Region 2
UNIVERSITY TRANSPORTATION RESEARCH CENTER

Final Report

Understanding Residential Location Decision in the New York Region – A Data Collection Effort

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June 17, 2010

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TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.

4. Title and Subtitle
Understanding Residential Location Decision in the New York Region- A Data Collection Effort

5. Report Date
June 17, 2010

6. Performing Organization Code

7. Author(s)
Cynthia Chen-University of Washington, Haiyun Lin-City College of New York, Hongmian Gong-Hunter College, CUNY

8. Performing Organization Report No.
49777-29-19

9. Performing Organization Name and Address

The City College of New York
160 Convent Avenue
New York, NY 10031

Hunter College, CCNY
695 Park Avenue
New York, NY 10065

10. Work Unit No.

11. Contract or Grant No.

12. Sponsoring Agency Name and Address

University Transportation Research Center
City College of New York
New York, NY 10031

13. Type of Report and Period Covered
Final Report
12/31/07- 12/31/09

14. Sponsoring Agency Code

15. Supplementary Notes

16. Abstract

Literature in residential location analysis is voluminous and profound and much has been learned. We now understand that there are three main categories of factors affecting our residential location choices: housing attributes (eg, housing size), neighborhood attributes (eg, school quality, the amount of open space that is available), and accessibility attributes (eg, access to various opportunities).

This project is a follow-up pursuit of the 2009 study by Chen et al. In the 2009 study, prior location experience is examined by a single point, which is the most recent prior location. This treatment is quite simplistic—it essentially ignores the entire life course prior to that prior location. It is hoped that a more complete life course perspective is to be taken in the current study.

The purpose of this project is to collect data to answer two questions:
1. How do people's prior residential location experiences influence their current residential preferences?
2. How do people search in space for a residential location?

To answer the first question, we collected information on households' socio-demographic characteristics and their prior residential experiences. The former includes current and prior homeownership, household size and type, household income, as well as respondents' age, gender, ethnicity, immigrant status (place of birth). As for the latter, we inquired the locations where the respondent lived the longest, the second longest, and the third longest, as well as the most recent prior location, in addition to their current location. For each prior location, we collected information on its geographical location, respondents' subjective level of satisfaction toward various dimensions (eg, housing space, school quality, accessibility to various opportunities), respondents' perceived level of crowdedness, and the building height of the location. Household size and type (child-bearing vs. not child-bearing) associate lifecycle with the type of neighborhood and housing people want to live in.
To understand how people search, we collected information on the motivations of a housing search, the various information sources used in the search, the number of neighborhoods and houses or apartments that were seriously considered, the level of agreement and compromise within couples, the reasons why a previously examined neighborhood is rejected, and difference between a rejected neighborhood and the chosen one. For every household who wants to relocate, there is a reason behind it, for example, job relocation, wanting a larger housing space, wanting to move closer to friends and relatives, and etc.
In this final report, we will present the descriptive analysis results of the variables we collected. It is worthy to note that these results are not conclusive and shall not be treated as the final answers to the two questions raised. Rather, these results provide us with some preliminary answers to the two questions. The PI of this project is currently leading a team to analyze the collected dataset and more rigorous analyses are being conducted to provide more conclusive answers to the two questions raised above.

17. Key Words	18. Distribution Statement
Residential Location, Survey, Accessibility, Housing Attributes, Household, Socio-demographic.	

19. Security Classif (of this report)	20. Security Classif. (of this page)	21. No of Pages	22. Price
Unclassified	Unclassified	44	

Form DOT F 1700.7 (8-69)

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Funding from UTRC is greatly appreciated.

Abstract

This project is a follow-up study by Chen et al. (2009). In the 2009 study, prior location experience was examined using a single prior location, which is the most recent prior location. This treatment is quite simplistic—it essentially ignores the entire life course prior to that prior location. It is hoped that a more complete life course perspective is to be taken in the current study.

In this study, we report primarily a data collection effort designed to answer two questions:

1. How do people's prior residential location experiences influence their later location choices in life?
2. Do prior locations have a role in people's search space?

To answer the above two questions, we collected data on 269 households who relocated to one of the four counties in the New York Metropolitan Region: Manhattan, Queens, Nassau, and Suffolk during the 2007-2009 period. The mail-out survey contains four parts of questions: prior location history, current location, search history, and socio-demographics.

Descriptive results from the dataset collected suggest that prior location experiences play an important in people's later location choices as well as their search space. These preliminary results provide empirical evidence for our life course perspective. In the future, more detailed analyses on location choice and residential search will be conducted.

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1. Introduction

Literature in residential location analysis is voluminous and profound. Much insight has been learned. We now understand that three main categories of factors affect our residential location choices: housing attributes (e.g., housing size), neighborhood attributes (e.g., school quality, the amount of open space that is available), and accessibility attributes (e.g., access to various opportunities). Our household and personal characteristics modify the weights we associate with each of these factors in residential location choices, such that a single person may value access to work opportunities higher than a couple with school-age children who value neighborhoods with good school quality more than access to work opportunities.

There is both theoretical (Anderson and Milson 1989) and empirical evidence (Green 1997, ÆRØ 2006, Chen et al. 2009) suggesting that human beings are adaptive- we are constantly modifying our preferences based on what have been experienced before. In the residential location context, Chen et al. (2009) identified the historical deposition effect in residential relocation choices. More specifically, they found that what was experienced in the prior location plays an important role in modifying people's preferences in their current residential location choices—a prior experience of a negative attribute such as long commute will make one become more tolerant toward that attribute, whereas a prior experience of a positive attribute (for example open space) will make one become more acquisitive of that attribute in future location choices.

This project is a follow-up pursuit of the 2009 study by Chen et al. In the 2009 study, prior location experience is examined by a single point, which is the most recent prior location. This treatment does not fully reflect the entire life course prior to that prior location. It is hoped that a more complete life course perspective is to be taken in the current study. A complete account of people's entire life courses is impossible within the small budget of the current study. Instead, we selected three or four points as the main anchor points in people's prior location histories and they are: the locations they lived in the longest, the second longest, the third longest, and the most recent prior location. These locations are identified based on a number of hypotheses:

- The most recent location is important, as demonstrated by Chen et al. (2009)[1],
- The locations where people spend the longest time are important because the long duration can potentially cast a strong influence,
- The locations where people spend the longest time are potentially the locations during their growth years when they were living with their parents. These locations are most likely not locations of their own choice, but their parents'. Thus, these locations provide us with an opportunity to study the historical deposition effect while filtering out the residential self-selection effect.

A related interest is how people search in space for their residential locations. Most of the existing empirical residential location studies assume the entire universe (usually the regional study area) as the choice set for every household in the region. This usually accounts for hundreds to even thousands of feasible locations. In reality, people on average search between 3 and 5 neighborhoods. A number of empirical studies in housing research confirm this observation. A critical question is how this limited choice set of 3 to 5 neighborhoods is selected out of a universe of hundreds to thousands of alternatives. It is the purpose of this study to provide some preliminary answers to this question.

[1] We acknowledge the importance of demographic variables (e.g., family events) in residential location choices. However, they are not the focus of this study.

To summarize, the purpose of this project is to collect data to answer two questions:

1. how do people's prior residential location experiences influence their current residential preferences?
2. how do people search in space for a residential location?

In this final report, we present the descriptive analysis results of the variables we collected. The results presented in this report provide us with some preliminary answers to the two questions. The PI of this project is currently leading a team to analyze the collected dataset and more rigorous analyses are being conducted to provide more conclusive answers to the two questions raised above.

The rest of the report is organized as follows. Section 2 provides a brief overview of the motivation behind the various kinds of the data collected through this project. Section 3 describes our target population, sampling procedure, and the final sample size. Section 4 presents descriptive analysis results on subjects' socio-demographic attributes. Information on the variables collected to answer the two questions is presented in Sections 5 and 6. The conclusion follows in Section 7.

2. Motivation behind the Information We Collected

To answer the first question, we collected information on households' socio-demographic characteristics and their prior residential experiences. The former includes current and prior homeownership, household size and type, household income, as well as respondents' age, gender, ethnicity, immigrant status (place of birth). As for the latter, we inquired about the locations where the respondent lived the longest, the second longest, and the third longest, as well as the most recent prior location, in addition to their current location. For each prior location, we collected information on its geographical location, respondents' subjective level of satisfaction toward various dimensions (e.g., housing space, school quality, accessibility to various opportunities), respondents' perceived level of crowdedness, and the building height of the location.

Household size and type (child-bearing vs. not child-bearing) associates lifecycle with the type of neighborhood and housing people want to live in. For example, a newly married couple may decide to relocate to a neighborhood that is completely different from their current location. On the other hand, a young couple who just had a baby may just want to find a bigger home in their current neighborhood. Homeownership and household income play an important role as well because the financial resource one has directly constrains the amount of housing opportunities one is able to access to and where these opportunities are located. It is possible that a child-bearing household wants to own a home in neighborhoods with good school quality but cannot afford them and thus choose to rent in their current neighborhood and wait for the opportunity to buy.

For each prior location, we asked respondents their subjective level of satisfaction toward a variety of factors, including housing attributes (housing space, variety of housing types), neighborhood attributes (school quality, open space, safety, visual attractiveness of area), and accessibility attributes (proximity to families/friends, commute time, access to public transit, access to shops, access to culture activities).

Respondents' current preference toward an attribute may be modified by his/her exposure to that attribute. For instance, one who previously lived in an area with satisfying open space may get used to the great amount of open space and thus develop a high expectation on open space when searching for the next location. In an opposite situation, one who has been exposed to long commute time may get used to it and thus become more tolerant to a longer commute when looking for future residential locations. Perceived level of crowdedness and the building height serve as proxy variables for neighborhood population density. Also, the perceived level of crowdedness tells us about a respondent's subjective assessment of population density. One individual who perceives a prior neighborhood as being very crowded may want to choose a location that is less crowded, while another individual who had lived in the same neighborhood before may perceive the same level of density as fine and thus happily stay in the same place.

To understand how people search, we collected information on the motivations of a housing search, the various information sources used in the search, the number of neighborhoods and houses or apartments that were seriously considered, the level of agreement and compromise within couples, the reasons why a previously examined neighborhood is rejected, and difference between a rejected neighborhood and the chosen one. For every household who wants to relocate, there is a reason behind it, for example, family events (marriage, divorce, or the birth of a child), job relocation, wanting a larger housing space, wanting to move closer to friends and relatives, and etc. Various information sources are used to facilitate a search, including real estate agents, newspaper ads, internet, and social networks etc. When a search involves more than one adult, there can be negotiations between spouses or partners, because they may not totally agree with each other on every aspect of a housing search. All these factors shape the search space that leads to a relocation in the end.

3. Survey Design

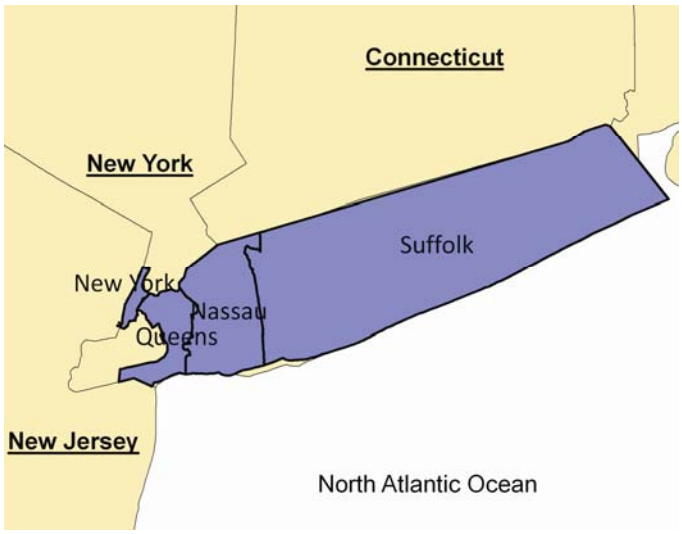
3.1. Questionnaire Design

The questionnaire contains four sections. In Section 1, respondents are asked about their prior residential location experiences. A total of three prior locations are inquired and they are the locations that the respondent lived in the longest, the second longest, and the third longest. For each location, its address was obtained, along with other information, including the duration of the stay, the level of satisfaction while living there, the level of crowdedness, the building height and the mode used most frequently during the stay. In Section 2, the respondents are asked about their current location and their most recent prior location. The addresses of both locations are obtained, along with other information, for example, the primary reason of the move, the information source used, the number of homes searched before settling on the current home, the perceived level of crowdedness and building height for the current neighborhood, and the level of satisfaction perceived by each partner. Section 3 focuses on the search process, in which respondents are asked to list up to three other neighborhoods they seriously considered before deciding upon the current neighborhood. For each neighborhood, they are asked how they heard about the neighborhood, the period of the time they seriously considered, how different this neighborhood is from their current chosen neighborhood, and why this neighborhood was later dropped from consideration. In the last Section (Section 4), respondents' socio-demographic information was obtained, including age, gender, education levels, employment status, access to vehicles, immigrant status, personality, and weekly time use patterns. In addition, we obtain information on each partner's commute, including mode of transportation and commute time.

