ATTACHMENT-TO-HOME AND OTHER FACTORS AFFECTING MOBILITY INTENTIONS OF RURAL HOUSEHOLDS: IMPLICATIONS FOR HOUSING THE ELDERLY

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PREFACE

This study was undertaken to examine the contributions of psychological attachment-to-home, socio-demographic and housing characteristics, and residential satisfaction in a model of mobility intentions. Additionally, the study was designed to use these variables in making recommendations for housing the rural elderly.

The format of this dissertation deviates from the Oklahoma State University prescribed thesis format. The purpose of the deviation is to provide manuscripts suitable for publication as well as to fulfill the traditional thesis requirements. Publication Manual of the American Psychological Association has been used in the first three chapters along with the Oklahoma State University thesis style. Chapters IV, V, and VI are written as manuscripts for publication for these respective journals: Home Economics Research Journal, Housing and Society, and Journal of Housing for the Elderly. Each of these manuscripts uses the Publication Manual of the American Psychological Association as the stylistic manual required by the journals. The cooperation of the Graduate College and Dean Norman Durham is appreciated in allowing this deviation.

Appreciation is extended to numerous people who have assisted me during the pursuit of this degree and whose support is reflected in this work. My deepest appreciation goes to Dr. Margaret J. Weber, who served as my major adviser through my doctoral studies. Her wisdom, insight, and sincere concern for my academic and professional success made this pursuit an enjoyable one. Her enthusiasm for research and higher education has rubbed off on me, and I will always be grateful for her friendship. Gratitude is also extended to other members of my doctoral committee: Dr. Joseph Weber and Dr. Sue Williams for their down-to-earth personalities, sense of humor, subject matter expertise, and friendship; Dr. Richard Dodder for his statistical knowledge and enthusiasm in teaching the subject; and Dr. K. Kay Stewart whose purpose on the committee was to remind me that the value of research is in its usefulness to people. Countless other faculty at Oklahoma State University have also assisted in preparing me for this research endeavor; their support is also appreciated.

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CHAPTER I

INTRODUCTION

Residential mobility has been a subject of interest to sociologists, demographers, and geographers for generations. Stemming from Rossi's (1955) classic study, Why Families Move, more recent work reflects the interest of decision-makers who must adjust policies to meet the needs of households as they move from one location to another. Attention is also being focused on those passive households who choose to remain in their current dwelling, despite circumstances that may seem contradictory.

At any given time, a survey of households will find some that are at the point of moving, others feeling vaguely that they would like to do so, and still others can be found firmly rooted in their present residences. Therefore, mobility intentions represent a continuum between the desire and the behavior which become stages in a connected sequence. In order to understand how moving behavior comes about, it is important to know the motivating factors behind the behavior.

Basic questions underlying mobility studies center around who wants to move and why. Equally important is research that focuses on who does not want to move and why

not. To answer these questions, researchers looked toward residential satisfaction as a determinant (Heaton, Fredrickson, Fugitt, & Zuiches, 1979; Morris, Crull, & Winter, 1976; Rossi, 1955; Speare, 1974;, Stewart & McKown, 1977). These researchers and others (McAllister, Kaiser, & Butler, 1970; McAuley & Nutty, 1982; McHugh, Gober, & Reid, 1990; Roistacher, 1975) also examined objective data such as demographic and housing characteristics for a relationship with the desire to move. While these studies have been valuable, additional research was necessary to provide further explanations for persons' mobility intentions. Evidence has been gathered to support the psychological relationship people have with their residential environment in an effort to explain their desire to move or to stay (O'Bryant & McGloshen, 1987).

Numerous studies suggest that dissatisfaction with ones' environment is cause for moving, while residential satisfaction often leads to lower mobility intentions (Heaton, et al., 1970; Rossi, 1955; Speare, 1974). Additional studies indicate that satisfaction acts not only as a mobility predictor but as an intervening variable between other factors and mobility intentions (McHugh, et al., 1990; Morris, et al., 1976; Stewart & McKown, 1977).

Research relating individuals' socio-demographic characteristics with their mobility intentions overwhelmingly suggests that age is negatively related and family size is positively related to the desire to move

(McAuley & Nutty, 1982; McHugh, et al., 1990; Roistacher, 1975; Rossi, 1955; Speare, 1970, 1974; Stewart & McKown, 1977). Mobility intentions based on other characteristics such as income, education, race, and the number of prior moves have also been studied, but the results are not as clear cut (McAllister, et al., 1970; McAuley & Nutty, 1982; Rossi, 1955; Speare, 1970; Stewart & McKown, 1977).

While housing characteristics as mobility determinants have not been as widely studied as demographic characteristics, the findings indicate that home ownership (as opposed to renting) serves as a deterrent to moving (McAllister, et al., 1970; McHugh, et al., 1990, Morris, et al., 1976; Roistacher, 1975; Rossi, 1955; Speare, 1970, 1974; Stewart & McKown, 1977). Other characteristics that have been studied include the age, size, type, and structural condition of the dwelling unit (Stewart & McKown, 1977).

While mobility research spans four decades, much of it relates only to urban areas (McHugh, et al., 1990; Morris, et al., 1976; O'Bryant & McGloshen, 1987; Rossi, 1955; Speare, 1970). With renewed interest in rural communities, such research could be used to assist those intending to move as well as accommodate those who desire to stay.

With so few mobility studies conducted in rural areas, research focusing on the mobility intentions of rural households is not as firmly rooted in a theoretical framework as that found in urban studies. Rural mobility

studies are especially deficient in the role of psychological attachment to place as a part of the framework.

Past literature overwhelmingly suggests that older persons have lower mobility intentions, thus leading to the phrase 'aging in place.' However, according to Dibner (1983), maintaining an independent residence may be especially difficult for rural elderly. He cites six factors as contributing to this independence - factors he considers as relatively weak in rural areas: 1) the availability of organized community services, 2) the availability of family and the supportive services they provide, 3) the interaction with and help received from friends and neighbors, 4) the quality of housing, 5) transportation, and 6) income.

Mobility concerns are particularly relevant to the rural elderly living in the South. They are known to have the most critical situations with regard to housing, income, educational attainment (Arnold, 1984), and health status (Kovar, 1977). By assessing their personal and housing characteristics and the psychological attachment of rural elderly to their environment, rural decision-makers can use such variables in revitalizing rural areas to meet the needs of older residents. Likewise, when rural communities cannot adapt to the needs of older residents, such research can be used to meet such needs and at the same time recreate the concept of home in another setting.

Purpose

The purpose of this study is to more fully understand the mobility intentions of rural households and the attitudes and characteristics of older rural residents. Specific objectives include:

1. to propose a model for rural mobility intentions by determining the degree of relationship between mobility intentions and a) demographic characteristics, b) housing characteristics, c) psychological attachment to home, and d) residential satisfaction,

2. to assess and compare the characteristics of the rural elderly and non-elderly in an effort to address the specific needs and resources of older rural residents.

Definitions

The following definitions clarify the terms used in this study:

Elderly - Any individual age 65 or older.

Mobility Intentions - The desire, plan, or intent to move from one residence to another.

Rural - Population less than 2500 persons.

Assumptions

Included in this study are the following assumptions:

1. Respondents answered the self-administered questionnaire and the telephone interview truthfully and accurately.

2. The instruments used accurately measure mobility intentions, attachment-to-home, and residential satisfaction.
3. County property assessment records contain accurate information on the residences.

Limitations

Limitations affecting the results of this study include:

1. The use of telephone directories as the sampling frame may limit the random selection process of choosing respondents.
2. Those respondents who moved between Phase One and Phase Two of the data collection process may create a final sample of persons with overall lower mobility intentions.
3. The instrument does not assess all the factors that may influence mobility intentions.
4. The sample and questionnaire used in Phase One were part of a data set designed for a purpose other than this study.

CHAPTER II

REVIEW OF LITERATURE

Previous Research on Mobility Intentions

Studies of mobility intentions span four decades of multi-disciplinary emphasis on the topic. The classic work of Rossi (1955) used personal interviews with nearly 1000 Philadelphia residents to examine the differences in mobile and stable families. Major findings of this study center around the effects of residential satisfaction, age, family size, and home ownership as mobility determinants. His work serves as the basis for all subsequent work in mobility expectations.

Speare (1970) worked from a demographer's perspective to collect mobility histories of 2264 Rhode Island residents, searching for relationships with both housing tenure status and various life-cycle stages. He found home owners as well as those in later stages of the life-cycle to be more stable. A later study of 700 Rhode Island residents (Speare, 1974) revealed that personal and housing characteristics impact mobility through their effect on residential satisfaction. Phoenix-area households (n=580) studied by McHugh, et al. (1990) reveal that residential

satisfaction acts as an intervening variable between objective characteristics and expectations for moving. However, the models are different for renters and owners as well as short- and long-term mobility expectations. Focusing on the propensity to move, Morris, et al. (1976) studied 405 households in a metropolitan New York county, confirming the hypothesis that housing deficits produce dissatisfaction and in turn, the desire to move.

Sociologists McAuley and Nutty (1982) examined the likelihood of moving at different life-cycle stages with a statewide sample of over 1000 Pennsylvania residents. Findings indicate greater mobility intentions by young singles and young couples with children. Roistacher (1975) uses socio-demographic and economic characteristics of families in 24 Standard Metropolitan Statistical Areas to examine mobility plans and actual mobility. She concludes renters, small families, and young persons are the most mobile. A national panel of 1500 households is used in research by McAllister, et al. (1970) to explain the differential mobility of blacks and whites.

While these studies have been primarily urban in design, the work of Stewart and McKown (1977) is one of the few mobility studies to examine such intentions from a rural perspective. Their research used 200 families representing two low-income rural counties. The purpose of this research was to examine demographic and housing characteristics with housing satisfaction as an intervening variable between

these characteristics and the desire to change housing by altering the home or moving. The results of this study confirm satisfaction as an intervening variable and age as the strongest factor in the desire to change housing.

Residential Satisfaction

Dissatisfaction with one's environment is a common cause for the desire to move. Rossi (1955) found those with more complaints about their home and neighborhood were more mobile. Their dissatisfaction was primarily related to the social environment (the 'wrong kind of people' in the neighborhood) and the lack of adequate space. Heaton, et al. (1979) conclude that satisfaction with the community is also negatively related to the desire to move.

