <input type="checkbox"/> OTHER <input type="checkbox"/> WALK TO WORK

INTERVIEWER: (REPEAT QUESTIONS 102-106 FOR EACH TRIP. INCLUDE TRIPS BY ANY FAMILY MEMBER AGED 5 AND OVER.)

Family Member _____	Family Member _____	Family Member _____
Trip Number _____	Trip Number _____	Trip Number _____
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INTERVIEWER: (REPEAT QUESTIONS 102-106 FOR EACH TRIP. INCLUDE TRIPS BY ANY FAMILY MEMBER AGED 5 AND OVER.)

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107. (HAND CARD 3 TO RESPONDENT) Now I have a question about something else. Here is a list of spare time activities. Which of the things on this list do you and other members of your family really like to do?

INTERVIEWER: CHECK AS MANY AS APPLY

- a. Going for a drive in a car..... ☐
- b. Gardening or working in the yard..... ☐
- c. Cooking out in the yard at home..... ☐
- d. Going on picnics away from home..... ☐
- e. Fishing..... ☐
- f. Hunting..... ☐
- g. Golf..... ☐
- h. Going to plays or concerts..... ☐
- i. Workshop hobbies..... ☐
- j. Watching television..... ☐

108. Some people like the idea of the excitement of living close to the center of things in a big city, where something is always going on, but others don't like all the hustle and bustle. How do you feel about this?

\_\_\_\_\_

\_\_\_\_\_

108a. Why is that? \_\_\_\_\_

\_\_\_\_\_

109. Where did you live most of the time while you were growing up, in the country, in a small town, in a suburb, or in a city?

☐ COUNTRY      ☐ SMALL TOWN      ☐ SUBURB      ☐ CITY

110. (HAND CARD 4 TO RESPONDENT) Please tell me the letter of the group on this card that indicates how much income you and your family will receive during the calendar year, 1965. I mean before taxes.

- A. ☐ UNDER \$2000    D. ☐ \$4000-4999    G. ☐ \$7500-9999  
 B. ☐ \$2000-2999    E. ☐ \$5000-5999    H. ☐ \$10,000-14,999  
 C. ☐ \$3000-3999    F. ☐ \$6000-7499    I. ☐ \$15,000 OR MORE

110a. Does that include the income of everyone in the family?

☐ YES

☐ NO (CHECK CORRECT BOX ABOVE TO INCLUDE TOTAL  
FAMILY INCOME)

	HEAD
111. How many grades of school did (HEAD) finish?  (IF MORE THAN 8)	<input type="checkbox"/> 8 OR LESS <input type="checkbox"/> 9-11 <input type="checkbox"/> 12
111a. Has (HEAD) had any other schooling?	<input type="checkbox"/> YES <input type="checkbox"/> NO ↓
(IF YES)  111b. What other schooling has (HEAD) had?	  <hr/> (COLLEGE, SECRETARIAL, BUSINESS, ETC.)
(IF ANY COLLEGE)  111c. Does (HEAD) have a college degree?	<input type="checkbox"/> YES <input type="checkbox"/> NO

## (BY OBSERVATION)

112. Race: ☐ WHITE ☐ NEGRO ☐ OTHER \_\_\_\_\_

113. Sex of respondent: ☐ MALE ☐ FEMALE

114. Neighborhood: Look at 3 structures on each side of DU but not more than 100 yards or so in both directions and check as many boxes as apply, below:

- ☐ VACANT LAND ONLY
- ☐ DETACHED SINGLE FAMILY HOUSE
- ☐ 2 FAMILY HOUSE, 2 UNITS SIDE-BY-SIDE
- ☐ 2 FAMILY HOUSE, 2 UNITS ONE ABOVE THE OTHER
- ☐ DETACHED 3-4 FAMILY HOUSE
- ☐ ROW HOUSE (3 or more units in an attached row)
- ☐ APARTMENT HOUSE (5 or more units, 3 stories or less)
- ☐ APARTMENT HOUSE (5 or more units, 4 stories or more)
- ☐ APARTMENT IN A PARTLY COMMERCIAL STRUCTURE
- ☐ WHOLLY COMMERCIAL OR INDUSTRIAL STRUCTURE
- ☐ OTHER (specify) \_\_\_\_\_

FURTHER OBSERVATIONS: \_\_\_\_\_

\_\_\_\_\_

115. Enter names of two streets at intersection nearest R's home, and the name of city or town whose Post Office serves this address:

\_\_\_\_\_  
(STREETS AT NEAREST INTERSECTION)

\_\_\_\_\_  
(CITY OR TOWN)

Thumbnail Sketch

+

$$\begin{array}{r} 48 \\ 46 \\ \hline 94 \end{array}$$

With my calculator