3.2. Survey Procedure

The target population consists of all recent movers in four counties in the New York Metropolitan Region: Manhattan, Queens, Nassau, and Suffolk. Figure 1 shows these four counties (shaded and outlined by a black boundary) in the New York Metropolitan Area. These four counties are selected because spatially, they form an imaginary line from Manhattan with increasing distance; Manhattan has over 2 million jobs and is the most concentrated employment center in the region. Three rounds of survey recruitment were carried out.

Figure 1 Targeted Counties in Survey—New York, Queens, Nassau, and Suffolk
(the four counties are shaded and outlined by a black boundary)



Round 1

We purchased the new movers' database containing the name of the household head and the household address from AccuData Integrated Marketing (http://www.accudata.com) for households who relocated to the study region from July 2007 to July 2008. We applied three criteria in selecting our target population: income, marital status and number of children. The existing coding for the first two variables are presented in Tables 1 and 2. For our target population, we selected households with a marital status of either married (extremely likely) or married (likely[2]), income of $50,000 or greater (Categories E-L in Table 2), and at least one child. After we applied these criteria, the total number of households who satisfy our criteria is 7,521.

Table 1 Marital Status Coding in Purchased Database

Marital Status Coding	Marital Status
1M	Married (Extremely Likely)
5M	Married (Likely)
5S	Single (Likely)
1U,5U,0U,0S,0M,[NULL]	Unknown

Data Source: http://www.accudata.com.

[2] This "likely" category includes those who are not spouses but partners living together.

Table 2 Household Income Coding in Purchased Database

Estimated Household Income	Income Range
A	$ 1,000-$ 14,999
B	$ 15,000-$ 24,999
C	$ 25,000-$ 34,999
D	$ 35,000-$ 49,999
E	$ 50,000-$ 74,999
F	$ 75,000-$ 99,999
G	$100,000-$124,999
H	$125,000-$149,999
I	$150,000-$174,999
J	$175,000-$199,999
K	$200,000-$249,999
L	$250,000+
U,[NULL]	Unknown

Data Source: http://www.accudata.com.

In addition to the income, marital status, and the number of children, the database also provided three additional variables: the distance of the move, dwelling type, and dwelling change indicator. The existing coding for these three additional variables is shown in Tables 3 to 5.

Table 3 Distance of Move Coding in Purchased Database

Move Distance Coding	Move Distance
L	Local (1 - 50 Miles)
R	Regional (51 - 150 Miles)
D	Distant (Greater than 150 Miles)
U,[NULL]	Unknown

Data Source: http://www.accudata.com.

Table 4 Dwelling Type Coding in Purchased Database

Dwelling Type Coding	Dwelling Type
S	Single family
A	Multi-Family dwelling unit
M	Marginal Multi-Family dwelling unit
P	PO Box

Data Source: http://www.accudata.com.

Table 5 Dwelling Type Change Indicator Coding in Purchased Database

Dwelling Change Indicator	Dwelling Change Type
0,[NULL]	Unknown
1	Single Family to Single Family
2	Multi Family to Single Family
3	Single Family to Multi Family
4	Multi Family to Multi Family

Data Source: http://www.accudata.com.

A hard copy of the questionnaire was mailed to each of the 7,521 households, together with a letter of invitation to participate in the survey, a consent form asking the respondent to sign if he/she agrees to participate in the survey, and a postage-paid business reply envelope to be used to return the completed questionnaire to us. We followed up with an additional mailing of the questionnaire and a round of postcard reminder. About 10% of the 7,521 records were wrong. A total of 188 completed questionnaires were returned to us, with a response rate of 2.8%, accounting for incorrect addresses.

Round 2 and Round 3

In rounds 2 and 3, we purchased a database from another company (http://www.experian.com) to identify those households who are owners, married, household heads' age of 55 or less, and a home purchased at $250,000 or more. The household income variable was not available and that is the reason why we controlled the purchase amount to be more than $250,000. The various purchase amount categories are shown in Table 6. The available marital status categories are Single (S), Married (M), and Unknown (U) and we selected those with a status of "Married". Additional variables that come with the dataset include: Mortgage Loan Type (FHA, Conventional, and VA), Mortgage Rate Type (Fixed and Variable), and Mortgage Sale Type (New and Resale). Using these criteria, there are 2,032 new homeowners in the second round and 1,313 households in the third round. The corresponding moving times for these two rounds are: from May 2008 to November 2008 and from December 2008 to March 2009. After removing the duplicate records between those in round 1 and round 2, the final sample sizes for round 2 and round 3 are 2003 and 1313 households accordingly.

In rounds 2 and 3, we used web-based surveys (http://www.hostedsurvey.com). Each household in our database identified through the above-described procedure was mailed a letter of invitation, followed by a postcard reminder. If a respondent decides to participate in the survey, he/she logs into a website, upon which, he/she will be asked to sign a consent form. Only a consent form is signed can a participant proceed with the survey. Each participant who completed a survey in rounds 2 and 3 was provided with a $5 gift card. A total of 99 households returned their surveys in rounds 2 and 3, resulting in a 3% response rate.

A total of 287 surveys were resulted from the three rounds of the survey. We removed 18 records, because they either recorded no residential relocation or there were too much missing information. Therefore, the total sample size of the final dataset is 269 households.

Table 6 Housing Purchase Amount Coding in Purchased Database

Purchase Amount	Purchase Amount Ranges
A	$ 1,000 - $ 9,999
B	$ 10,000 - $ 24,999
C	$ 25,000 - $ 39,999
D	$ 40,000 - $ 59,999
E	$ 60,000 - $ 79,999
F	$ 80,000 - $ 99,999
G	$100,000 - $119,999
H	$120,000 - $139,999
I	$140,000 - $159,999
J	$160,000 - $199,999
K	$200,000 - $249,999
L	$250,000 - $349,999
M	$350,000 - $449,999
N	$450,000 - $749,999
O	$750,000 - $999,999
P	$1,000,000 +
U,[NULL]	Unknown

Data Source: http://www.experian.com.

4. Description of the Scoio-economic and Demographic Characteristics (SES)

Tables 7-17 show information on a range of socio-economic and demographic characteristics (SES). Table 7 shows the distribution of owners and renters in the sample. About 78% of the households are owners and the rest are renters. For buyers, 42% of them are prior owners and for renters, 30% of them are prior owners (Table 8). Even though we controlled to only select married couples or partners living together, the final database still has single adult households. The majority of the respondents (85%) are couples, with or without children (Table 9). In Table 10, we examine the number of household members for buyers' group and renters' group. Almost half of the buyers' households have children and only 42% of the renters' households have children. The average household size for buyers' group is 2.9 while the number for the renters' group is 2.63.

In the first round of our survey, we are able to obtain information on household income. Table 11 displays the income distribution for the two groups. The distributions between buyers and renters are quite similar. For the second and the third round of our survey, we are able to obtain information on the amount of money used to purchase the home. The corresponding distribution is shown in Table 12. The lowest category "250,000-$349,999" has the fewest number of households—7 in this case. The gender distribution of the subjects who responded to our surveys is shown in Table 13. About 60% of the respondents are male and the rest are females. The age distribution of the survey respondents by gender and by homeownership is shown in Table 14. The mean age for all groups is about 41 years old. Table 15 shows the ethnicity distribution of our survey respondents by gender and by homeownership. White is the predominant majority in our sample; this is even more the case for the buyers sample. The level of education by gender and by homeownership is shown in Table 16. The majority of our subjects have college and above degrees. In fact, the dominant group is the ones with graduate degrees. Less than one third of the sample subjects are foreign-born (Table 17). This is true for both buyers and renters.

Table 7 Homeownership Distribution of Survey Respondents

Homeownership	Number of Households	Percent of Respondents
Owner Occupied	209	77.7
Renter Occupied	60	22.3
Total	269	100.0

Table 8 Prior Homeownership Distribution by Current Homeownership of Survey Respondents

Prior Homeownership	Owner		Renter		Total	
	Freq	%	Freq	%	Freq	%
Prior Owner	85	42.5	18	30.0	103	39.6
Prior Renter	115	57.5	42	70.0	157	60.4
Total	200	100.0	60	100.0	260	100.0
Missing	9		0		9	
Grand Total	209		60		269	

Table 9 Household Type Distribution of Survey Respondents

Household Type	Number of Households	Percent of Respondents
Single Adult Lived Alone	25	9.4
Single Adult With Children	2	0.8
Couples Without Children	113	42.3
Couples With Children	116	43.4
Other*	11	4.1
Total	267	100.0
Missing	2	
Grand Total	269	

*: Other are cases that at least two adults (with or without children) are reported living together, however no partner/spouse related questions are answered.

Table 10 Household Type and Average Household Size

	Owner	Renter
Num. of Households	208	57
Num. of child-bearing Households	102	24
% of child-bearing Households	49.0	42.1
Household Size	Owner	Renter
N	208	57
Mean	2.90	2.63
Std. Dev.	1.38	1.22
Min	1	1
Max	7	6
Missing	1	3
Grand Total	209	60

Table 11 Estimated Household Income Distribution of Survey Respondents by Homeownership

Estimated Household Income	Owner		Renter		Total	
	Freq	%	Freq	%	Freq	%
$ 50,000- 74,999	25	21.4	16	26.7	41	23.2
$ 75,000- 99,999	33	28.2	13	21.7	46	26.0
$100,000-124,999	13	11.1	3	5.0	16	9.0
$125,000-149,999	7	6.0	5	8.3	12	6.8
$150,000-174,999	18	15.4	9	15.0	27	15.2
$175,000-199,999	0	0.0	1	1.6	1	0.6
$200,000-249,999	6	5.1	4	6.7	10	5.6
$250,000+	15	12.8	9	15.0	24	13.6
Total Num. Available*	117	100.0	60	100.0	177	100.0

Data Source: http://www.accudata.com.
*: Estimated income is only available for first branch targets. Respondents recruited on second or third rounds do not have this information.

Table 12 Purchase Amount Distribution of Survey Respondents by Homeownership

Purchase Amount Ranges	Number of Households	Percent of Respondents
$250,000 - $349,999	7	7.6
$350,000 - $449,999	21	22.8
$450,000 - $749,999	34	36.9
$750,000 - $999,999	11	12.0
$1,000,000 +	19	20.7
Total Num. Available*	92	100.0

Data Source: http://www.experian.com.
*: Purchase amount is only available for second and third branch targets. Respondents recruited on first branch do not have this information.