Additional research indicates residential satisfaction does not act alone in shaping mobility intentions. It serves as an intervening variable between demographic and housing characteristics and the desire to change locations (McHugh, et al., 1990; Morris, et al., 1976; Speare, 1974; Stewart & McKown, 1977).

Housing Characteristics

Housing characteristics have been studied both independently as a direct influence on mobility intentions as well as indirectly through satisfaction. Numerous researchers find renters to be more likely to move than home owners (McAllister, et al. 1970; McHugh, et al., 1990;

Morris, et al., 1976; Roistacher, 1975; Rossi, 1955; Speare, 1970, 1974; Stewart & McKown, 1977). Explanations center around the economic investment of home ownership and the ability of home owners to make structural changes in the residence. It may also be that mobility differences by tenure are related to the desire of renters to become home owners.

House size is another variable investigated in mobility studies. Both Rossi (1955) and Speare (1974) contend that house size is negatively related to the desire to move.

Minimal attention is given to other housing variables as mobility predictors, including the age, quality, value and type of housing structure. Stewart and McKown (1977) conclude a negative relationship between the quality of the structure and the desire to change housing. The value of one's home and its age are both negatively related to mobility plans, according to the work of McHugh, et al. (1990). Morris, et al. (1976) conclude that those persons residing in conventional single-family dwellings are less likely to move.

Household Characteristics

Socio-demographic characteristics of the household have also been studied in relation to mobility intentions. While numerous characteristics have been identified, the majority of the research focuses on life-cycle stages and the desire to move. Such research overwhelmingly suggests that older

persons are more stable (McAuley & Nutty, 1982; McHugh, et al., 1990; Roistacher, 1975; Rossi, 1955; Speare, 1970, 1974; Stewart & McKown, 1977).

Little work has been done on racial influences on the desire to change residence. However, according to McAllister, et al. (1971), blacks are more mobile than whites because blacks are more likely to be renters.

Speare (1970) found that the length of time a household has spent in a dwelling is related to their mobility intentions. The longer a family has lived in a particular home, the less likely they are to move. He concludes that it is the social ties to the area that hold the residents there.

Rossi's (1955) work includes the study of family size and the desire to move. This research suggests that large families are more mobile than small families. However, Roistacher (1975) concludes that small families are more likely to change residences.

Rossi (1955) also found age to be highly influential in predicting mobility in that young families are more mobile than older ones. The findings of McAuley and Nutty (1982) support this with results indicating young singles and young couples with preschool children are more likely to move. The rural sample questioned by Stewart and McKown (1977) indicates age serves as the strongest of all direct variables in the desire to change housing, with age negatively related to the desire to change.

The strength of the association of age with lower mobility intentions is explained in several ways. Morrison (1969) believes that some segments of the population have high thresholds with respect to mobility and that such individuals are likely neither to seek out those residential amenities or to act upon them if available. Older persons appear to have higher thresholds. In addition, they may be less responsive to the availability of desired features because their present residence so closely matches their residential preferences.

Stewart and McKown (1977) suggest that older people are realistic in their thinking and recognize that opportunities for making changes are not available to them and therefore would not express any desire to change. Pulling from the work of Campbell, Converse, and Rodgers (1976), Montgomery, Stubbs, and Day (1980) suggest that in order to reduce the gap between reality and aspirations, older persons undergo a shrinkage of their desire to improve their residential situation.

Psychological Attachment-to-Home

O'Bryant (1982, 1983), recognizes the problem in explaining the lack of mobility ıntentions among the elderly. She believes it is related to their psychological attachment to their home, and has developed and tested a scale to measure this phenomenon. In the instrument development phase (O'Bryant, 1981), a variety of sources

were used to compile a group of 75 statements regarding older people and their desire to stay in their homes. The initial instrument was developed and administered to 276 older home owners and the results factor analyzed. This procedure provided a shortened version of 25 items measuring five factors which constitute the subjective value of a home.

One subjective factor relates to a feeling of competence and independence derived from living in a familiar home. It is thought that while physical abilities are declining, knowing that one can care for themselves in their own home preserves self-esteem.

Traditional family orientation emerges as a second factor. Researchers have observed that for older persons, their home represents a reservoir of family history and memorabilia. It may be the common meeting place for family get-togethers. There is a sense of tradition in remaining in the family home.

The third factor represents the American dream of home ownership and the status it provides. Being a home owner, which most elderly are, is equated with being a responsible tax-paying citizen and a more influential member of the community. Factor four is made up of items concerning the cost of the home. And factor five represents the comfort provided by the home.

Since its inception, O'Bryant and her associates have used the scale in a variety of settings (O'Bryant, 1982;

O'Bryant, 1983; O'Bryant and Nocera, 1985; O'Bryant and Murray, 1986; O'Bryant and McGloshen, 1987). Overall, the instrument provides a predictive measure of who is emotionally attached to their home and therefore, does not wish to move.

Summary of Mobility Research

From this review of mobility literature it is clear that the predictors of mobility intentions are numerous and interrelated. Primarily the desire to move stems from demographic characteristics of the household, characteristics of the dwelling unit, psychological attachment to the residence, and satisfaction with the residential environment. The proposed model depicted in Figure 1 provides a visual display of such a relationship.

Overview of the Older Population

Mobility research overwhelmingly indicates the desire of older persons to age in place. In establishing policies to meet the residential needs of older persons, it is important to understand their personal and housing characteristics as well as attitudes toward living environments. Such findings can be used to meet older persons' needs in the rural community or in another setting when the rural community cannot feasibly do so.

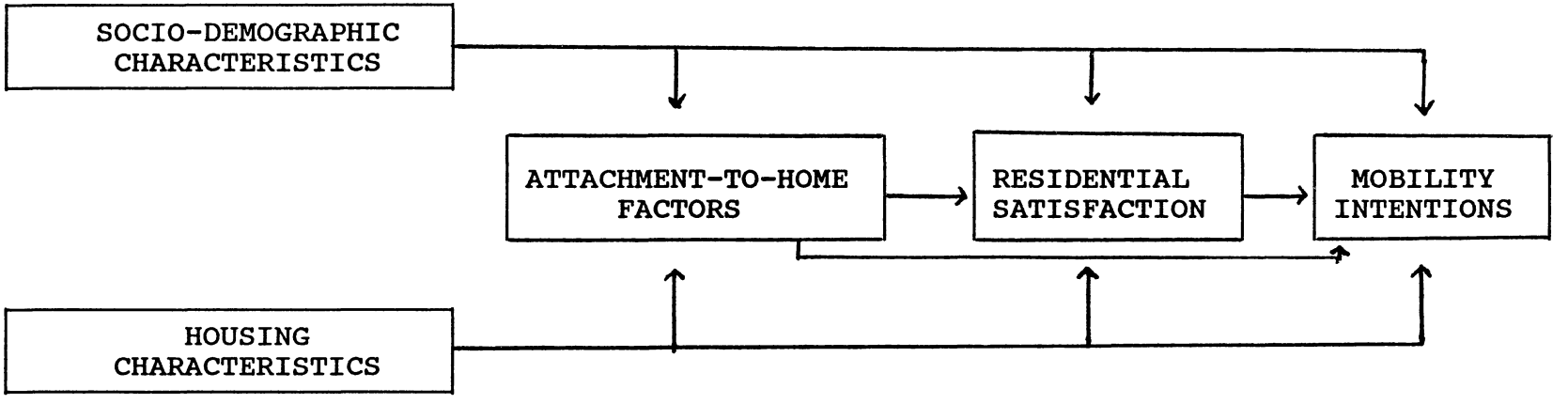

Figure 1: Hypothesized Model of Mobility Intentions

Population Characteristics

A publication by the American Association of Retired Persons (1987) reports 12.1 percent of the U.S. population is age 65 or older, having tripled since 1900. Predictions suggest that this age group will represent well over 13 percent of the population by the year 2000.

A disproportionate share of older Americans live in rural areas. Glascow's (1988) review of 1980 census data found that 10.7 percent of the elderly were living in urban areas and 13 percent in rural areas. The 1979 and 1984 Annual Housing Survey data analyzed by Arnold (1984) suggests that the number of rural elderly households is growing rapidly. During the period 1974-1979, a 16 percent increase in rural elderly households was documented, compared to a 10 percent increase in all U.S. households.

The South experienced an even greater increase in rural elderly households at 21 percent. There continues to be more rural elderly in the South than in any other region of the United States, with 43 percent of the national rural elderly population (Arnold, 1984). This over-concentration of rural elderly is expected to increase in the depressed agriculture areas of the South and Midwest as young people move to urban areas for the economic benefits and leave the rural elderly behind.

Personal Characteristics

America's elderly are largely women, according to figures by Soldo (1982). For every 100 older women there are 68 men in the same age group. The difference is even greater with increased age. For those age 75 and older, there are only 56 older men for every 100 women. This reflects the increasing life expectancy for women. A man age 65 can expect to live another 14.8 years. Life expectancy is even greater for women with an expected 18.6 more years at age 65 (AARP, 1987).

Arnold (1984) found that while the majority of rural elderly households are headed by men, 30 percent are single female households. There are fewer male heads with each increasing age group. Therefore, rural elderly are also experiencing increased life expectancy for women.

The educational level of the older population is rising for both urban and rural elderly. Between 1970 and 1986, the median level of education for all older American increased from 8.7 years to 11.8 years (AARP, 1987). The percentage of those completing high school rose from 28 percent to 49 percent during the same time period. For rural elderly, Arnold, (1984) reports that 22 percent of those age 65-74 graduated from high school compared to 14 percent of those age 75 and older.

Although most elderly people are no longer concerned about converting their educational attainment into wages, their low levels of education serve as a handicap. Soldo

(1982) suggests poorly educated older adults often have trouble finding out about service and benefit programs and, once they do, find it difficult and frustrating to deal with the paperwork and bureaucracy.

Not everyone retires at age 65. Many are able to do so in their 50's or early 60's and a few continue working into their 70's and beyond. In 1978, only 21 percent of those age 65 and older remained in the work force (Soldo, 1982). Those still in the labor force were frequently working in low-paying, white-collar and service jobs.