Table 13 Gender Split of Survey Respondents

Gender	Number of Respondents	Percent of Respondents
Male	161	59.9
Female	108	40.1
Total	269	100.0

Table 14 Age Distribution of Survey Respondents by Gender and by Homeownership

Age	Male		Female		Owner		Renter		All Respondents	
Mean	42.5		41.2		42.1		41.6		42.0	
Std. Dev.	11.1		12.2		11.6		11.4		11.6	
Min	20		19		19		23		19	
Max	79		78		79		78		79	
Age Category	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
18 to 21 yrs	2	1.3	1	0.9	3	1.4	0	0.0	3	1.1
22 to 24 yrs	1	0.6	4	3.7	3	1.4	2	3.3	5	1.9
25 to 29 yrs	13	8.1	15	13.9	21	10.1	7	11.7	28	10.5
30 to 34 yrs	27	16.9	18	16.7	36	17.3	9	15.0	45	16.8
35 to 39 yrs	28	17.5	16	14.8	36	17.3	8	13.3	44	16.4
40 to 44 yrs	23	14.4	13	12.0	25	12.0	11	18.3	36	13.4
45 to 49 yrs	29	18.1	14	13.0	33	15.9	10	16.7	43	16.0
50 to 54 yrs	20	12.5	15	13.9	28	13.5	7	11.7	35	13.1
55 yrs +	17	10.6	12	11.1	23	11.1	6	10.0	29	10.8
Total	160	100.0	108	100.0	208	100.0	60	100.0	268	100.0
Missing	1		0		1		0		1	
Grand Total	161		108		209		60		269	

Table 15 Ethnicity Distribution of Survey Respondents by Gender and by Homeownership

Ethnicity Category	Male		Female		Owner		Renter		All Respondents	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
White	116	72.0	71	65.7	151	72.6	35	58.3	186	69.4
Black	9	5.6	10	9.3	15	7.2	4	6.7	19	7.1
Hispanic	13	8.1	7	6.5	8	3.9	12	20.0	20	7.5
Asian	20	12.4	16	14.8	29	13.9	7	11.7	36	13.4
Native American	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Other	3	1.9	4	3.7	5	2.4	2	3.3	7	2.6
Total	161	100.0	108	100.0	208	100.0	60	100.0	268	100.0
Missing	0		0		1		0		1	
Grand Total	161		108		209		60		269	

Table 16 Level of Education of Survey Respondents by Gender and by Homeownership

Education Level	Male		Female		Buyer		Renter		All Respondents	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
some grade school or high school	3	1.9	2	1.9	5	2.4	0	0.0	5	1.9
high school diploma	11	6.8	7	6.5	8	3.8	10	16.7	18	6.7
some college or technical school	30	18.6	14	13.0	31	14.8	13	21.7	44	16.4
4-year college/technical school degree	39	24.2	31	28.7	59	28.2	11	18.3	70	26.1
some graduate school	7	4.3	6	5.6	7	3.3	6	10.0	13	4.9
completed graduate degree(s)	69	42.9	48	44.4	97	46.4	20	33.3	117	43.7
Total	159	100.0	108	100.0	207	100.0	60	100.0	267	100.0
Missing	2		0		2		0		2	
Grand Total	161		108		209		60		269	

Table 17 Place of Birth of Survey Respondents by Homeownership

Place of Birth	Buyer		Renter		Total	
	Freq	%	Freq	%	Freq	%
Native Born (USA)	153	73.2	45	75.0	198	73.6
Foreign Born	56	26.8	15	25.0	71	26.4
Total	209	100.0	60	100.0	269	100.0

5. Prior Residential Location Histories

Tables 18-26 show information related to prior housing locations. As mentioned earlier in Sections 2 and 3, we asked subjects to identify three prior locations, in addition to the most recent prior location and these three locations are those ones where they lived the longest, the second longest, and the third longest. Not all subjects reported three locations. Table 18 describes the distribution of those households reporting 0, 1, 2, and 3 locations where they spent the most time in their lives. The majority of them reported three locations (77% for buyers and 83% for renters). Table 19 provides descriptive statistics in terms of mean, minimum, maximum, and standard deviation for the number of years spent at the three locations where the subjects spent the most, the second most, and the third most time. Over 16 years on average were spent at the location with the longest stay, followed by 7.8 years for buyers and 6.7 years for renters, and 4.5 years for buyers and 3.8 years for renters. Most of our subjects, buyers and renters, have their prior locations in the state of New York and over 91% of them are in the U.S. (Table 20). For each prior location, we asked subjects their perceived level of satisfaction toward various attribute during the time they lived at the location.

Table 21 shows the percentage of the times that a subject rated a particular attribute “satisfied”, “neutral”, “not satisfied” “did not care”. Overall, “satisfied” was chosen more frequently than the

other three categories and “school quality”, “access to cultural activities”, and variety of housing types” were rated less satisfied than other attributes. Table 22 presents the frequency distribution of the number of times a prior location is rated “very crowded”, “crowded”, “neutral”, “some people around”, and “very few people” for each of the three prior locations where subjects spent the most time. About 40% of the times, a location is rated as neutral, followed by “crowded” and “some people around”. Similarly, building height for a prior location is most likely “2 story”, followed by “3-6 story”, and “1 story” buildings (Table 23). Over 98% of the most recent prior locations are in the U.S. In total, over 80% of the most recent prior locations are in the state of New York. For perceived level of crowdedness (Table 25) and building height (Table 26), the results for the most recent prior location are similar to those for those prior locations where subjects spent the most time—for perceived level of crowdedness, “some people around” to “crowded” are the majority; for building height, “2-6 story” buildings dominate.

Table 18 Number of Prior Locations Reported by Survey Respondents (as where They Lived the Longest, Second Longest, and Third Longest)

Reported Num. of Long Duration Locations*	Owner		Renter		Total	
	Freq	%	Freq	%	Freq	%
0	8	3.8	1	1.7	9	3.3
1	11	5.3	2	3.3	13	4.8
2	30	14.4	7	11.7	37	13.8
3	160	76.5	50	83.3	210	78.1
Total	209	100.0	60	100.0	269	100.0

*:0- No longest duration locations is reported; 1- respondents reported the location where he/she lived longest; 2- respondents reported the location where he/she lived longest and second longest; 3- respondents reported locations where he/she lived longest, second longest, and third longest.

Table 19 Duration of Stay at the Three Prior Locations where Respondents Lived the Longest, Second Longest, and the Third Longest (in years)

Reported Duration & Years Away from Current of Stay by Ranking of Duration										
	Owner					Renter				
		Duration		Recency*			Duration		Recency*	
	N	Mean	Std. Dev.	Mean	Std. Dev.	N	Mean	Std. Dev.	Mean	Std. Dev.
Longest	201	16.1	7.2	13.9	11.2	59	16.4	8.3	15	12.6
2nd Longest	190	7.8	4.5	9.8	11.5	57	6.7	4.3	7.7	10.1
3rd Longest	160	4.5	2.9	10.6	11.4	50	3.8	2.9	8.9	11.8
Total Reported Duration of All Prior Locations (comparing to Respondents' Age)										
	Owner					Renter				
	N	Mean	Std. Dev.	Min	Max	N	Mean	Std. Dev.	Min	Max
Age	208	42.1	11.6	21	79	60	41.6	11.4	23	78
Total Reported Durations	207	27.8	11.3	4	61.9	59	27.5	13.0	2.5	69.5
Grand Total	209					60				

*: Recency is defined as the number of years away from current when ended stay at a prior location.

Table 20 Geographical Distribution of the Three Prior Locations where Survey Respondents Lived the Longest, 2nd Longest, and 3rd Longest

Prior Location: Country and State	Owner		Renter		Total	
	Freq	%	Freq	%	Freq	%
USA*	505	91.7	154	92.8	659	91.9
NY	356	64.6	99	59.7	455	63.5
NJ	24	4.4	7	4.2	31	4.3
CA	17	3.1	3	1.8	20	2.8
PA	13	2.4	5	3.0	18	2.5
MI	11	2.0	4	2.4	15	2.1
Other State	84	15.2	36	21.7	120	16.7
Other Country	46	8.3	12	7.2	58	8.1
Total Num. of Locations	551	100.0	166	100.0	717	100.0

*: The five states listed alone are those who have highest frequencies. All other states are reported together.

Table 21 Level of Satisfaction on Various Attributes at the Three Prior Locations where Respondents lived the Longest, 2nd Longest, and 3rd Longest

Level of Satisfaction During Stay	Satisfied		Neutral		Not Satisfied		Don't Care		Missing
	Freq	%	Freq	%	Freq	%	Freq	%	Freq
Housing Space	460	65.0	114	16.1	110	15.5	24	3.4	9
School Quality	290	41.3	85	12.1	48	6.8	280	39.8	14
Open Space	420	59.6	134	19.0	118	16.7	33	4.7	12
Proximity to Friends/families	455	64.3	150	21.2	75	10.6	28	4.0	9
Commute Time	408	58.0	121	17.2	97	13.8	78	11.1	13
Access to Public Transit	376	53.3	104	14.7	123	17.4	103	14.6	11
Access to Shop	482	68.1	117	16.5	74	10.5	35	4.9	9
Access to Cultural Activities	333	47.2	184	26.1	109	15.4	80	11.3	11
Safety	481	67.8	141	19.9	67	9.4	20	2.8	8
Variety of Housing Types	341	48.4	205	29.1	56	7.9	103	14.6	12
Visual Attractiveness of Area	424	59.8	164	23.1	96	13.5	25	3.5	8

Table 22 Survey Respondents' Perceived Level of Crowdedness at the Three Prior Locations where they lived the Longest, 2nd Longest, and 3rd Longest

Level of Crowdedness	Owner		Renter		Total	
	Freq	%	Freq	%	Freq	%
very crowd	37	6.8	5	3.0	42	5.9
crowded	146	26.7	42	25.6	188	26.4
neutral	218	39.8	70	42.7	288	40.5
some people around	119	21.8	38	23.2	157	22.1
very few people	27	4.9	9	5.5	36	5.1
Total	547	100.0	164	100.0	711	100.0
Missing	4		2		6	
Grand Total	551		166		717	

Table 23 Building Heights at the Three Prior Locations where they lived the Longest, 2nd Longest, and 3rd Longest

Building Height	Owner		Renter		Total	
	Freq	%	Freq	%	Freq	%
1 story	82	15.0	32	19.4	114	16.0
2 stories	254	46.5	69	41.8	323	45.4
3- 6 stories	137	25.1	44	26.6	181	25.5
7-10 stories	18	3.3	10	6.1	28	4.0
> 10 stories	55	10.1	10	6.1	65	9.1
Total	546	100.0	165	100.0	711	100.0
Missing	5		1		6	
Grand Total	551		166		717	

Table 24 Geographical Distribution of Respondents' Most Recent Prior Locations

Prior Location: Country and State	Owner		Renter		Total	
	Freq	%	Freq	%	Freq	%
USA*	200	98.5	59	100	259	98.9
NY	174	85.7	40	67.8	214	81.7
FL	1	0.5	5	8.5	6	2.3
NJ	6	2.9	2	3.4	8	3.1
PA	3	1.5	3	5.1	6	2.3
other US state	16	7.9	9	15.2	25	9.5
Other Country	3	1.5	0	0.0	3	1.1
Total	203	100.0	59	100.0	262	100.0
Missing	6		1		7	
Grand Total	209		60		269	

*: The four states listed alone are those who have highest frequencies. All other states are reported together.

Table 25 Respondents' Perceived Level of Crowdedness at their Most Recent Prior Locations

Level of Crowdedness	Owner		Renter		Total	
	Freq	%	Freq	%	Freq	%
very crowd	17	8.4	8	13.6	25	9.6
crowded	61	30.2	25	42.4	86	32.9
neutral	75	37.1	16	27.1	91	34.9
some people around	43	21.3	9	15.2	52	19.9
very few people	6	3.0	1	1.7	7	2.7
Total	202	100.0	59	100.0	261	100.0
Missing	7		1		8	
Grand Total	209		60		269	

Table 26 Building Heights of Respondents' Most Recent Prior Locations

Building Height	Owner		Renter		Total	
	Freq	%	Freq	%	Freq	%
1 story	19	9.3	7	11.7	26	9.9
2 stories	83	40.7	20	33.3	103	39.0
3- 6 stories	44	21.6	21	35.0	65	24.6
7-10 stories	18	8.8	1	1.7	19	7.2
> 10 stories	40	19.6	11	18.3	51	19.3
Total	204	100.0	60	100.0	264	100.0
Missing	5		0		5	
Grand Total	209		60		269	

6. Households' Residential Search Experiences

Tables 27-37 present information on households' residential search experiences. Searching for a primary residence is the main reason for both buyers and renters (Table 27). Relocating for housing-related, job/school-related, and family reasons are the primary ones for buyers and renters (Table 28). For renters, 16.7% of them moved due to involuntary reasons (e.g., lease expired). Both buyers and renters used a variety of information sources to find potential housing opportunities.

Table 29 shows the number of times an information source was checked in one's search. Among the various sources, TV and newspaper advertisements are the least popular. The average number of months for the search process is 7 months for buyers and 2 months for renters; on average, buyers examined between 2 and 10 houses/apartments and renters looked at fewer numbers of opportunities (Table 30).

In the survey, we also asked whether spouses/partners agreed with each other in envisioning their ideal future home and most (buyers and renters) indicated that they mostly agree with each other (Table 31). Consequently, most indicated that they both got what they wanted in moving to their current home (Table 32).

Table 33 shows the number of times a particular attribute was rated “satisfied”, “neutral”, “not satisfied”, and “don’t care” for males and females. The distributions between two agree with each other mostly. Compared to the level of satisfaction when they first moved in, over 90% find that their level of satisfaction has either improved or stayed about the same (Table 34). The information presented in Table 35 is striking—it shows that about 40% of the buyers and renters did not look anywhere else other than their currently chosen neighborhood and another 36% looked into one additional neighborhood. In comparing those neighborhoods that are rejected and the chosen one, most find them different from the current one. The various reasons for rejecting those neighborhoods (Table 37) include: “price not right” (about 45%), “no suitable house” (about 30%), “too far from work” (18%), and “do not like the neighborhood” (12%).

Table 27 Purposes of a Housing Search: Primary Residence vs. Not a Primary Residence

	Buyer		Renter		Total	
Search Purpose	Freq	%	Freq	%	Freq	%
Primary residence	160	94.1	43	100.0	203	95.3
Not primary residence*	10	5.9	0	0.0	10	4.7
Total	170	100.0	43	100.0	213	100.0
Missing**	39		17		56	
Percent Missing	18.7		28.3		20.8	
Grand Total	209		60		269	

*: The 10 non primary residence cases here include: looking for a secondary home (closer to work, to live with mom, in good school district, etc.) or getting divorce/separation. **: Missing value is relatively high because we didn’t include this question in round 1. We mailed a second letter to everyone who responded in round 1 and asked them to answer this question. 132 subjects of 188 answered it.

Table 28 Primary Reasons of Move of Survey Respondents: Owner vs. Renter

	Owner		Renter		Total	
Primary Moving Reason*	Freq	%	Freq	%	Freq	%
family reasons	38	16.9	13	20.6	51	17.7
housing-related reasons	65	28.9	14	22.2	79	27.4
job/school related reasons	28	12.5	14	22.2	42	14.6
quality of surrounding environment	32	14.2	7	11.1	39	13.6
proximity to relatives/friends	12	5.3	1	1.6	13	4.5
other reasons	47	20.9	4	6.4	51	17.7
involuntary reasons	3	1.3	10	15.9	13	4.5
Total Reported Reasons	225	100.0	63	100.0	288	100.0
Avg. Num. of Reasons Reported per respondent	1.10		1.05		1.09	
Total Num. of Respondents	204		60		264	
Missing	5		0		5	
Grand Total Num. of Respondents	209		60		269	

*: Respondents are allowed to report multiple reasons.

Table 29 Number of Times an Information Source Was Used in the Search Process by Homeownership

	Owner		Renter		Total	
Information Source*	Freq	%	Freq	%	Freq	%
relatives	28	8.0	13	15.7	41	9.4
friends	57	16.3	15	18.0	72	16.6
TV	2	0.6	0	0.0	2	0.5
newspapers	18	5.1	1	1.2	19	4.4
internet searches	47	13.4	11	13.3	58	13.4
colleagues	22	6.3	3	3.6	25	5.8
lived there before	50	14.3	14	16.9	64	14.8
visited there before	66	18.8	12	14.5	78	18.0
advertised flyers/broker	45	12.9	9	10.8	54	12.5
others	15	4.3	5	6.0	20	4.6
Total Num. of Reported Information Source	350	100.0	83	100.0	433	100.0
Avg. Num. of Sources Used per respondent	1.72		1.38		1.64	
Total Num. of Respondent	204		60		264	
Missing	5		0		5	
Grand Total Num. of Respondent	209		60		269	

*: Respondents are allowed to report multiple information sources used.

Table 30 Amount of Search Effort: Months Spent and Number of Homes Examined

Number of Months Searched	Owner	Renter
N	203	60
Mean	7.1	2.1
Std. Dev.	8.1	2.2
Min	1	1
Max	48	12
Missing	6	0

Number of Homes Looked at During Search				
	Owner		Renter	
Number of Homes Looked	Freq	%	Freq	%
only 1	19	9.4	12	20.0
2-10	103	51.2	42	70.0
11-30	54	26.9	4	6.7
31-50	10	5.0	2	3.3
> 50	15	7.5	0	0.0
Total	201	100.0	60	100.0
Missing	8		0	
Grand Total	209		60	

Table 31 Level of Agreement on an Ideal Home between Spouses/Partners by Homeownership

	Owner		Renter		Total	
Agree of Ideal Home	Freq	%	Freq	%	Freq	%
totally agree	53	28.5	11	25.0	64	27.8
mostly agree	107	57.5	25	56.8	132	57.4
half and half	23	12.4	7	15.9	30	13.0
mostly disagree	2	1.1	0	0.0	2	0.9
totally disagree	1	0.5	1	2.3	2	0.9
Total	186	100.0	44	100.0	230	100.0
Missing	23		16		39	
Grand Total	209		60		269	

Table 32 Level of Compromise on Current Home between Spouses/Partners by Homeownership

	Owner		Renter		Total	
Compromise	Freq	%	Freq	%	Freq	%
we both got what we want	113	61.1	15	33.3	128	55.7
husband compromise more	20	10.8	9	20	29	12.6
wife compromise more	23	12.4	12	26.7	35	15.2
we both compromise equally	22	11.9	2	4.4	24	10.4
other	7	3.8	7	15.6	14	6.1
Total	185	100.0	45	100.0	230	100.0
Missing	24		15		39	
Grand Total	209		60		269	

Table 33 Level of Satisfaction toward Various Factors of Current Home between Spouses/Partners (Owner and Renter together) by Gender

Male's Level of Satisfaction on Current Home									
Level of Satisfaction	Satisfied		Neutral		Not Satisfied		Don't Care		Missing
	Freq	%	Freq	%	Freq	%	Freq	%	Freq
Housing Space	169	69.3	43	17.6	31	12.7	1	0.4	25
School Quality	112	46.1	41	16.9	13	5.3	77	31.7	26
Open Space	145	59.9	56	23.1	40	16.5	1	0.4	27
Proximity to Friends/families	141	58.3	68	28.1	24	9.9	9	3.7	27
Commute Time	157	64.9	45	18.6	36	14.9	4	1.7	27
Access to Public Transit	175	72.3	43	17.8	17	7	7	2.9	27
Access to Shop	183	75.6	37	15.3	18	7.4	4	1.7	27
Access to Cultural Activities	152	63.1	52	21.6	20	8.3	17	7.1	28
Safety	178	73.6	47	19.4	16	6.6	1	0.4	27
Variety of Housing Types	130	53.7	72	29.8	17	7	23	9.5	27
Visual Attractiveness of Area	161	66.8	53	22	26	10.8	1	0.4	28
Female's Level of Satisfaction on Current Home									
Level of Satisfaction	Satisfied		Neutral		Not Satisfied		Don't Care		Missing
	Freq	%	Freq	%	Freq	%	Freq	%	Freq
Housing Space	180	73.5	35	14.3	30	12.2	0	0	24
School Quality	117	48.1	44	18.1	14	5.8	68	28	26
Open Space	150	61.5	57	23.4	35	14.3	2	0.8	25
Proximity to Friends/families	140	57.6	63	25.9	35	14.4	5	2.1	26
Commute Time	155	63.5	52	21.3	29	11.9	8	3.3	25
Access to Public Transit	173	70.9	45	18.4	18	7.4	8	3.3	25
Access to Shop	191	78	31	12.7	23	9.4	0	0	24
Access to Cultural Activities	156	63.7	62	25.3	17	6.9	10	4.1	24
Safety	177	72.2	53	21.6	15	6.1	0	0	24
Variety of Housing Types	137	56.4	72	29.6	18	7.4	16	6.6	26
Visual Attractiveness of Area	167	68.4	53	21.7	23	9.4	1	0.4	25

Table 34 Change in the Level of Satisfaction After Moved into the Current Home by Homeownership

Level of Satisfaction Change	Owner		Renter		Total	
	Freq	%	Freq	%	Freq	%
improved	90	44.1	22	36.7	112	42.4
been about the same	103	50.5	31	51.6	134	50.8
declined	11	5.4	7	11.7	18	6.8
Total	204	100.0	60	100.0	264	100.0
Missing	5		0		5	
Grand Total	209		60		269	

Table 35 Number of Other Neighborhoods Examined in addition to the Current One by Homeownership

Num. of Other Neighborhoods Examined	Owner		Renter		Total	
	Freq	%	Freq	%	Freq	%
None	79	38.0	30	50.8	109	40.8
One	77	37.0	20	33.9	97	36.3
Two	37	17.8	9	15.3	46	17.3
Three	15	7.2	0	0.0	15	5.6
Total	208	100.0	59	100.0	267	100.0
Missing	1		1		2	
Grand Total	209		60		269	

Table 36 Level of Differences between the Rejected Neighborhoods and the Current One by Homeownership

Level of Differences	Owner		Renter		Total	
	Freq	%	Freq	%	Freq	%
totally different	24	12.3	10	27.8	34	14.7
very different	44	22.5	6	16.7	50	21.6
somewhat different	60	30.8	12	33.3	72	31.2
a little different	54	27.7	7	19.4	61	26.4
not different at all	13	6.7	1	2.8	14	6.1
Total	195	100.0	36	100.0	231	100.0
Missing	1		2		3	
Grand Total Num. of Neighborhoods	196		28		234	

Table 37 Reasons for Rejecting Alternative Neighborhoods in addition to the Current One by Homeownership

	Owner		Renter		Total	
Reject Reason*	Freq	%	Freq	%	Freq	%
do not like the neighborhood	25	9.6	1	2.2	26	8.5
no suitable house	60	23.1	13	28.9	73	23.9
price is not right	92	35.4	15	33.3	107	35.1
too far from work	36	13.8	3	6.7	39	12.8
too far from relatives/friends	13	5.0	3	6.7	16	5.3
other	34	13.1	10	22.2	44	14.4
Total Num. of Rejected Reasons	260	100.0	45	100.0	305	100.0
Total Num. of Rejected Neighborhoods	196		38		234	

*: More than one rejecting reasons for one household are allowed.

7. Information on Commute Choices

Tables 38-43 provide us information on employment status and the mode of transportation for the commute trip. About 75% of our subjects are employed full time; 11% are self-employed and 3% are part time employed. Most (92%) worked outside of the home (Table 38). For both buyers and renters, the use of public transportation and car are the dominant modes of transportation (Table 39). There are a total number of 171 home owners and 50 renters who are commuters, defined as those who are employed and worked outside of home. Within these 171 buyers, 170 subjects reported their own commute times, 144 subjects reported spouse/partner's commute times as well. For renters, 23 subjects out of 50 reported their spouses/partners' commute times. The average commute time is about 35 minutes in the region (Table 40). About 75% of the subjects had access to an automobile (Table 41). While staying at the current home, the most frequent modes of transportation are car and public transit (Table 42). While staying at the prior locations, the most frequent mode of transportation was car, followed by public transit, and walk.