Personal income is usually cut by one-third to one-half after age 65 when most people are retired (U.S. Bureau of the Census, 1980a). While this is true for most all older people, the income differences of rural and urban elderly are striking. In 1986 the poverty rate for all persons age 65 and older was 12.4 percent (AARP, 1987). For rural elderly the incidence of poverty was 29 percent (Arnold, 1984). This is compared to a poverty level of 10 percent in younger rural households. While rural aged incomes are low, they vary by region and housing tenure. Arnold (1984) reports that incomes for this group are highest in the Northeast and lowest in the South. In addition, she reports incomes are higher for rural elderly home owners as compared to renters.

Old age in itself is not a disease but is accompanied by physical changes brought about by the normal aging process. Muscle strength gradually diminishes, bones become

more brittle, response time slows, and the senses dull (Hickey, 1980). With all these changes, it is not surprising that the elderly are more susceptible to chronic illness. Only 14 percent of the noninstitutionalized elderly can claim to be free of chronic conditions. The most frequently reported conditions are arthritis, heart problems, hypertension, and diabetes. The prevalence for all these conditions is greater in rural areas, especially in the South (Kovar, 1977).

In 1986 (AARP, 1987), 30 percent of older persons assessed their health as fair or poor. There is little difference between the sexes, but older blacks report poorer health than older whites.

AARP (1987) also reports that in 1984, while the older age group represents 12 percent of the total U.S. population, they account for 31 percent of total health care expenditures. Hospital expenses account for the largest share of health expenditures, followed by physicians and nursing home care.

AARP (1987) indicates that nationwide, elderly whites make up 11.8 percent of the total white population. Elderly blacks comprise 7.9 percent of the total black population. For rural elderly, Arnold (1984) reports that racial breakdown as 92 percent white, seven percent black, and one percent from other races.

Living Arrangements and Housing Characteristics

The majority of the noninstitutionalized elderly live in a family setting with spouse, children, siblings, or other relatives. Three percent live with nonrelatives and 30 percent live alone (AARP, 1987). Contrary to popular belief, only five percent of older Americans live in nursing homes. The rate of institutionalization increases with age from one percent for those age 65-74, six percent for those 75-84, and 22 percent for those age 85 and older (AARP, 1987). Not only is institutionalization affected by age but also by marital status. Glascow (1988) suggests that having a spouse is often the key to maintaining an independent household.

In 1986 (AARP, 1987), 75 percent of older residents were owners and 25 percent were renters. Home ownership is greater among rural elderly with 83 percent (Arnold, 1984). Arnold also found that while most rural elderly live in single-family detached units, 10 percent live in mobile homes and seven percent live in multiple units. In addition, her review of Annual Housing Survey data reveals that rural elderly homes are smaller than other rural households, but larger than the homes of urban elderly. Over half of the rural elderly have lived in their current homes 20 years or more.

Housing affordability is a problem for many elderly. Although the homes of many older persons are debt free, on reduced or fixed incomes, many have problems meeting the

rising costs of property taxes, utilities and maintenance. Arnold (1984) reports that 20 percent of rural elderly home owners devote more than 30 percent of their incomes to housing. Forty-eight percent of rural elderly renters spent more than this amount.

Most elderly people in the United States live in adequate housing, but in rural areas, 27 percent of elderly renters and 18 percent of all elderly living in the South have inadequate housing (Arnold, 1984). Inadequate housing is defined as having one or more of the following flaws: incomplete plumbing, incomplete kitchen, leaking roof, holes in walls or ceiling, and exposed wiring.

Summary of the Older Population

From this review of literature concerning the characteristics of the elderly population, it is clear that they are a vulnerable group. Unfavorable circumstances are most often found in the rural aged, particularly those living in the South.

Relocation of the Elderly

Additional information suggests that the elderly are less likely to change residence than other age group. In 1985, only 16 percent of persons 65 and older had moved since 1980 compared to 45 percent of persons under 65 (AARP, 1987). The same is true of rural elderly home owners. Only 14 percent had lived in their current units less than five

years (Arnold, 1984). However, for rural elderly renters, 52 percent moved during the period 1974-1979.

Because older persons are so stable, a great deal has been written about the residential relocation of this age group. The result has been a somewhat confusing collection of findings - some of which testifies to the benefits and others to the detriments of moving.

A vast majority of research on the effects of moving into senior housing environments indicates that there are no major effects on health status. One of many such studies was conducted by Brand and Smith (1974). This research compared a group of community dwellers to older people who moved into senior housing. Findings indicate no major ill effects on the health of the movers. Critics of such research point out that it takes time for health consequences to manifest themselves and this is why such impressive results were found. It is important to note that the respondents in the Brand and Smith (1974) study were forced to move and did show more personal maladjustment, although no immediate physical health reactions.

Previous research has shown that the desire to move clearly affects personal adjustment (Beaver, 1979) and residential satisfaction of older movers (Ferraro, 1981). Such research suggests that ones' mobility intentions can be used to predict success in relocating.

Change of residence is one of a number of events on Holmes and Rahe's (1967) life change index that is

considered to have negative effects on the individual. There is concern that relocation by older people in particular may come at a time when it is likely to be accompanied by other equally stressful events such as retirement, illness, financial setback, or loss of spouse.

Housing Attitudes of Older Adults

To prevent the unnecessary relocation of those elderly who desire to stay in their own homes, communities will need to be supportive of the older persons' needs and preferences. Likewise, when communities cannot feasibly meet such demands, an understanding of the older person's attitudes toward their current dwelling can be used to mitigate the consequences of relocation.

O'Bryant's work on attachment-to-home has been used to make suggestions for recreating the elderly person's environment on the basis of family tradition, status of home ownership, cost of home, comfort of home, and competence in a familiar environment (O'Bryant, 1982, 1983; O'Bryant & Nocera, 1985; O'Bryant & Murray, 1986; O'Bryant & McGloshen, 1987). However, these studies have been restricted to urban samples.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this research project is to develop a model for explaining mobility intentions and to compare the rural elderly and non-elderly by their mobility intentions, demographic characteristics, housing characteristics, and attitude toward home. This section explains the research methodology necessary to meet these objectives.

Data for this study were generated from an Agricultural Experiment Station funded project, "Socio-economic and Structural Dimensions of Adequate Housing Perceived by Rural Households: A Framework for Housing Decisions." Participating institutions include Oklahoma State University and the University of Arkansas at Pine Bluff.

Research Design

This study is based on a descriptive research design. Best and Kahn (1986) distinguish descriptive research from other types of research with the following characteristics:

1. It involves the formation and testing of hypotheses.

2. It uses inductive-deductive reasoning to make generalizations.

3. It employs randomization in sample selection so that error may be estimated when making inferences to the population.

4. The procedures are described accurately and completely to aid in replication of the study.

5. The relationships between variables have already occurred or exist and are not manipulated by experimental procedures.

Descriptive research may be used to identify a broad classification of research types. Although this study fits the definition of descriptive research, the study may be more specifically defined as survey research because of the data collection methods utilized (Babbie, 1989).

Phase One

Sample Selection

The original sample utilized non-SMSA counties in Arkansas and Oklahoma which were placed in relatively homogeneous geographic quadrants as determined by the Interstate Highway System. The 1980 population Census was used to arrange the counties within each quadrant by population size (Appendix A). The median population for each quadrant was used to identify those above as high population and those below as low population. Such a selection process allowed the inclusion of respondents from

rural communities as well as those residing in the open country on the fringe of a larger community. Through random selection, one county was selected from the high population group and one from the low population group for each quadrant in each state. The process resulted in a total of 16 counties being selected for the study (eight counties per state).

Following the identification of the sample counties, all communities were listed for each county (Appendix A). Respondents were limited to communities of 2500 or less, or inhabitants residing in the open country of communities with population greater than 2500.

Household addresses listed in telephone directories were used for each community to identify the sample. All non-residential names were deleted from the directory. Of the remaining entries, five percent or a minimum of 300 households per county were drawn using systematic sampling. This procedure provided a sample total of approximately 4800 households for the two states combined.

Instrument Development

A self-administered questionnaire was developed as the initial data collection instrument (Appendix B). Dillman (1978) states that such instruments can be valid and reliable when properly developed and utilized; thus, Dillman's (1978) Total Design Method was used in the development process. Items for the questionnaire were

highly structured and designed to elicit respondents' socio-demographic characteristics, housing characteristics, residential satisfaction, and mobility intentions.

The instrument was pilot-tested in a non-SMSA county before being used in the research project. Suggestions from the pilot test were used in developing the final instrument, thus improving the validity of the measurement tool.

Data Collection

Dillman's (1978) Total Design Method provided the procedure for data collection. This process involved sending a cover letter and questionnaire (Appendix B) to potential respondents by first class mail with a self-addresses business reply envelope to return the completed questionnaire. Two weeks later, a reminder postcard (Appendix B) was sent to those who had not responded. In another two weeks, a follow-up letter (Appendix B), a second questionnaire, and a return envelope were sent to those who had not submitted a completed questionnaire. A response rate of 39.5 percent of the 4800 households provided 1645 usable questionnaires in the Fall of 1988.

Phase Two

Sample Selection

Phase two involved a subset of the original sample. In each state, one county in each quadrant was randomly selected, narrowing the total counties from 16 to eight

(Appendix A). Within each of the eight counties, potential respondents were randomly chosen from the completed mail questionnaires from phase one, until 25 respondents from each county agreed to complete the second instrument. The number of respondents for phase two was 100 from each state for a total sample size of 200.

Instrument Development

An in-depth interview schedule (Appendix C) designed to provoke a greater depth of information was used as the data collection instrument in phase two. Like the phase one instrument, the in-depth interview schedule elicited respondents' socio-demographic characteristics, housing characteristics, residential satisfaction, and mobility intentions; however, the inquiry included more open-ended questions. Dillman's (1978) Total Design Method was used as a guide in the development of the interview schedule. In addition, the interview derived respondents' subjective value of home through a version of O'Bryant's (1983) Attachment-Home-Scale. The scale consists of 24 statements to which respondents indicate their agreement or disagreement on a six-point Likert scale. Pilot testing of the instrument in non-SMSA counties and subsequent redevelopment of the instrument improved the validity of the data collection device.