Table 38 Employment Status and Split of Commuters by Homeownership

	Owner		Renter		Total	
Employment Status	Freq	%	Freq	%	Freq	%
employed full time	156	75.0	42	70.0	198	73.9
employed part time	5	2.4	4	6.7	9	3.4
self-employed	24	11.5	5	8.3	29	10.8
unemployed	23	11.1	9	15.0	32	11.9
Total	208	100.0	60	100.0	268	100.0
Missing	1				1	
Grand Total	209		60		269	

	Owner		Renter		Total	
Commute Status	Freq	%	Freq	%	Freq	%
work at home	14	7.6	1	2.0	15	6.4
work outside home	171	92.4	50	98.0	221	93.6
Total Employed	185	100.0	51	100.0	236	100.0
Missing or N/A	24		9		33	
Grand Total	209		60		269	

Table 39 Share of Mode of Transportation for the Commute Trip by Homeownership

Mode Choice*	Owner		Renter		Total	
	Freq	%	Freq	%	Freq	%
car	82	46.6	21	38.2	103	44.6
motorcycle	1	0.6	0	0.0	1	0.4
Public transit	80	45.4	26	47.3	106	45.9
walked	12	6.8	6	10.9	18	7.8
bicycle	0	0.0	0	0.0	0	0.0
other	1	0.6	2	3.6	3	1.3
Total Num. of Reported Mode	176	100.0	55	100.0	231	100.0
Total Num. of Respondents	173**		51**		224	
Missing or N/A	36		9		45	
Grand Total Num. of Respondents	209		60		269	

*: Multiple modes for one person are allowed.

**: 2 buyers and 1 renters report that work at home but travel a lot for work. Their mode choices are included.

Table 40 Average Commute Times by Homeownership and by Gender of Survey Respondents

Commute Time	Owner					Renter				
(in minutes)	N	Mean	Std. Dev.	Min	Max	N	Mean	Std. Dev.	Min	Max
Respondent	170	37.34	25	2	135	50	35.18	26.15	5	150
Spouse/Partner	144	31.15	19.74	2	90	23	28.7	19.78	5	90
Commute Time by Gender										
	Buyer					Renter				
	N	Mean	Std. Dev.	Min	Max	N	Mean	Std. Dev.	Min	Max
Male Commute Time	165	35.85	22.38	2	105	39	31.97	22.11	5	90
Female Commute Time	149	33	23.48	2	135	34	34.47	27.02	5	150

Table 41 Access to Personal Automobile by Homeownership of Survey Respondents

Access to Personal Automobile	Owner		Renter		Total	
	Freq	%	Freq	%	Freq	%
Have access	156	75.4	40	66.7	196	73.4
Not have access	51	24.6	20	33.3	71	26.6
Total	207	100.0	60	100.0	267	100.0
Missing	2		0		2	
Grand Total	209		60		269	

Table 42 Most Frequently Used Mode of Transportation at Current Home by Homeownership

	Owner		Renter		Total	
Mode*	Freq	%	Freq	%	Freq	%
car	127	39.7	21	30.9	148	38.1
public transit	113	35.3	28	41.2	141	36.3
walk	71	22.2	17	25.0	88	22.7
bike	5	1.6	0	0.0	5	1.3
other	4	1.2	2	2.9	6	1.6
Total Num. of Reported Mode	320	100.0	68	100.0	388	100.0
Total Num. of Respondents	204		60		264	
Missing	5		0		5	
Grand Total Num. of Respondents	209		60		269	

*: Multiple modes for one person are allowed.

Table 43 Most Frequently Used Mode of Transportation at Prior Locations by Homeownership

	Owner		Renter		Total	
Mode*	Freq	%	Freq	%	Freq	%
car	279	50.6	97	55.4	376	51.8
public transit	127	23.1	41	23.4	168	23.1
walk	113	20.5	25	14.3	138	19.0
bike	27	4.9	9	5.2	36	5.0
other	5	0.9	3	1.7	8	1.1
Total Num. of Reported Mode	551	100.0	175	100.0	726	100.0
Num. of Reported Prior Locations	538		165		703	
Missing	13		1		14	
Grand Total Num. of Prior Locations	551		166		717	

*: Multiple modes for one person are allowed.

8. Patterns of Prior Locations

Our subjects' prior location scatter everywhere in the U.S. Figure 2 is a spatial distribution of all those prior locations that are in the U.S.

Figure 2 Spatial Distributions of Prior Locations in the U.S. (a total of 986 prior locations)

To study how past residential location experiences affect people's current residential preferences, we looked at how population density changed from prior locations to the current one. We identified a number of distinct patterns involving population density changes. For each pattern, a chart is created. Each pattern is characterized by the number of big and small jumps, (a big jump is defined as a population density change of greater than 45,000 persons/sq. mile),

as well as order of increases or decreases in population density. Charts 1-6 displays patterns involving big changes in density (big jumps) while charts 7-12 shows patterns involving small changes in density (small jumps).

9. Summary

This report has documented the results of a comprehensive residential relocation survey. The motivations behind this study are two hypotheses: 1) human beings are adaptive and our current preferences are constantly modified by the environment we are exposed to; and 2) in the residential search process, we are limited in our search space and our search is influenced by what we are exposed to previously.

The initial analyses presented in this final project report support the two hypotheses described above. It is our hope that further analysis on the collected dataset will provide us with behavioral insights on how people search and a more accurate residential relocation model that better depicts people's search and decision processes.

References

ÆRØ T, 2006, "Residential Choice from a Lifestyle Perspective" *Housing, Theory and Society* **23**(2) 109-130

Anderson J R, Milson R, 1989 "Human Memory: An Adaptive Perspective" *Psychological Review* **96** 703-719

Anderson J R, 1990 *The Adaptive Character of Thought* (Lawrence Erlbaum Associates, Hilldale, New Jersey)

Green A E, 1997 "A Question of Compromise? Case Study Evidence on the Location and Mobility Strategies of Dual Career Households" *Regional Studies* **31**(7) 641-657

Chart 1 Population Density Changes in Residential History-Type 1
(Large Decrease - Large Increase)

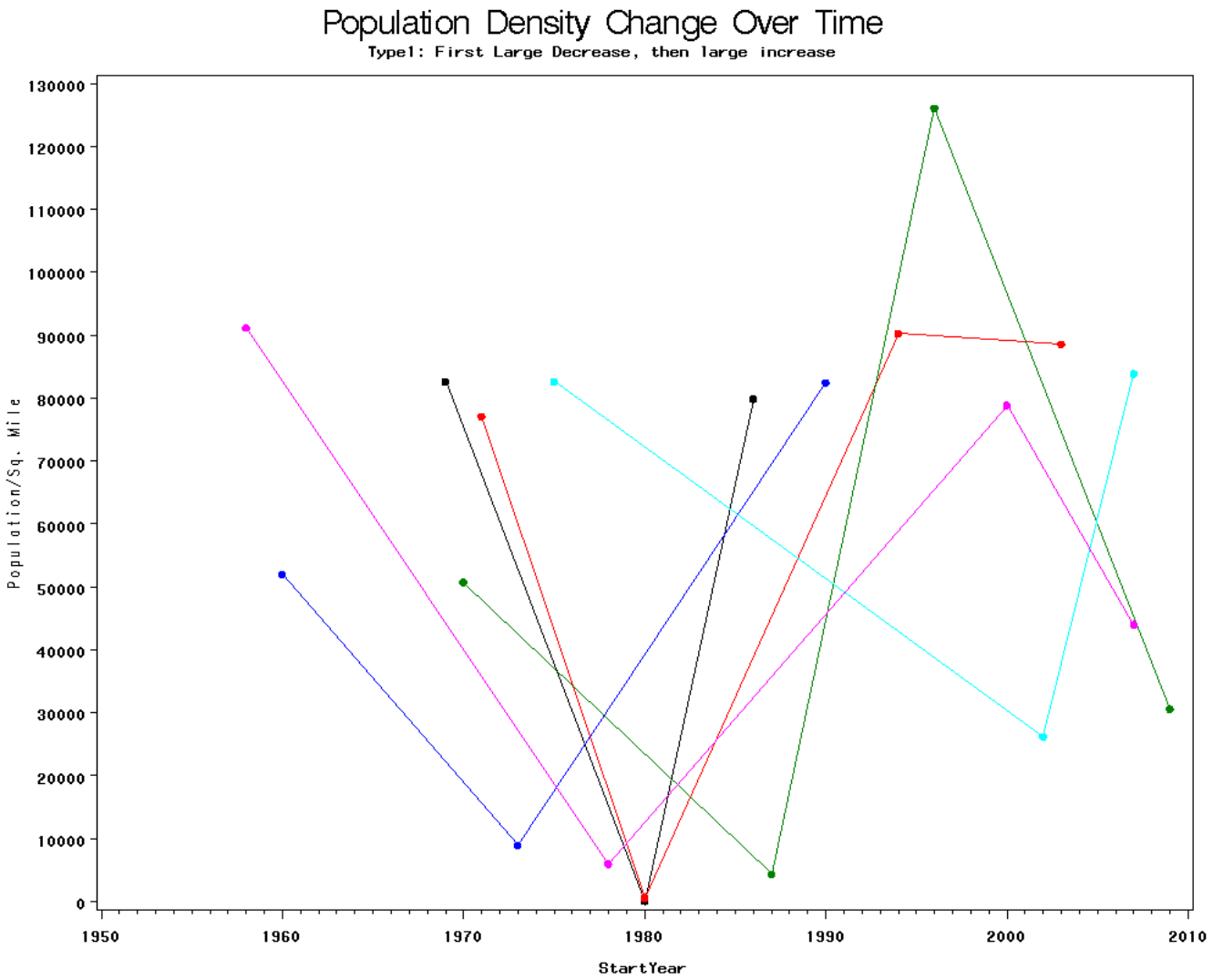


Chart 2 Population Density Changes in Residential History-Type 2
(Large Increase - Large Decrease)

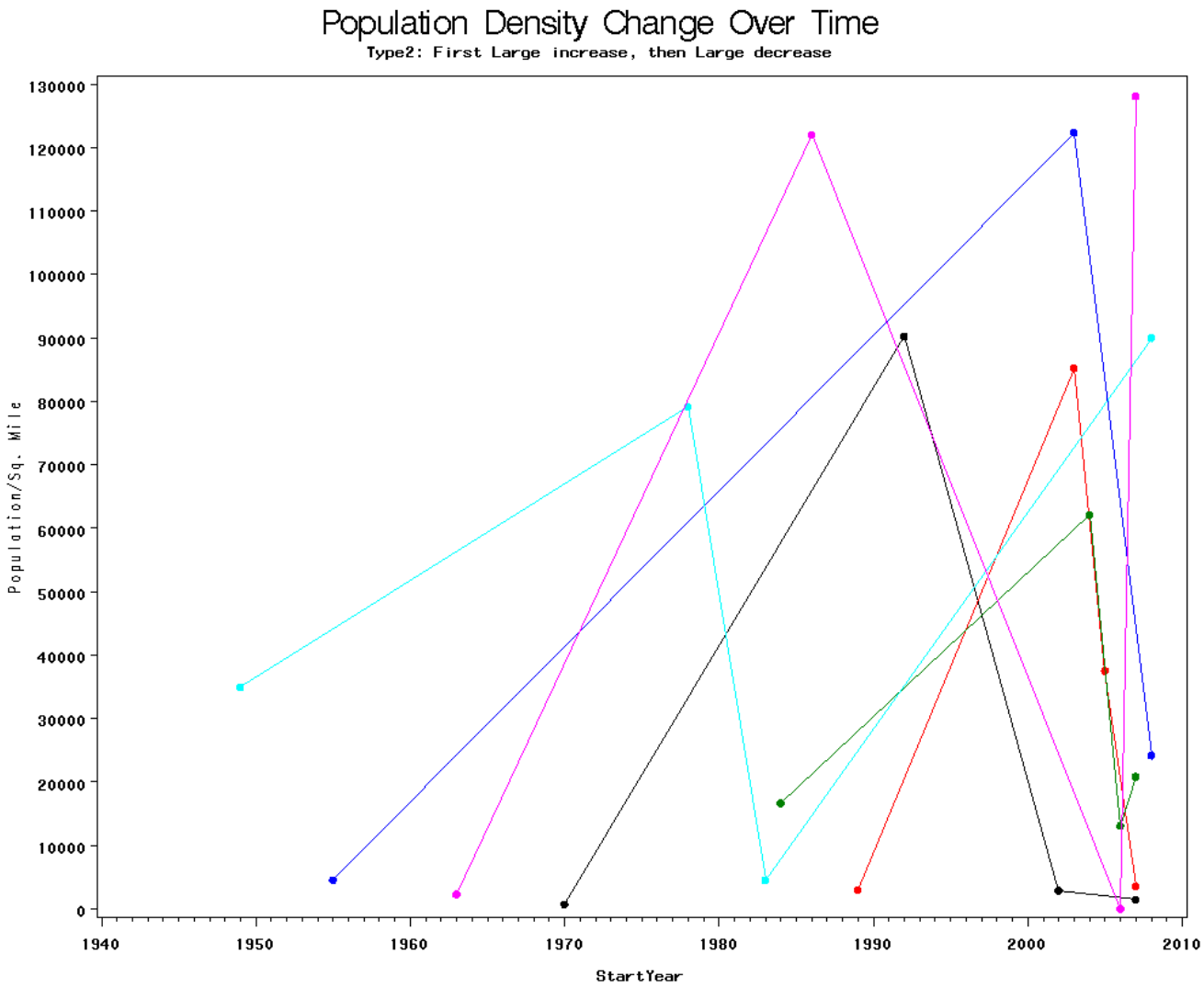


Chart 3 Population Density Changes in Residential History-Type 3
(Large Decrease – Small Jumps)

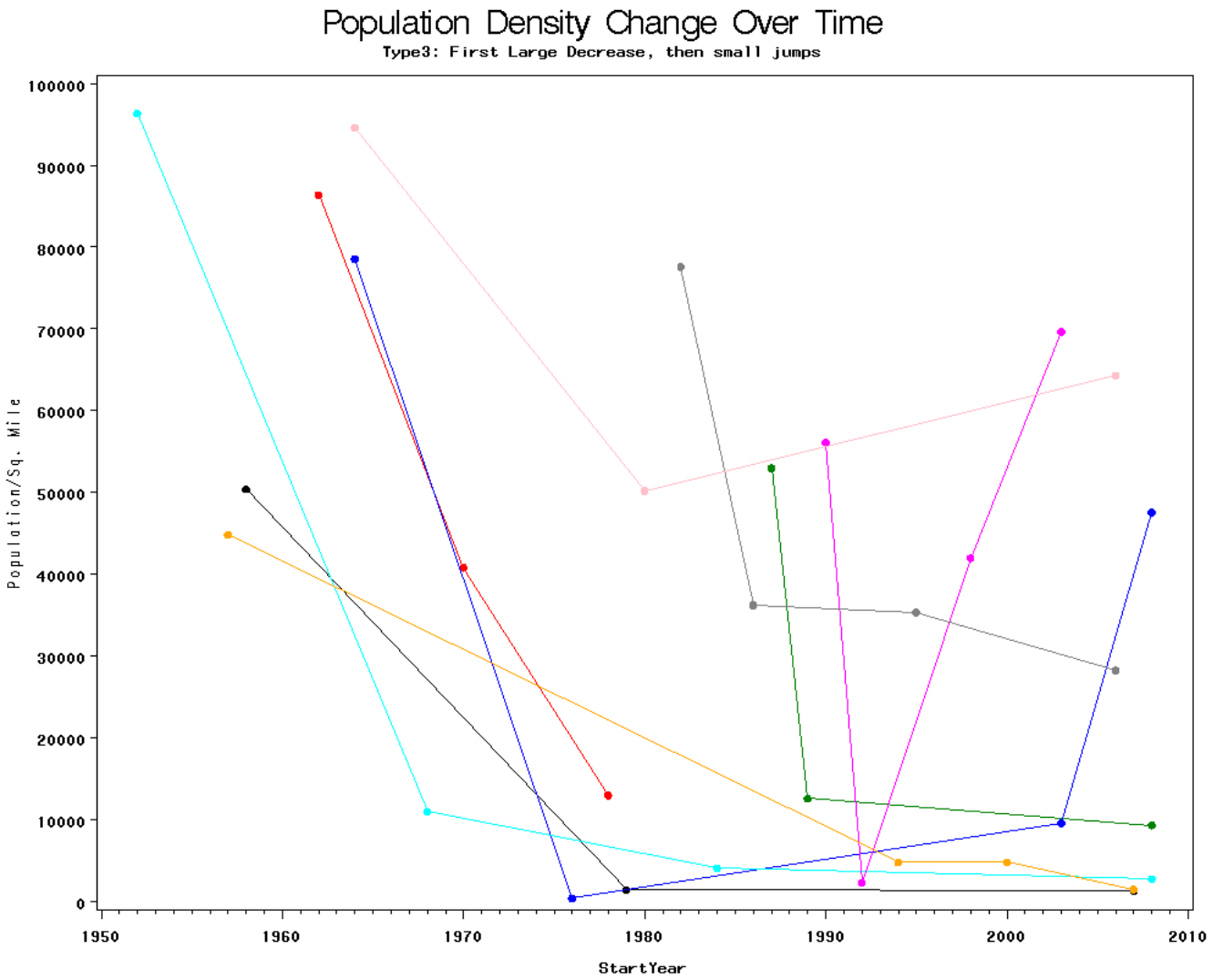


Chart 4 Population Density Changes in Residential History-Type 4
(Large Increase – Small Jumps)

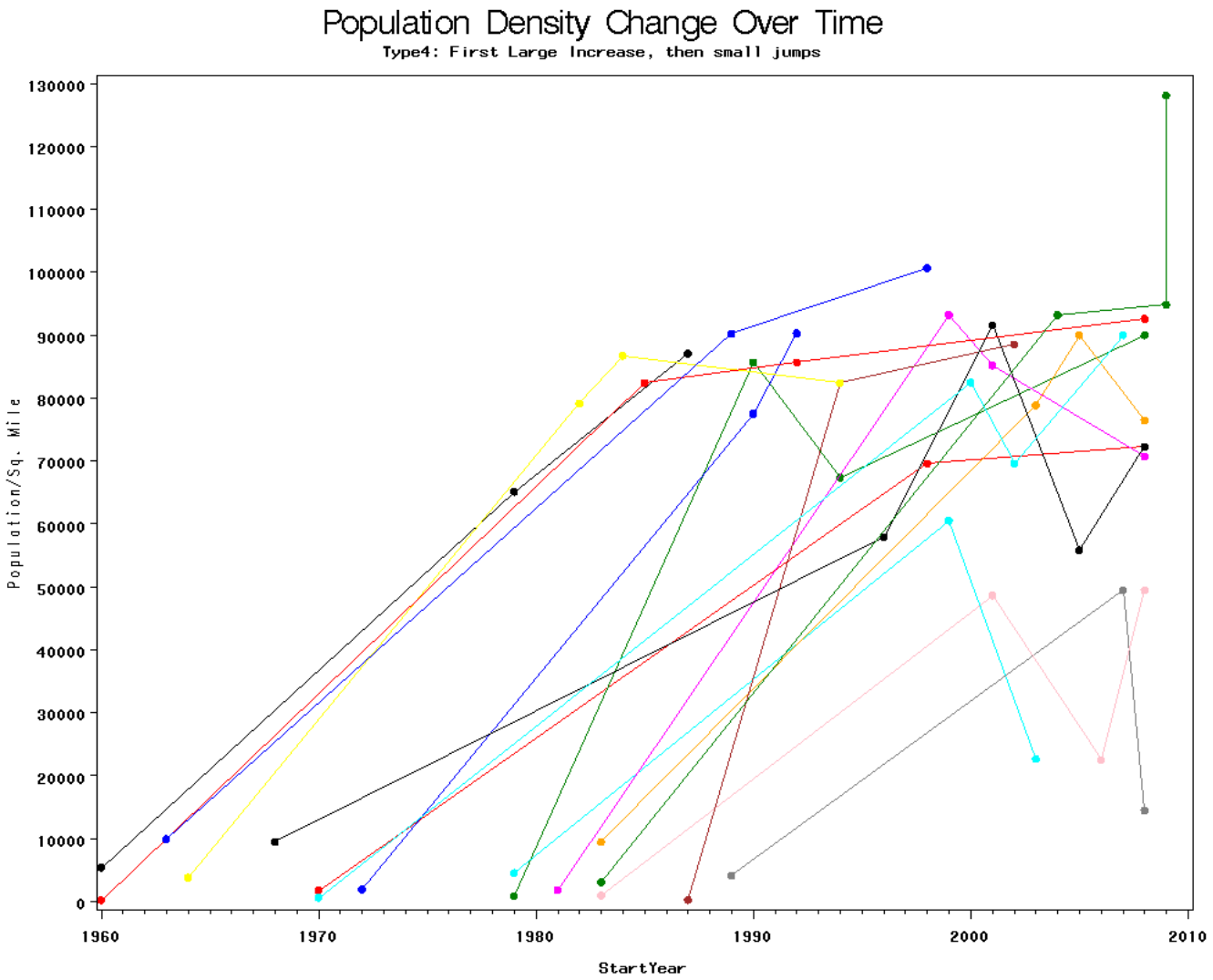


Chart 5 Population Density Changes in Residential History-Type 5
(Small Increase – Large Increase – Small Jumps)

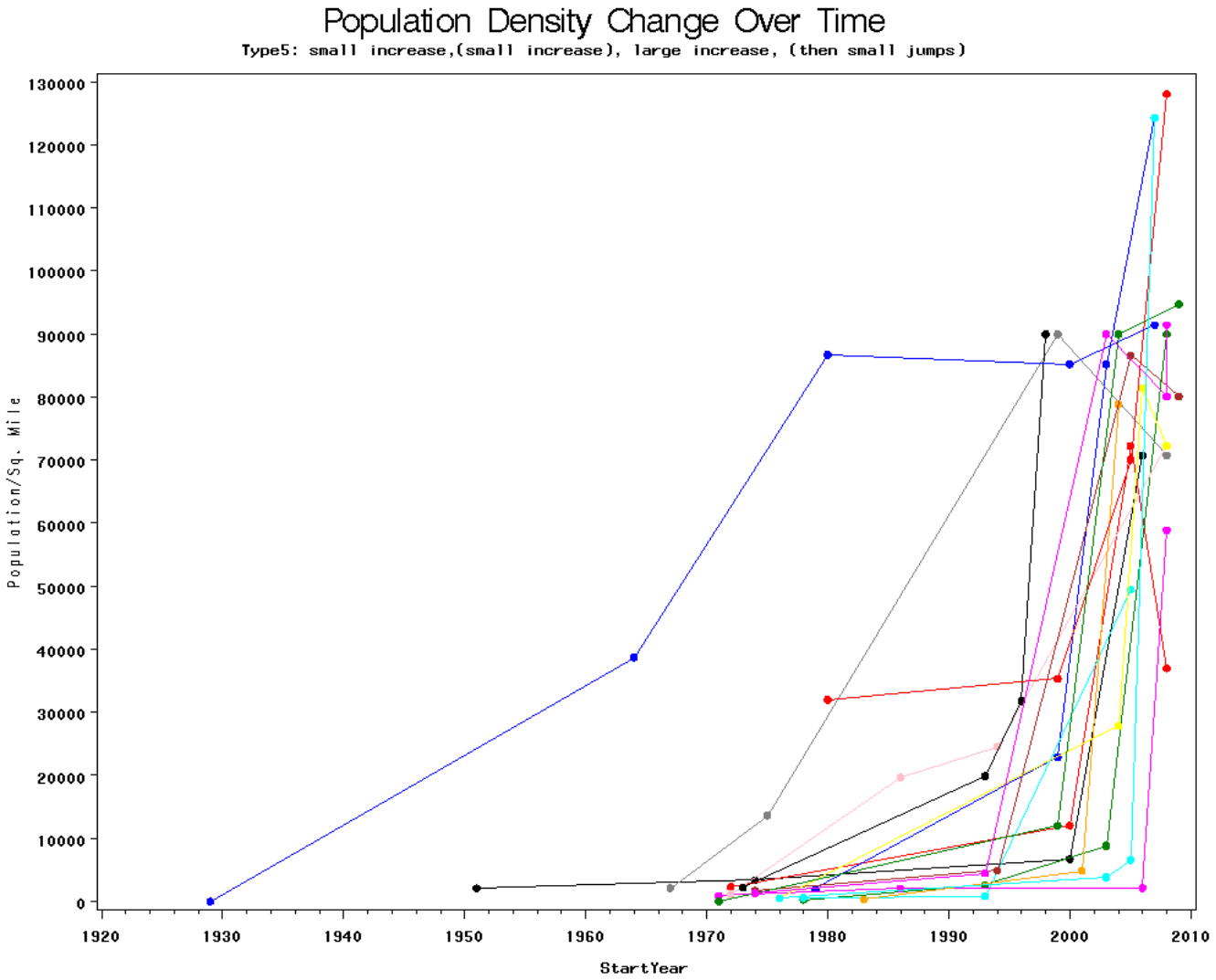


Chart 6 Population Density Changes in Residential History-Type 6
(Small Jumps – Large Increase - Large Decrease)