An additional instrument was used to obtain housing information from county property assessment records on each

residence in the final sample (Appendix D). Such data included the assessed value, size, age, and condition of each residence.

Data Collection

The sample subset in phase two was contacted by mail (Appendix C) to explain the follow-up study and to notify respondents that they would be contacted by telephone. A silver dollar was enclosed to motivate respondents to participate in the telephone interview. The process followed Dillman's (1978) method of data collection.

Telephone contacts were attempted with potential respondents no more than eight times over a two-week period in the Summer of 1990. To obtain 200 completed interviews, it was necessary to contact 209 questionnaire respondents. Of these, seven had changed residences since completing the mailed questionnaire, one was too ill to respond to the in-depth questioning, and one refused to participate in the study. Telephone interviews ranged from eight to 15 minutes in length. To keep inter-interviewer reliability as consistent as possible, two interviewers were used, one in each state.

In addition to the information obtained from respondents, housing data were obtained from county property assessment records. When possible, the county assessor in each county represented in the study completed the data collection instrument from field cards on each residence in

the sample. In other cases, it was necessary for the researchers themselves to visit the county to obtain the necessary data from the field cards. Missing information on some of the property assessment records resulted in incomplete data for the property assessment variables in the study. As a result, only 146 of the 200 residences in the study have complete property assessment data.

Data Analysis

Following the data collection process, data were coded for analysis purposes. A frequency analysis of all variables in the study revealed some coding errors which were subsequently corrected. Errors in the respondent identification number in data from the mailed questionnaire made it possible to use data from only 198 of the 200 respondents.

Characteristics of Respondents

Table I presents the characteristics of the rural respondents used in this study. This is compared with characteristics of rural residents from the 1980 Census of Population (U.S. Bureau of the Census, 1980b).

Respondent age ranges from 20 to 84 with a mean of approximately 52 years. By age group category, the sample tends to be older than is typical of rural residents. An overwhelming majority of the respondents are white which is

TABLE I

RESPONDENT CHARACTERISTICS COMPARED WITH CENSUS DATA

Characteristic		Sample %	Rural Census %
Age:			
	less than 35	17.9	28.0
	35 - 44	21.1	18.8
	45 - 54	14.3	17.0
	55 - 64	22.1	15.3
	65 and over	25.6	20.9
Race:			
	white	89.9	92.8
	non-white	10.1	7.2
Marital status:			
	married	82.8	65.9
	not married	17.2	34.1
Household size:			
	1	16.7	16.7
	2	40.9	31.6
	3	19.7	18.3
	4	17.7	17.8
	5 or more	5.1	15.5
Education:			
	11 years or less	21.8	37.3
	high school grad.	37.1	36.2
	some college	21.8	14.5
	college degree	19.1	13.0
Income:			
	less than $10,000	15.2	20.2
	10,000 - 24,999	33.1	34.8
	25,000 - 49,999	42.1	30.4
	50,000 or greater	9.6	5.6

common in rural areas. However, this study has a substantially higher proportion of married respondents than would be found in rural communities. Household size of the sample is small with the majority having only one or two members. Typical rural households are slightly larger.

Respondents in this study have a higher than average level of education of approximately 13 years. By education category, Census data show a much greater proportion of persons not completing high school than was found in this sample. Family income of the respondents was distributed across all categories and tends to be higher than is typical of rural families.

Comparison of the Census population characteristics of rural residents with the data from this rural sample reveals that this sample is older, better educated, more likely to be married, and has a higher level of income. As a result, the findings of this study are limited to the respondents from which the data were obtained.

Attachment-to-Home Scale

Before performing statistical analyses to answer the research questions, preliminary analysis of the Attachment-to-Home Scale was conducted. This process involved recoding some items of the scale, factor analysis of the scale, and reliability testing of the resulting factors.

Four of the 24 items on the Attachment-to-Home Scale were negatively worded in the in-depth interview schedule.

This included questions 23, 26, 29, and 37 (Appendix C). Scores for these items were necessarily reversed.

Principle components factor analysis rotation was performed on the 24 items. Four factors were retained using the following criteria: 1) the item must load at 0.5 or greater and 2) the item must load on a factor at a level twice as strong as on another factor (Table II). Orthogonal rotation was used to aid in interpreting the factors. Factor 1 was named family tradition and contained five statements related to the home as a place of family memories. Status of home owner was the title given to factor 2 which contained five statements related to the respect given to those who own their homes. Five statements related to the balance between the cost of the home and the comfort it provides formed the third factor and was named cost/comfort trade-off. A fourth factor containing three items related to the home as a wise investment and familiar place was titled confidence in home. Six items did not meet the factor loading prerequisites established for this study and were not included in any of the factors.

The results of the factor analysis of the Attachment-to-Home Scale are much like the results of O'Bryant's (1983) analysis of the scale. This study uses more stringent requirements for the factor loadings, with O'Bryant's study accepting items loading at 0.3 or greater. In addition, O'Bryant was not concerned with the factor loadings being twice as strong on one factor as on another as long as it

TABLE II

FACTOR ANALYSIS OF ATTACHMENT-TO-HOME SCALE

FACTOR 1 (family)	FACTOR 2 (status)	FACTOR 3 (cost/comfort)	FACTOR 4 (confidence)	STATEMENT
0.82+	0.82+	0.81+	0.60+	
*0.54638	0.22212	0.09924	-0.16879	Moving to another place would destroy our family tradition.
*0.67585	0.22166	0.26445	-0.08406	I would not want to give up our home ... it's our family home.
*0.70753	0.09269	0.13531	-0.01897	If I had to leave my home, memories would go with it.
*0.77769	0.09324	-0.04273	0.10774	Advantage of owning home, can remain in family after death.
*0.74186	0.16694	0.10365	0.04082	Things in home belong to family; hold for future generations.
0.19101	*0.77177	-0.11476	-0.08126	People look up to persons who own their own homes.
0.16202	*0.80827	-0.07364	-0.03235	Owning your own home gives you status in your neighborhood.
-0.01532	*0.73806	0.05392	0.02489	People who own their homes have more influence ... than renters.

+ reliability coefficient
* identifies those statements loading on a factor

TABLE II (continued)

FACTOR 1 (family)	FACTOR 2 (status)	FACTOR 3 (cost/comfort)	FACTOR 4 (confidence)	STATEMENT
0.82+	0.82+	0.81+	0.60+	
0.11849	*0.81027	0.04185	-0.02535	Achievement of owning home gives higher place in society.
0.28562	*0.58882	0.26311	0.08242	Owning home makes more responsible community resident.
0.16407	0.04019	*0.69824	0.14918	I have grown very comfortable in my present residence.
0.10942	-0.0853	*0.70576	0.08494	My residence is costing me more than it is worth.
0.09063	-0.03770	*0.72221	0.14847	I am not comfortable where I am living now.
-0.01272	0.20267	*0.68214	0.19597	My residence imposes a financial burden on me.
0.12278	0.02880	*0.64379	-0.12773	Grown tired of looking at same walls; wish for new place.
0.05827	0.08814	-0.04381	*0.68926	I can walk around in dark; know where everything is.

+ reliability coefficient
* identifies those statements loading on a factor

TABLE II (continued)

FACTOR 1 (family)	FACTOR 2 (status)	FACTOR 3 (cost/comfort)	FACTOR 4 (confidence)	STATEMENT
0.82+	0.82+	0.81+	0.60+	
0.27216	-0.02182	0.29365	*0.60700	Buying your home is a wise investment.
-0.12670	-0.08661	0.22154	*0.72515	Can take care of myself whether or not in own place.
0.46663	0.32030	0.12944	0.24158	In my home I feel like I'm truly my own boss;...
0.47074	0.35646	0.06655	0.14499	Living in my own place is proof that I can take care of myself.
0.15723	0.10138	0.29230	0.28161	My home is no place, but I'm used to it; feel "snug as a bug."
0.53306	0.17730	0.10564	0.43781	My residence is place to keep and enjoy possessions.
0.48162	0.09865	-0.08812	0.18071	Like to relive past by keeping lots of mementos.
0.50223	0.03789	0.12979	0.48489	Familiarity with home helps me feel more comfortable.

+ reliability coefficient
* identifies those statements loading on a factor

met the 0.3 criterion. As a result, the more stringent requirements of this study improve the validity of the factors in the Attachment-to-Home Scale.

Coefficient alpha was used to test the reliability of the four attachment-to-home factors. The resulting scores are of acceptable levels as follows: family tradition, 0.82; status of homeowner, 0.82, cost/comfort trade-off, 0.81; and confidence in home, 0.60.

Objective One

To address objective one of the study, a number of the variables were recoded from categorical variables to quantitative or 'dummy' variables. Table III identifies the coding of the variables before further analysis was performed.

A correlation matrix of the independent variables computed using Pearson's Product Moment Correlation was examined for multicollinearity (Table IV). House size and assessed value exhibit the strongest correlation with a positive relationship of 0.72. A variety of other variables are correlated at levels of 0.30 to 0.50. Age of respondent is significantly related to a number of other socio-demographic characteristics including household size, education, occupation, length of residence, and income.

Pearson's Product Moment Correlation analysis was used to determine which of the independent variables exhibit a significant relationship with mobility intentions, the

TABLE III

MEASUREMENT OF VARIABLES: OBJECTIVE ONE

DEPENDENT VARIABLE

Mobility Intentions:	1=Plan to stay 2=Uncertain 3=Plan to move 4=Started to move

INDEPENDENT VARIABLES

Characteristics of Respondent

Age:	Actual age in years
Sex:	1=Male 0=Female
Race:	1=White 0=Other
Marital Status:	1=Married 0=Other
Household Size:	Number of persons residing in home
Education:	Number of years of education completed
Occupation:	3=White collar 2=Blue collar 1=Service occupation 0=Not employed
Length of Residence:	Number of years at this address
Income:	1=Less than $5,000 2=$ 5,000 to $ 9,999 3=$10,000 to $14,999 4=$15,000 to $19,999 5=$20,000 to $24,999 6=$25,000 to $29,999 7=$30,000 to $39,999 8=$40,000 to $49,999 9=$50,000 or greater

TABLE III (continued)

Housing-Related Characteristics	
House Type:	1=Single-family detached 0=Other
Tenure Status:	1=Own or buying 0=Other
Year Built:	Year house was built
Size:	Square footage
Condition:	1=Poor 2=Fair 3=Good/Average 4=Excellent/Above average
Value:	Assessed value in dollars
Attachment-to-Home Factors	
Family Tradition:	Sum of scores for statements loading on this factor
Status of Homeowner:	Sum of scores for statements loading on this factor
Cost/Comfort:	Sum of scores for statements loading on this factor
Confidence:	Sum of scores for statements loading on this factor
Residential Satisfaction	
Dwelling:	5=Very satisfied 4=Satisfied 3=Neutral 2=Dissatisfied 1=Very dissatisfied
Neighborhood:	5=Very satisfied 4=Satisfied 3=Neutral 2=Dissatisfied 1=Very dissatisfied
Community:	5=Very satisfied 4=Satisfied 3=Neutral 2=Dissatisfied 1=Very dissatisfied

TABLE IV

PEARSON PRODUCT MOMENT CORRELATION MATRIX OF INDEPENDENT VARIABLES

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	1 00																					
2	0 25	1 00																				
3	0 01	0 01	1 00																			
4	-0 22	0 19	0 07	1 00																		
5	-0 58	-0 06	-0 01	0 51	1 00																	
6	-0 32	-0 06	0 14	0 15	0 13	1 00																
7	-0 47	0 16	0 11	0 17	0 24	0 29	1 00															
8	0 49	0 17	-0 04	0 03	-0 22	-0 20	-0 22	1 00														
9	-0 43	0 06	0 08	0 37	0 56	0 43	0 36	-0 13	1 00													
10	0 20	0 13	-0 01	0 06	-0 04	0 10	-0 01	0 21	0 13	1 00												
11	0 14	0 08	-0 07	0 12	-0 08	-0 01	0 01	0 14	0 10	0 05	1 00											
12	0 23	-0 03	0 06	0 04	0 01	0 17	0 22	-0 38	0 17	-0 10	0 11	1 00										
13	-0 05	0 00	-0 14	0 19	0 11	0 23	0 20	0 12	0 31	0 14	0 10	0 12	1 00									
14	0 07	-0 03	0 09	0 05	-0 10	0 05	0 02	0 01	0 05	0 22	0 09	0 28	0 23	1 00								
15	-0 01	0 04	0 02	0 10	-0 04	0 25	0 17	-0 04	0 32	0 17	0 10	0 40	0 72	0 36	1 00							
16	0 10	0 08	0 02	0 03	-0 05	-0 20	-0 11	0 34	-0 15	0 01	0 15	-0 14	0 09	0 07	-0 07	1 00						
17	0 18	0 13	0 15	0 05	-0 10	-0 01	-0 15	0 14	-0 14	0 04	0 01	-0 05	-0 03	-0 01	-0 04	0 40	1 00					
18	0 08	0 12	0 09	-0 01	-0 19	0 13	0 01	0 04	0 08	0 13	-0 01	0 18	0 15	0 23	0 16	0 32	0 09	1 00				
19	-0 11	-0 09	-0 04	0 08	0 14	-0 04	-0 07	-0 07	-0 03	-0 01	0 05	-0 10	0 21	0 13	0 19	0 01	-0 02	-0 25	1 00			
20	0 16	0 18	0 10	0 11	-0 21	0 05	0 05	-0 02	0 17	0 19	-0 02	0 26	0 24	0 35	0 31	0 16	0 16	0 37	-0 09	1 00		
21	-0 01	-0 01	0 16	0 03	-0 09	-0 04	0 08	0 01	0 09	-0 02	-0 04	0 04	0 01	0 06	0 03	0 05	-0 13	0 29	-0 07	0 22	1 00	
22	0 04	0 13	0 15	-0 05	-0 13	0 02	0 11	0 01	0 01	0 07	-0 04	0 16	0 06	0 07	0 12	0 14	0 06	0 30	0 04	0 19	0 27	1 00

1=age, 2=sex, 3=race, 4=marital status, 5=household size, 6=education, 7=occupation, 8=length of residence, 9=income, 10=house type, 11=tenure status, 12=year house built, 13=house size, 14=house condition, 15=assessed house value, 16=family tradition factor, 17=status of homeowner factor, 18=cost/comfort trade-off factor, 19=confidence in home factor, 20=dwelling satisfaction, 21=neighborhood satisfaction, 22=community satisfaction

dependent variable. To develop the two mobility intentions models, multiple regression was used on the traditional mobility variables alone and with the attachment-to-home factors added. Incremental contributions of each variable in explaining mobility intentions was determined through stepwise regression on each of the two models. Direct and indirect relationships of the independent variables to mobility intentions were examined through path analysis using the standardized regression coefficients resulting from a series of multiple regression equations.

Objective Two

To address the second objective of the study, a number of variables were recoded from interval level data to categorical variables to assist in the statistical analysis procedures. The coding of the variables is provided in Table V. Following, Pearson's Product Moment Correlation was used to determine the significance of the relationship between mobility intentions and age of the respondent. Personal and housing characteristics of the elderly and non-elderly age groups were assessed and compared using chi square analysis. Assessment and comparison of the age groups' attachment-to-home was performed using t-test as the statistical method.

TABLE V

MEASUREMENT OF VARIABLES: OBJECTIVE TWO

ANALYSIS ONE: PEARSON'S PRODUCT MOMENT CORRELATION

DEPENDENT VARIABLE

Mobility Intentions:	1=Plan to stay	2=Uncertain
	3=Plan to move	4=Started to move

INDEPENDENT VARIABLE

Age:	Actual age in years

ANALYSIS TWO: CHI SQUARE

DEPENDENT VARIABLES

Characteristics of Respondent

Marital Status:	1=Married 0=Other	
Household Size:	1=One 2=Two 3=Three 4=Four or more	
Length of residence:	1=One to five years	2=Six to ten years
	3=11-20 years	4=More than 20 years
Respondent health:	1=Poor 2=Fair 3=Good 4=Excellent	
Education:	1=11 years or less	2=High school graduate
	3=Some college	4=College graduate
Occupation:	1=Not employed	2=Service occupation
	3=Blue collar	4=White collar
Income:	1=Less than $10,000	
	2=$10,000 to $29,999	
	3=$30,000 to $49,999	
	4=$50,000 or more	

Housing-Related Characteristics

House Type:	1=Single-family detached 2=Other
Tenure Status:	1=Own or buying 2=Other
Size:	1=800 or less square feet
	2=801-1200 square feet
	3=1201-1600 square feet
	4=1601-2000 square feet
	5=over 2000 square feet

TABLE V (continued)

Year Built:	1=Before 1940 2=1940-1959 3=1960-1979 4=Since 1980
Condition:	1=Poor 2=Fair 3=Good/Average 4=Excellent/Above average
Value:	1=Less than $10,000 2=$10,000-24,999 3=$25,000-39,999 4=$40,000-64,999 5=$65,000 or more
Monthly cost:	1=Less than $200 2=$200-499 3=$500-799 4=$800 or more
	INDEPENDENT VARIABLE
Age:	1=Less than 65 2=65 years or more

ANALYSIS THREE: T-TEST

DEPENDENT VARIABLES

Attachment-to-Home Factors

Family Tradition:	Sum of scores for statements loading on this factor divided by the number of statements
Status of Homeowner:	Sum of scores for statements loading on this factor divided by the number of statements
Cost vs. Comfort:	Sum of scores for statements loading on this factor divided by the number of statements
Confidence:	Sum of scores for statements loading on this factor divided by the number of statements
	INDEPENDENT VARIABLE
Age:	1=Less than 65 2=65 years or more

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CHAPTER IV

ATTACHMENT-TO-HOME: A CONTRIBUTING FACTOR TO RESIDENTIAL MOBILITY MODELS

MANUSCRIPT FOR PUBLICATION

JOURNAL TITLE: HOME ECONOMICS RESEARCH JOURNAL

ATTACHMENT-TO-HOME: A CONTRIBUTING FACTOR TO RESIDENTIAL MOBILITY MODELS

ABSTRACT

Traditional models of residential mobility use socio-demographic characteristics, housing characteristics, and residential satisfaction to explain the desire to move. This study compares the traditional mobility model with one that incorporates psychological attachment-to-home as an additional variable. Data are analyzed for 198 subjects who responded to a mail questionnaire and an in-depth telephone interview. Regression analysis reveals that two attachment-to-home factors, as well as the respondent's age, dwelling satisfaction, and neighborhood satisfaction are significant predictors of mobility intentions. Stepwise regression is used to develop two mobility models and indicates that the model incorporating attachment-to-home factors explains more than twice as much of the variation in mobility intentions as the model using traditional mobility variables.

Attachment-to-Home: A Contributing Factor to Residential Mobility Models

Theoretical explanations for residential mobility have been sought for generations by demographers, geographers, and sociologists. However, such a rich history of research toward why people move may be further expounded upon from a holistic, multi-disciplinary approach which is concerned with improving the quality of life for individuals and families.

Traditional mobility research examines a variety of factors influencing the desire to move, including personal characteristics of the household, housing-related characteristics, and residential satisfaction. However, recent research provides evidence that another variable, psychological attachment-to-home, may make significant contributions to the previous models of residential mobility.

The purpose of this research is to develop a predictive model of residential mobility intentions using attachment-to-home, a psychological factor, as an additional component in the traditional mobility models. Specifically, this study is designed to:

1. Determine the degree of the relationship between mobility intentions and a) characteristics of the household, b) housing-related characteristics, c) psychological attachment-to-home, and d) residential satisfaction.

2. Compare the model that incorporates the attachment-to-home factors with the traditional mobility model.

Review of Related Literature

For nearly four decades, research has been conducted by sociologists, demographers, geographers, and home economists to explain families' mobility intentions and subsequent mobility actions. Stemming from Rossi's (1955) classic study Why Families Move, such research centers primarily around the effect of characteristics of the household, housing-related characteristics, and residential satisfaction variables. Table 6 summarizes the results of previous mobility studies.