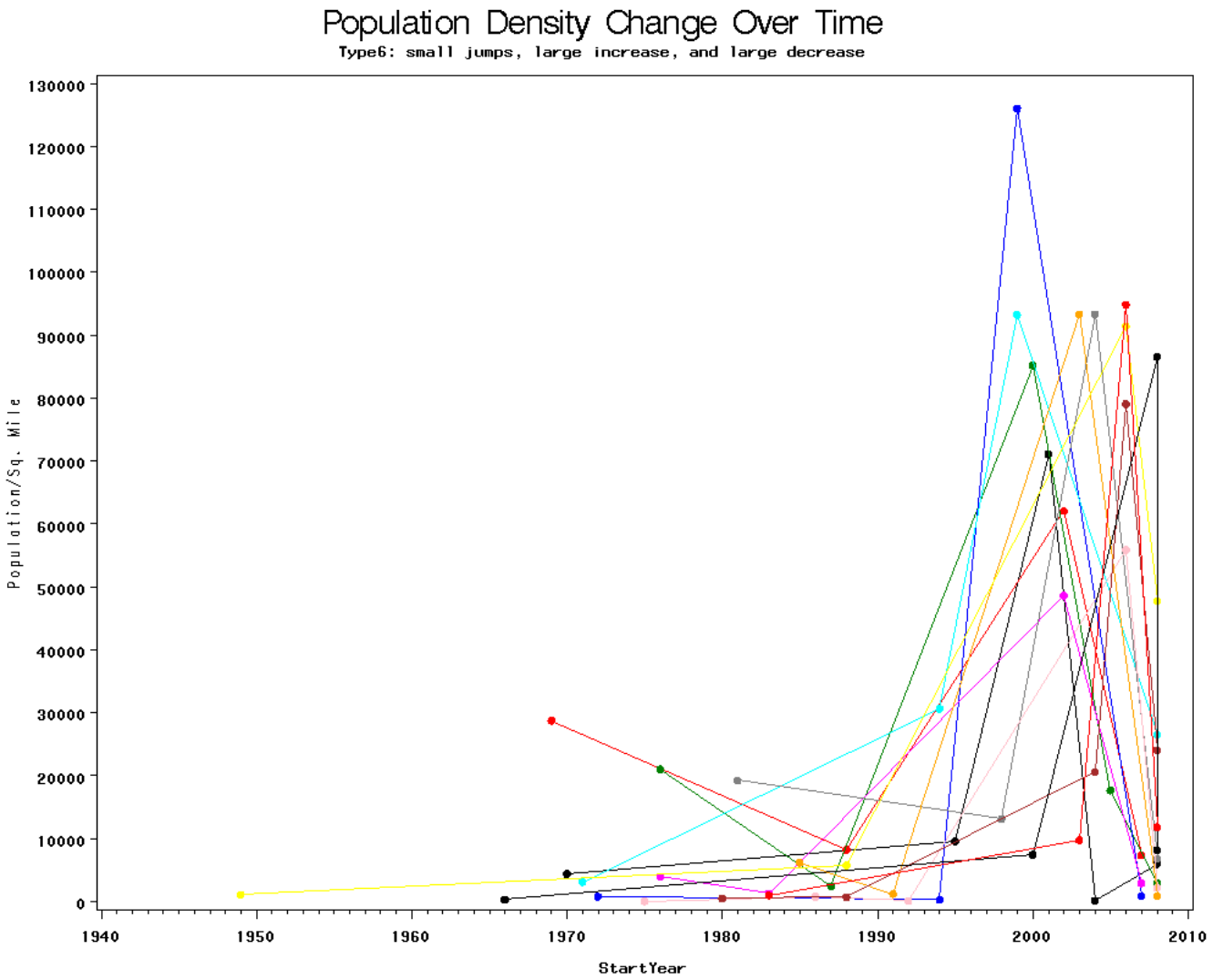


Chart 7 Population Density Changes in Residential History-Type 7
(Small Jumps, Always Decrease)

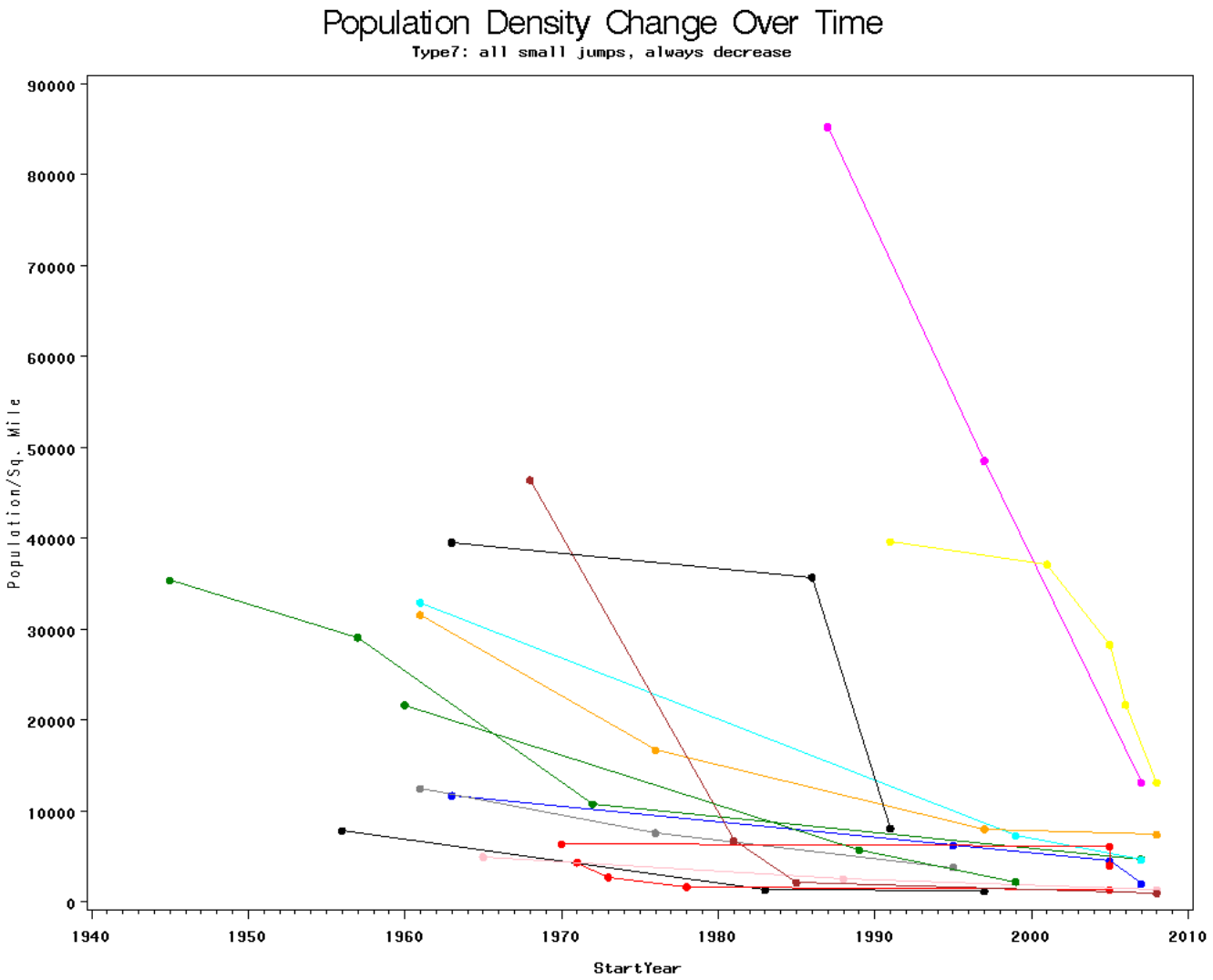


Chart 8 Population Density Changes in Residential History-Type 8

(Small Jumps, always Increase)

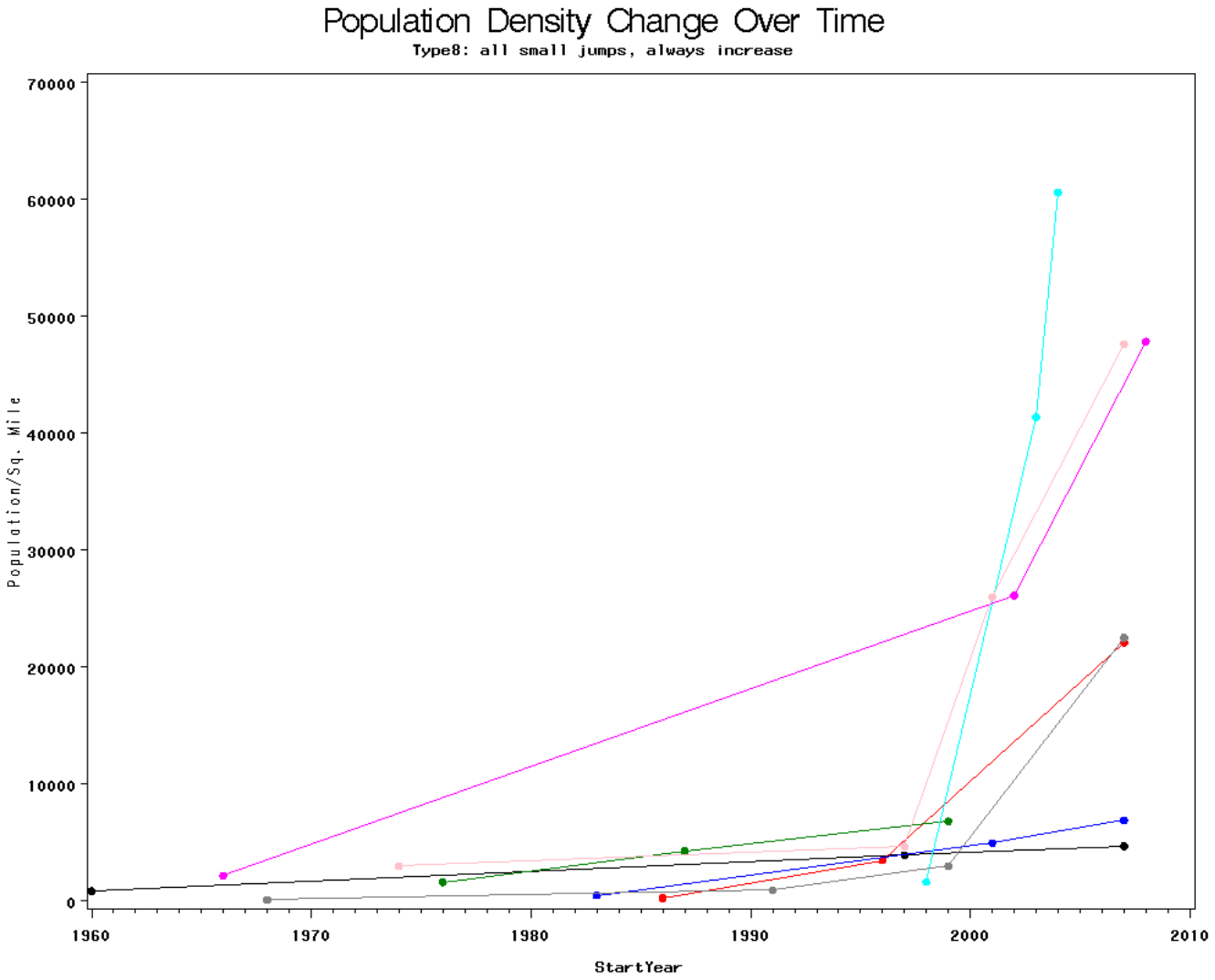


Chart 9 Population Density Changes in Residential History-Type 9

(Small Jumps, Decrease – Increase)