Insert Table 6 about here

Characteristics of the Household

Of the personal characteristics studied in previous research, age (and/or family life-cycle stage) appears to exhibit the strongest relationship with mobility. Numerous researchers (McAuley & Nutty, 1982; McHugh, Gober, & Reid, 1990; Roistacher, 1975; Rossi, 1955; Speare, 1970, 1974; Stewart & McKown, 1977) overwhelmingly conclude that young households are more mobile, while older households prefer to remain in their current location. Explanations for such findings focus on realistic thinking of the elderly that residential changes may not be available to them (Stewart & McKown, 1977) or that the residential environment of older

persons already matches their residential preferences (Morrison, 1969).

A second highly researched mobility variable is family size, but the conclusions are not as straight forward. On one hand, both Rossi (1955) and Speare (1974) found that as family size increases, so does the desire to move. It is their contention that for large families, current housing is more often out of balance with housing requirements. Moving (to a larger dwelling) reduces this disequilibrium. On the other hand, Roistacher (1975) found smaller families to be more mobile, except for families of seven or more. Recent research (McHugh, et al., 1990) concludes that mobility and family size are not related at all.

Attention has also been given to length of residence and its relationship to mobility. According to Speare's studies in 1970 and 1974, as well as the work of McHugh, et al. (1990), the longer a family lives in a home, the less likely they are to move. However, Morris, Crull, and Winter (1976) and Stewart and McKown (1977) report no relationship between these two variables.

Sporadic attempts have been made to study the predictive ability of other household characteristics to mobility, including race, sex, employment, education, and income. McAllister, Kaiser, & Butler (1970) report blacks to be more mobile than whites, whereas Roistacher (1975) and Stewart and McKown (1977) found no relationship between race and the desire to change housing. Both Morris, et al.

(1976) and Stewart and McKown (1977) conclude that sex is a significant mobility predictor, but Roistacher's (1975) investigation concludes otherwise. Employment, education, and income are not related to mobility, according to a study conducted by Morris, et al. (1976). Research by Roistacher (1975) and Stewart and McKown (1977) supports the work of Morris, et al. (1976) with results suggesting that education and income are poor predictors of mobility. However, Speare (1974) found income to be negatively related to the desire to change residential location.

Housing-Related Characteristics

Just as age is the most conclusive mobility predictor of the household characteristics, housing tenure status is the most decisive housing-related predictor of residential mobility. Previous research finds home owners to be more stable than renters (McAllister, et al., 1970; McHugh, et al., 1990; Morris, et al., 1976; Roistacher, 1975; Rossi, 1955; Speare, 1970, 1974; Stewart & McKown, 1977). Explanations for this relationship center around the economic investment of home ownership and the ability of home owners to make structural changes in the residence. It is further believed that mobility differences by tenure are related to the desire of renters to be home owners.

House size appears to be the next most widely investigated housing-related determinant in explaining why people move. Both Rossi (1955) and Speare (1974) conclude that house size is negatively related to mobility, whereas

research by McHugh, et al. (1990) and Stewart and McKown (1977) suggests that the two variables are not related.

Minimal attention is given to other housing-related variables as mobility predictors, including house age, quality, value, and structure type. While McHugh, et al. (1990) suggest a negative relationship between house age and mobility, research by Stewart and McKown (1977) reveals no relationship. Stewart and McKown (1977) also conclude that a negative relationship exists between the quality of the structure and the desire to change housing, and research by McHugh, et al. (1990) concludes that the value of one's home and mobility are negatively related. Morris, et al. (1976) studied structure type as a mobility predictor, concluding that those persons residing in conventional single-family dwellings are less likely to move.

Explanations for the diverse findings in previous mobility studies may stem from the methodology employed in the various studies. There are distinct differences especially in the samples and the data collection methods.

Sample size for the mobility studies range from a low of 200 (Stewart & McKown, 1977) to Speare's (1970) sample of 2264 households. Metropolitan residents are used in the majority of the studies, but Stewart and McKown (1977) questioned rural residents about their desire to change housing. Morris, et al. (1976) as well as Stewart and McKown (1977) restrict their respondents to females. Quota sampling is used by McAllister, et al. (1970) with others

using random sampling. McHugh, et al. (1990) admit their study is racially homogeneous and Stewart and McKown's (1977) work uses residents of low-income counties. While most of the mobility studies use personal interview to collect data, McHugh, et al. (1990) use a mail questionnaire and Speare (1974) combines personal interview with telephone interview to obtain data.

It should also be noted that diverse findings may also be a result of changes over a decade of study. Social and economics changes that have occurred during the period these studies were conducted may have impacted the findings.

Residential Satisfaction

Contentment with one's environment has been studied by a variety of investigators as a mobility predictor. Satisfaction with the dwelling unit is a deterrent to moving in research conducted by McHugh, et al. (1990), Morris, et al. (1976), Rossi (1955); and Stewart and McKown (1977). Although Stewart and McKown's (1977) work does not encompass neighborhood satisfaction as a mobility variable, the other researchers conclude that neighborhood satisfaction is also a deterrent to moving. Heaton, Fredrickson, Fuguitt, and Zuiches (1979) found community satisfaction to also be negatively related to changing residential location. Using a Residential Satisfaction Index, an investigation by Speare (1974) supports the results of the studies above.

Alternative Mobility Models

Morris, et al. (1976) developed an alternative to the traditional mobility model. The model suggests that families whose dwellings do not meet societal expectations for tenure, size, quality, and structure type experience a deficit between their current housing and housing norms. This deficit is reduced by moving to a more socially acceptable dwelling unit.

Although the mobility model developed by Morris, et al. (1976) has made significant contributions to mobility research from a sociological standpoint, investigations from a psychological perspective are needed. Noted futurists suggest that in the coming decades, individuals will respond to individual needs rather than societal pressures (Naisbitt & Aburdene, 1990). In support of the need for more personalized research, Maddox and Campbell (1983) maintain that studies should be conducted from the perspective of how individual lives are shaped by events, situations, and relationships.

Psychological Attachment-to-Home

Hayward (1977) claims that individuals give personalized meaning to their homes. Nevertheless, not until O'Bryant's (1983) Attachment-to-Home Scale has such a phenomenon been measured. In research using the scale, O'Bryant & McGloshen, (1987) suggest that mobility intentions are shaped by one's psychological attachment to their residence rather than socio-demographic or housing

factors. Underlying dimensions of residential attachment that are related to mobility intentions include the cost/benefit of the home, the comfort of the home, home as a place of family tradition, competence in a familiar environment, and status of home ownership.

O'Bryant and McGloshen's (1987) discovery of the relationship between psychological attachment-to-home and the desire to move is a significant advancement for the study of mobility intentions. However, the sample was restricted to older urban widows. In addition, the investigation lacked the breadth of objective factors used in traditional mobility studies. It is believed that expanding the sample to include rural respondents with a broader range of characteristics, including age and marital status, will improve the usefulness of the model. Also, tying the research to theoretical frameworks in the root disciplines improves the opportunities to conduct mobility research with a multi-disciplinary focus.

Methodology

A two phase method was used in the process of obtaining data for this study. In both phase one and phase two, Dillman's (1978) Total Design Method serves as the guide for the instrument development and data collection procedures.

Phase One

The sample was chosen from non-SMSA counties using a geographical stratification in two Southern states. Systematic random sampling identified 4800 individual

households from telephone directories in the 16 selected counties. A self-administered questionnaire designed to elicit respondents' socio-demographic and housing characteristics, residential satisfaction, and mobility intentions was mailed to potential respondents in the Fall of 1988. Completed questionnaires were returned by 1648 households for a return rate of 40 percent.

Phase Two

The phase two sample consists of a subset of the sample used in phase one. Potential respondents were randomly chosen from the questionnaires completed and returned by the phase one respondents.

An in-depth interview schedule designed to provoke a greater depth of information was used as the data collection instrument in phase two. Like the phase one instrument, the in-depth interview schedule elicited respondent's socio-demographic and housing characteristics, residential satisfaction, and mobility intentions; however, the inquiry included more open-ended questions. In addition, the schedule derived respondents' subjective value of home through a version of O'Bryant's (1983) Attachment-to-Home Scale. An additional instrument was used to obtain housing information from county property assessment records on each residence in the phase two sample.

In the Summer of 1990, telephone interviews were attempted with 209 individual, with usable data obtained from 198. County property assessment records were examined

for the residences of the 198 respondents, with complete data available for 146 cases.

Results

Characteristics of Respondents

Demographic data are presented in Table 7. Respondent age ranges from 20 to 84 with a mean of approximately 52 years. Participation in the study is fairly well divided between males (56.6%) and females (43.4%) An overwhelming majority of the respondents are white and married. Household size of the sample is small ($\bar{X}$=2.4) with the majority having only one or two members.

Insert Table 7 about here

Respondents have a higher than average level of education of approximately 13 years. Slightly over half of the respondents are not employed, which may be indicative of the advanced age of the sample. Employed respondents are more likely to be in blue collar occupations. Family income, distributed across all categories, reveals the majority of the households earn less than $30,000 per year.

Principle components factor analysis with orthogonal rotation of the 24 item Attachment-to-Home Scale produced four factors with high reliability coefficients. Factor 1 is called family tradition (a=0.82) and contains five statements related to the home as a place of family memories. Status of home ownership (a=0.82) is the title

given to factor 2 which contains five statements related to the respect given to those who own their homes. Five statements related to the balance between the cost of the home and the comfort it provides forms the third factor and is named cost/comfort trade-off (a=0.81). A fourth factor containing three items related to the home as a wise investment and familiar place and is titled confidence in home (a=0.60). A factor score for each of the four attachment-to-home subscales was derived for each respondent by summing the scores for items loading on each factor. The four factors were then used as four separate independent variables.[1]

A correlation matrix of the independent variables was examined for multicollinearity. House size and assessed value have the highest correlation at 0.72. Many of the other variables are correlated with each other at levels of 0.30 to 0.50. However, this multicollinearity did not present a problem.

Analysis of the relationship of each independent variable with mobility intentions using Pearson's Product Moment Correlation is presented in the first column of Table 8. Of the household characteristics studied, only age (p=.05) is significantly related to the desire to move. As expected, as age increases mobility desires diminish. Sex, race (white, non-white), marital status (married, not married), household size, length of residence, education,

1 Details on the analysis of the Attachment-to-Home Scale are available from the first author.

occupation, and income are not significantly associated with mobility intentions.