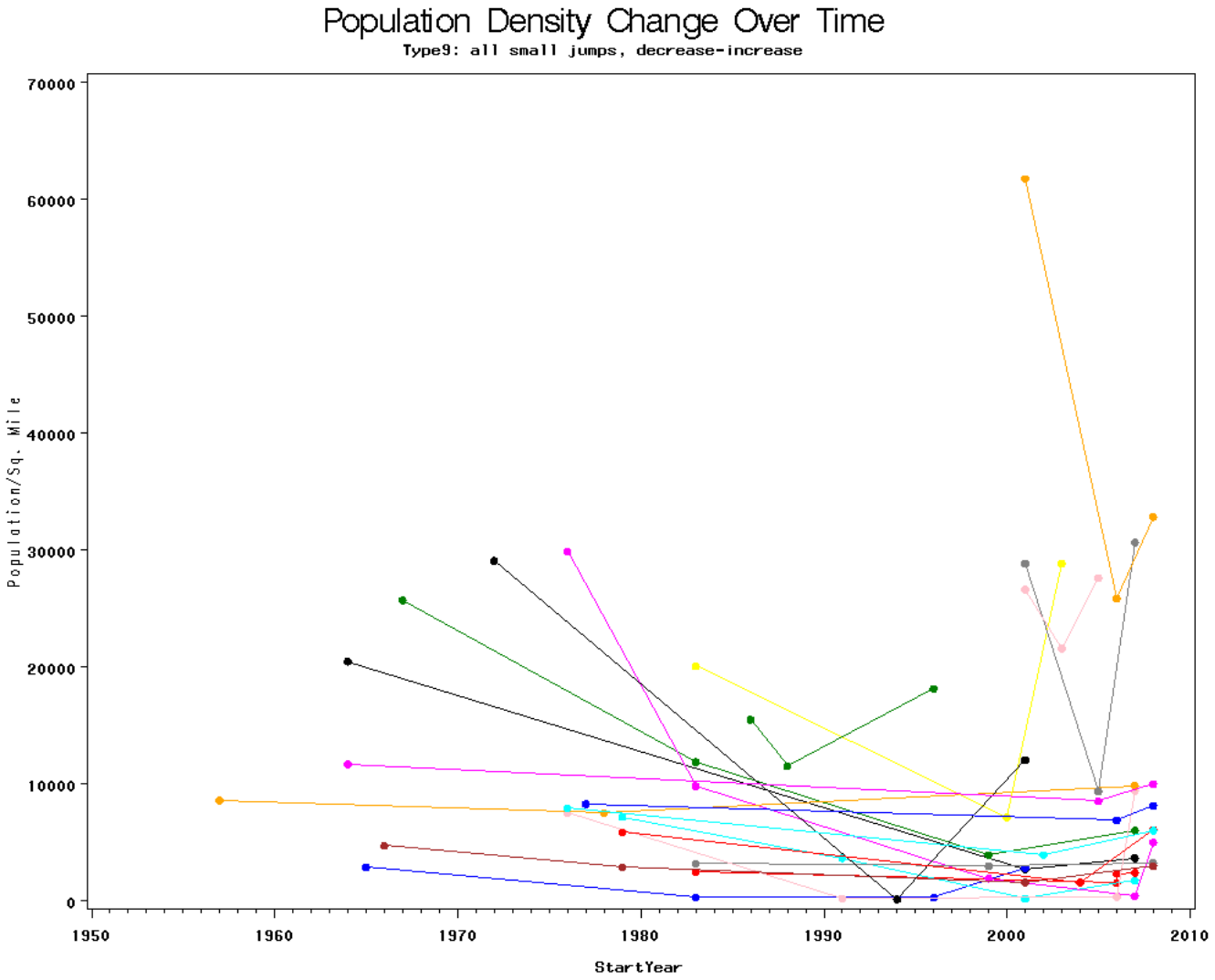


Chart 10 Population Density Changes in Residential History-Type 10

(Small Jumps: Decrease – Increase – Decrease
or Decrease – Increase – Decrease– Increase)

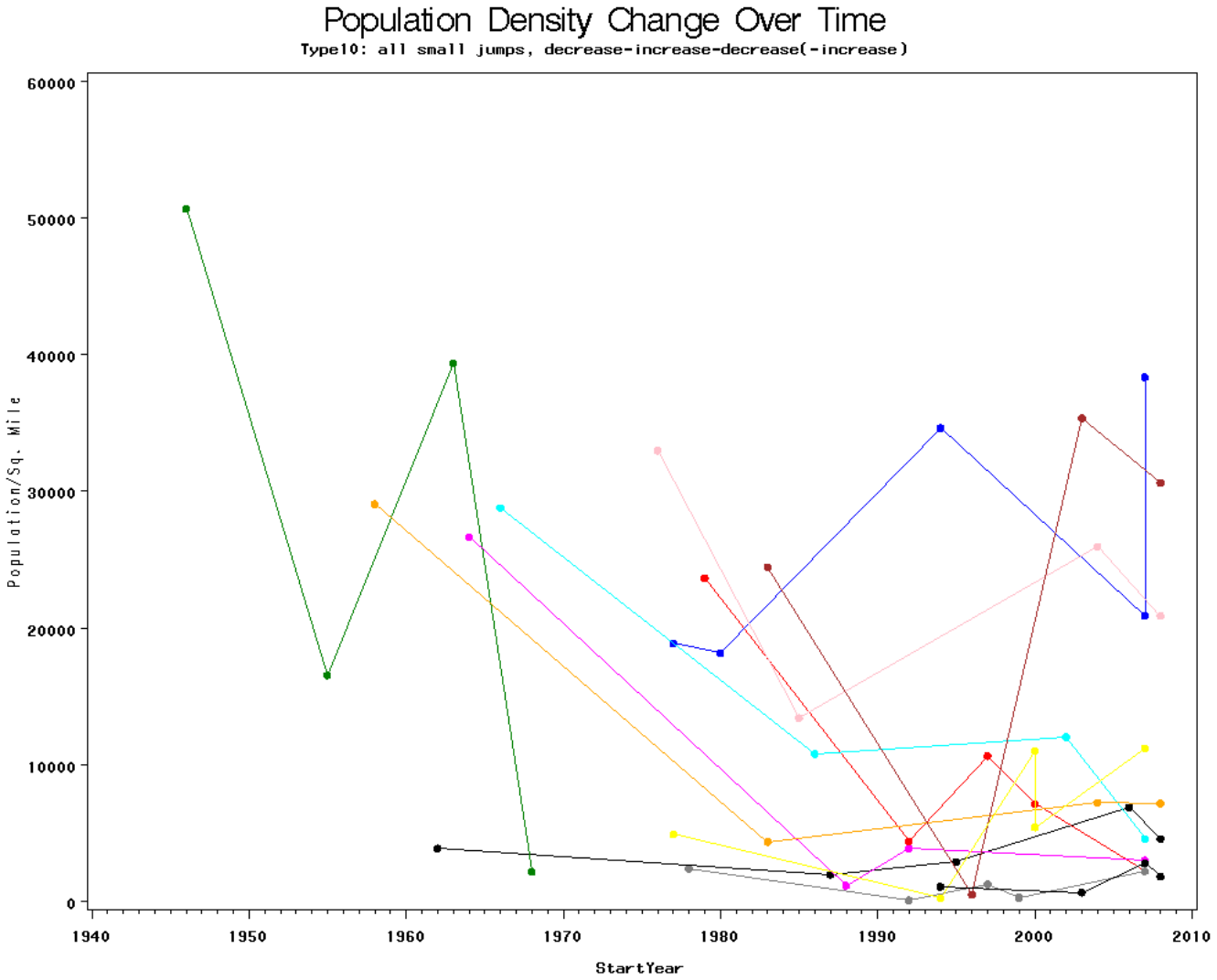


Chart 11 Population Density Changes in Residential History-Type 11

(Small Jumps, Increase – Decrease)

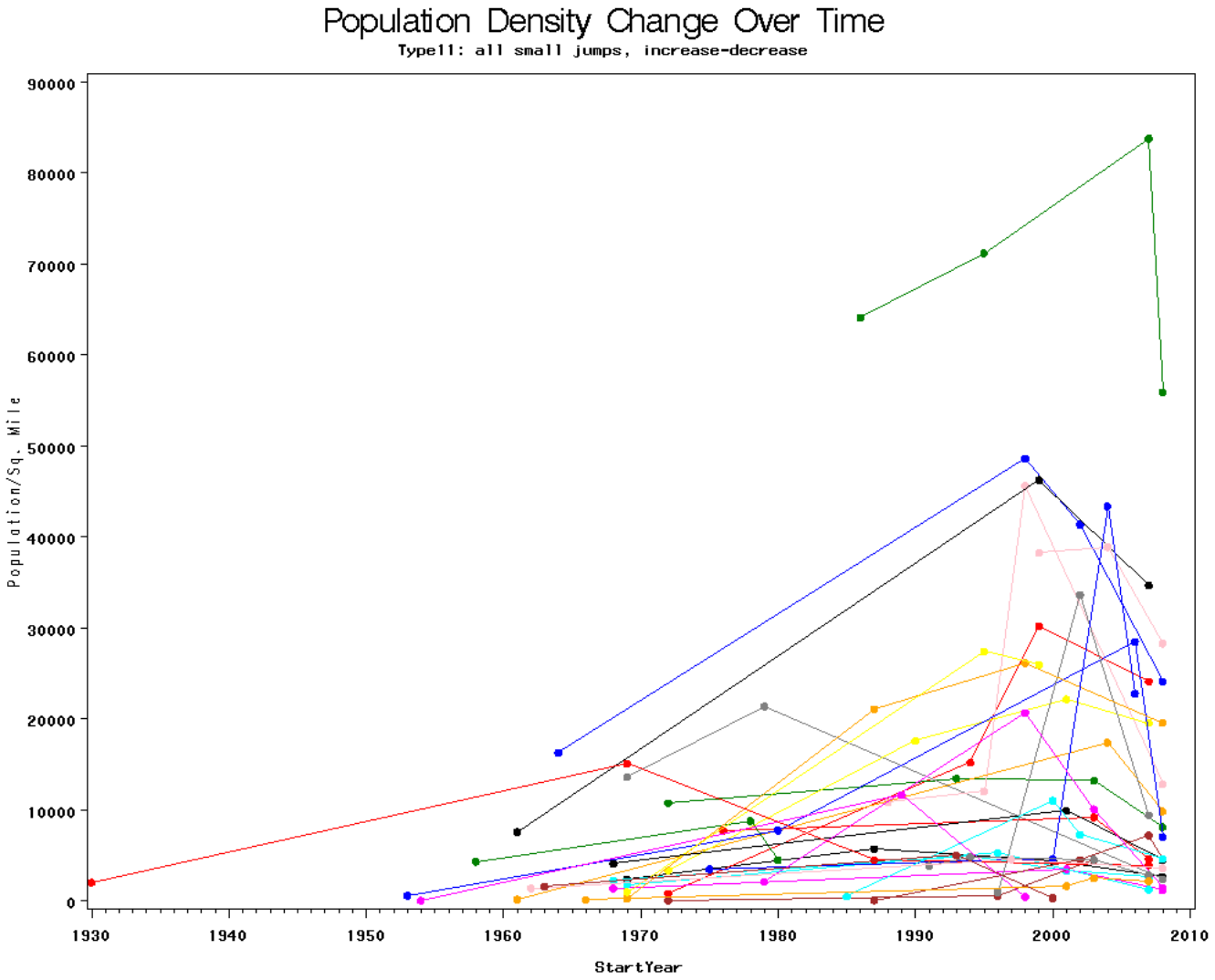


Chart 12 Population Density Changes in Residential History-Type 12

(Small Jumps: Increase - Decrease – Increase or Increase - Decrease – Increase - Decrease)