Insert Table 8 about here

None of the housing-related characteristics are significantly related to mobility intentions. This is true for house type, tenure, year built, size, condition, and assessed value.

Of the three residential satisfaction variables, two are highly correlated with mobility intentions. The results of the analysis indicate that dwelling satisfaction (p=.00) and neighborhood satisfaction (p=.00) are negatively related to mobility intentions. Community satisfaction is not significantly related to mobility desires.

Two of the four attachment-to-home factors are significantly related to mobility intentions. This includes the family tradition factor (p=.00) and the cost/comfort trade-off factor (p=.00). As anticipated, those respondents scoring higher on these factors are less likely to report intentions to move. Neither the status of home owner nor the confidence in home factors are significantly associated with the desire to move.

Multiple regression was used to formulate two models of mobility intentions - one using only the traditional mobility variables and another that incorporates attachment-to-home factors into the traditional model. Because only

146 of the 198 respondents have complete sets of data from property assessment records and these variables are not significantly related to mobility intentions, property assessment data are omitted from the model development. The results of the regression analysis are presented in columns two and three of Table 8.

Neither the respondent characteristics nor the housing characteristics make significant contributions to the traditional mobility intentions model. The only variables retained in this model are dwelling satisfaction (p=.04) and neighborhood satisfaction (p=.00).

Further analysis of the traditional model using stepwise regression indicates that neighborhood satisfaction explains over six percent of the variation in mobility intentions. Satisfaction with the dwelling unit contributes an additional two percent to the explained variation. As a result, the variance explained by the traditional mobility intentions model is nine percent.

In the mobility model that incorporates the attachment-to-home-factors, multiple regression analysis indicates that none of the personal or housing characteristics are significantly related to mobility intentions. The improved model retains neighborhood satisfaction (p=.01), family tradition (p=.00), and cost/comfort trade-off (p=.00) as significant predictors of mobility intentions.

Stepwise regression of the improved model shows that the cost/comfort trade-off factor explains 19% of the

variation in mobility intentions, more than the entire traditional model. Family tradition and neighborhood satisfaction each contribute an additional three percent of explained variation to the improved model, for a total R^2 of 0.25.

Discussion

In determining the predictive ability of a variety of mobility determinants, age displays a significant negative relationship to mobility intentions. This finding is supported by the work of McAuley and Nutty (1982); McHugh, et al. (1990); Roistacher (1975); Rossi (1955), Speare (1970 & 1974); and Stewart and McKown (1977). Two residential satisfaction variables, dwelling satisfaction and neighborhood satisfaction, are also significant negative mobility determinants. Such findings relate to the results of previous research on this topic (McHugh, et al., 1990; Morris, et al., 1976; Rossi, 1955; Speare, 1974; and Stewart & McKown, 1977). Although past research shows that many other socio-demographic and housing-related characteristics are also related to mobility intentions, the results of this study do not support such claims.

A lack of significance among the variables studied may be explained in a several ways. First, the methodology employed in this study may contribute to a lack of significance between mobility intentions and these variables. In drawing the subset from the original sample, seven potential respondents had already moved and were

therefore no longer available for the study. As a result, the responses that were obtained were from a sample that may have had overall lower mobility intentions than would have otherwise been the case. However, if the respondents in this sample do have lower mobility desires than the population as a whole, such a situation only reinforces the relationship that exists between mobility intentions and those variables that were found to be significant mobility predictors.

Second, most of the variables in question are not clear cut mobility predictors, according to previous studies. By re-examining Table 6, a variety of household characteristics, housing-related characteristics, and residential satisfaction variables are either studied by too few researchers to determine a relationship to mobility intentions, or the findings are not consistent from one study to another. Age, dwelling satisfaction, and neighborhood satisfaction are all mobility determinants in previous investigations as well as in this study.

The major contradiction between previous research and this study is a lack of predictive ability of housing tenure status and mobility intentions. Previous researchers (McAllister, et al., 1970; McHugh, et al., 1990; Morris, et al., 1976; Roistacher, 1975; Rossi, 1955; Speare, 1970, 1974; and Stewart & McKown, 1977) overwhelmingly conclude that owners are more stable than renters, but this study does not support such findings. A possible explanation for

this lies in the tenure status of this particular sample. As is typical of rural residents, almost all of the respondents (95.9%) own or are buying their homes. A lack of variation in tenure status may contribute to this inconsistent finding. In addition, it may mean that renters are also psychologically attached to their dwellings, and therefore do not wish to move.

This research does, however, support the findings of O'Bryant and McGloshen (1987) that attachment-to-home factors are significant predictors of mobility intentions. Consistent with their findings, the current study finds that the family tradition factor and the cost/comfort trade-off factor are both negatively related to the desire to move. Failure of the status of home owner factor as a significant mobility determinant may also be attributed to the high number of home owners in this sample.

The second objective of this study was to compare a model of traditional mobility determinants with a model that also incorporates attachment-to-home factors. Only two of the traditional mobility variables are significantly related to mobility intentions - neighborhood satisfaction and dwelling satisfaction. Together they explain over nine percent of the variation in mobility intentions. When the attachment-to-home factors are included, the model explains 25% of the variation and includes the cost/comfort trade-off factor, the family tradition factor, and neighborhood satisfaction.

While it was anticipated that the attachment-to-home factors would make a contribution to the traditional mobility model, it is surprising that these additional variables more than doubled the R-square value of the model. It is nonetheless recognized that the improved model explains only 25% of the variation in mobility intentions. These results emphasize the necessity of including the subjective mobility predictors that have been omitted in previous models of residential mobility as well as the need to continue searching for additional mobility predictors.

Implications

The results of this study point to several implications. Suggestions are given for both researchers and practitioners.

This study is limited by the fact that some potential respondents moved between the two data collection periods. In future investigations of mobility intentions, efforts should be made to avoid the methodological situation encountered in this study. This would create a better measure of the dependent variable. Future research should also include both rural and urban respondents to increase the diversity of the respondents' housing tenure status.

Professionals should be aware of the attachment-to-home factors as significant mobility predictors. By knowing that rural residents who are firmly rooted place great importance on family tradition and the balance between housing cost and housing comfort, the findings can be used to improve the

quality of life of rural residents. If deteriorating economic conditions in rural areas force these individuals to leave their home to look elsewhere for employment, health care, or other amenities, efforts should be made to assist them in recreating the concept of "home" in the new location.

Finally, the significant contribution of psychological attachment-to-home to traditional models of mobility intentions opens up opportunities for multi-disciplinary research on the topic. Home economists, along with demographers, geographers, sociologists, and psychologists should work together toward theoretical explanations for mobility intentions.

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Table 6

Summary of Mobility Predictors

	Personal Characteristics of Household								Housing-Related Characteristics						Residential Satisfaction		
	Age or Life-cycle Stage	Family Size	Length of Residence	Sex	Race	Education	Employment	Income	Tenure	Structure Type	Age	Size	Quality	Value	Housing	Neighborhood	Community
Heaton, Fuguitt, Fredricks, & Zuiches (1973)																	-
McAllister Kaiser, & Butler (1970)					-				-								
McAuley & Nutty (1982)	-																
McHugh Gober, & Reid (1990)	-	0	-					0	-		-	0		-	-	-	
Morris Crull & Winter (1976)			0	-		0	0	0	-	-					-	-	
Roistacher (1975)	-	-		0	0	0		0	-								
Rossi (1955)	-	+							-			-			-	-	
Speare (1970)	-		-						-								
Speare (1974)	-	+	-			0		-	-			-			-	-	
Stewart & McKown (1977)	-		0	-	0	0		0	-	0	0	0	-		-	-	

+ = variable positively related to mobility
- = variable negatively related to mobility
0 = variable not related to mobility
blank = variable not studied

Table 7

Characteristics of Respondents

		f	%
Age:			
	less than 34	35	17.9
	35 - 44	41	21.1
	45 - 54	28	14.3
	55 - 64	42	22.1
	65 and over	48	25.6
Sex:			
	male	112	56.6
	female	86	43.4
Race:			
	white	178	89.9
	non-white	20	10.1
Marital status:			
	married	164	82.8
	not married	34	17.2
Household size:			
	1	33	16.7
	2	81	40.9
	3	39	19.7
	4	35	17.7
	5	10	5.1

Table 7 (continued)

		f	%
Education:			
	11 years or less	43	21.8
	high school grad.	73	37.1
	some college	43	21.8
	college degree	38	19.1
Occupation:			
	not employed	106	53.5
	service	10	5.1
	blue collar	47	23.7
	white collar	35	17.7
Income:			
	less than $5,000	6	3.0
	5,000 - 9,999	24	12.2
	10,000 - 14,999	23	11.7
	15,000 - 19,999	20	10.2
	20,000 - 24,999	22	11.2
	25,000 - 29,999	18	9.1
	30,000 - 39,999	39	19.8
	40,000 - 49,999	26	13.2
	50,000 or greater	19	9.6

Table 8

Analysis of Variables Related to Mobility Intentions

Variable	Correlation Coefficient (p)	Traditional Model Regression Coefficient (p)	Improved Model Regression Coefficient (p)
Respondent Characteristics:			
Age	-0.14 (0.05)	-0.04 (0.71)	-0.18 (0.11)
Sex	-0.10 (0.17)	-0.05 (0.59)	-0.00 (0.97)
Race	-0.02 (0.97)	0.02 (0.79)	-0.01 (0.90)
Marital status	0.03 (0.69)	0.08 (0.41)	0.12 (0.16)
Household size	0.12 (0.10)	-0.08 (0.44)	-0.13 (0.18)
Education	0.03 (0.71)	-0.02 (0.81)	-0.03 (0.68)
Occupation	0.05 (0.45)	0.06 (0.51)	0.00 (0.96)
Length of Residence	-0.08 (0.22)	-0.01 (0.87)	0.15 (0.07)

Table 8 (continued)

Variable	Correlation Coefficient (p)	Traditional Model Regression Coefficient (p)	Improved Model Regression Coefficient (p)
Income	0.01 (0.89)	0.03 (0.78)	0.04 (0.64)
Housing-related Characteristics:			
House type	-0.09 (0.19)	-0.06 (0.47)	-0.01 (0.87)
Tenure	-0.10 (0.14)	-0.07 (0.34)	-0.03 (0.69)
Year built	-0.01 (0.98)		
Size	-0.06 (0.40)		
Condition	-0.11 (0.17)		
Assessed value	-0.06 (0.41)		
Residential Satisfaction:			
Dwelling	-0.21 (0.00)	-0.17 (0.04)	-0.01 (0.89)

Table 8 (continued)

Variable	Correlation Coefficient (p)	Traditional Model Regression Coefficient (p)	Improved Model Regression Coefficient (p)
Neighborhood	-0.26 (0.00)	-0.24 (0.00)	-0.19 (0.01)
Community	-0.13 (0.07)	-0.03 (0.72)	0.10 (0.19)
Attachment-to-home Factors:			
Family tradition	-0.30 (0.00)		-0.31 (0.00)
Status of home ownership	-0.04 (0.62)		0.13 (0.10)
Cost/comfort trade-off	-0.38 (0.00)		-0.37 (0.00)
Confidence in home	0.11 (0.12)		0.02 (0.74)
Explained Variation	(R^2)	0.09	0.25

CHAPTER V

MOBILITY INTENTIONS OF RURAL ELDERLY AND NON-ELDERLY: IMPLICATIONS FOR SOCIAL SERVICES AND PLANNED HOUSING FOR THE ELDERLY

MANUSCRIPT FOR PUBLICATION

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MOBILITY INTENTIONS OF RURAL ELDERLY AND NON-ELDERLY: IMPLICATIONS FOR SOCIAL SERVICES AND PLANNED HOUSING FOR THE ELDERLY

ABSTRACT

Although mobility investigations in urban areas indicate an overwhelming desire of older persons to age in place, such studies in rural areas are scarce. With the poor conditions that exist for rural elderly, it is important to understand their desire to stay. This study uses 198 rural residents to examine the relationship between age and the desire to move. Assessment is made of the differences between elderly and younger respondents for socio-demographic and housing characteristics and housing attitudes. Findings indicate rural elderly prefer to remain in their present home and are significantly different from their younger counterparts in socio-demographic characteristics. Results are used to make recommendations for housing the elderly as well as services to assist them in their own home. Suggestions are given for further research which may indicate differences in housing between the two age groups.

Mobility Intentions of Rural Elderly and Non-elderly: Implications for Social Services and Planned Housing for the Elderly

The factors related to one's desire to move have been extensively researched in a number of disciplines. Such investigations overwhelmingly conclude that age is significantly related to mobility intentions, with older persons being more stable and younger persons being more mobile. However, research on age-related mobility intentions of rural residents is scarce. Because maintaining an independent residence may be especially difficult for rural elderly, additional research is needed to identify the mobility intentions, personal and housing characteristics, and housing attitudes of rural residents.

The purpose of this study is to investigate the mobility intentions, socio-demographic and housing characteristics, and housing attitudes of rural residents in an effort to address the specific needs and resources of the rural elderly. Specific objectives include:

1. to determine the relationship between age and mobility intentions, and
2. to compare the socio-demographic characteris-tics, housing characteristics, and housing attitudes of the rural elderly and non-elderly.

Review of Related Literature

Previous Mobility Studies

Mobility studies using urban samples span four decades, beginning with Rossi's (1955) classic study of Philadelphia residents. This research found age to have a negative influence on the desire to move. Age continues to be negatively related to the desire to move in subsequent urban studies of residents of Rhode Island (Speare, 1970), a metropolitan New York county (Morris, Crull, & Winter, 1976), Pennsylvania (McAuley and Nutty, 1982), and Phoenix (McHugh, Gober, & Reid, 1990).

In one of the few rural investigations, Stewart and McKown's 1977 study supports the results of urban mobility studies, confirming age as a negative predictor of the desire to move. However, such research needs to be updated. Additionally, research is needed to assess the personal and housing characteristics of the rural elderly in an effort to provide the best residential environment.

The Elderly Population

Mobility research overwhelmingly indicates the desire of older persons to 'age in place'. In establishing policies to meet the residential needs of older persons, it is important to understand their personal and housing characteristics as well as needs and preferences for living environments. Such findings can be used to support older persons in their current rural environment or in another setting when the rural community cannot feasibly do so.

The American Association of Retired Persons (1987) reports 12.1 percent of the U.S. population is age 65 or older, with a disproportionate share in rural areas (Glascow, 1988). Glascow's (1988) review of census data found 10.7 percent of the elderly living in urban areas and 13 percent in rural areas. The 1979 and 1984 Annual Housing Survey data analyzed by Arnold (1984) suggests the number of rural elderly households is growing rapidly with a 16 percent increase in rural elderly households compared to a 10 percent increase in all U.S. households during the same time period.

The South experienced an even greater increase in rural elderly households at 21 percent where there continues to be more rural elderly than in any other region of the United States, with 43 percent of the national rural elderly population (Arnold, 1984). This over-concentration of rural elderly is expected to increase in the depressed agriculture areas of the South and Midwest as young people continue to move to urban areas for economic benefits and leave the rural elderly behind.

Socio-demographic characteristics. Both rural and urban elderly are experiencing an increase in educational attainment compared to previous generations of elderly (AARP, 1987), but the growth has not been as great for rural elderly (Arnold, 1984). The percentage of all older persons completing high school rose from 28 percent in 1970 to 49 percent in 1986 (AARP, 1987). For rural elderly, Arnold

(1984) reports that 22 percent of those age 65-74 had graduated from high school compared to 14 percent of those age 75 and older. Soldo (1982) suggests poorly educated older adults often have trouble finding out about service and benefit programs and, once they do, find it difficult and frustrating to deal with the paperwork and bureaucracy.

Not everyone retires at age 65. Many are able to do so in their 50's or early 60's and a few continue working into their 70's and beyond. In 1978, only 21 percent of those age 65 and older remained in the work force (Soldo, 1982). Those still in the labor force were frequently working in low-paying, white-collar and service jobs.

Personal income is usually cut by a third to one-half after age 65 when most people are retired (U.S. Bureau of the Census, 1980). While this is true for most all older people, the income differences of rural and urban elderly are striking. In 1986 the poverty rate for all persons age 65 and older was 12.4 percent (AARP, 1987). For rural elderly the incidence of poverty was 29 percent (Arnold, 1984). This is compared to a poverty level of 10 percent in younger rural households. While rural aged incomes are low, they vary by region with the lowest income levels occurring in the South (Arnold, 1984).

Old age in itself is not a disease but is accompanied by physical changes brought about by the normal aging process. Muscle strength gradually diminishes, bones become more brittle, response time slows, and the senses dull

(Hickey, 1980). With all these changes, it is not surprising that the elderly are more susceptible to chronic illness and disability. Kovar (1977) notes that the prevalence for chronic conditions is greater in rural areas, especially in the South. In 1986 (AARP, 1987), 30 percent of older persons assessed their health as fair or poor. AARP (1987) also reports that in 1984, while the older age group represented 12 percent of the total U.S. population, they accounted for 31 percent of total health care expenditures. Hospital expenses accounted for the largest share of health expenditures, followed by physicians and nursing home care.

Living Arrangements and Housing Characteristics. The majority of the noninstitutionalized elderly live in a family setting with spouse, children, siblings, or other relatives. Three percent live with nonrelatives and 30 percent live alone (AARP, 1987). Contrary to popular belief, only five percent of older Americans live in nursing homes. The rate of institutional-ization increases with age from one percent for those age 65-74, six percent for those 75-84, and 22 percent for those age 85 and older (AARP, 1987). Not only is institutionalization affected by age but also by marital status. Glascow (1988) suggests that having a spouse is often the key to maintaining an independent household.

In 1986 (AARP, 1987), 75 percent of older residents nationwide were owners and 25 percent were renters. Home

ownership is greater among rural elderly with 83 percent (Arnold, 1984). Arnold also found that while most rural elderly live in single-family detached units, 10 percent live in mobile homes and seven percent live in multiple units. In addition, this review of Annual Housing Survey data revealed that rural elderly homes are smaller than other rural households, but larger than the homes of urban elderly. Over half of the rural elderly have lived in their current homes 20 years or more.

Housing affordability is a problem for many elderly. Although the homes of many older persons are debt free, on reduced or fixed incomes, many have problems meeting the rising costs of property taxes, utilities, and maintenance. Arnold (1984) reports that 20 percent of rural elderly home owners devoted more than 30 percent of their incomes to housing. Forty-eight percent of rural elderly renters also spent more than this amount.

Most elderly people in the United States live in adequate housing, but in rural areas, 27 percent of elderly renters and 18 percent of all elderly living in the South have inadequate housing (Arnold, 1984). Inadequate housing is defined as having one or more of the following flaws: incomplete plumbing, incomplete kitchen, leaking roof, holes in walls or ceiling, and exposed wiring.

An overview of characteristics of the elderly population provides evidence that they are a vulnerable group. Unfavorable circumstances are most often found in

the rural aged, particularly those living in the South. Dibner (1983) points out factors particularly relevant to the rural elderly that make it difficult for them to continue to maintain an independent residence. He cites these six conditions that are relatively weak in rural areas: 1) the availability of organized community services, 2) the availability of family and the supportive services they provide, 3) the interaction with help received from friends and neighbors, 4) the quality of housing, 5) transportation, and 6) income.

Relocation of the Elderly

Additional demographic information suggests that the elderly as a group are less likely to change residence than other age groups. In 1985, only 16 percent of persons 65 and older had moved since 1980 compared to 45 percent of persons under 65 (AARP, 1987). The same is true of rural elderly home owners. Only 14 percent had lived in their current units less than five years (Arnold, 1984).

Change of residence is one of a number of events on Holmes and Rahe's (1967) life change index that is considered to have negative effects on the individual. There is concern that relocation by older people in particular may come at a time when it is likely to be accompanied by other equally stressful events such as retirement, illness, financial setback, or loss of spouse.

Housing Attitudes of Older Adults

Minimal attention has been given to the housing attitudes of older persons. O'Bryant's work on attachment-to-home has been used to make suggestions for the elderly person's environment on the basis of family tradition, status of home ownership, cost of home, comfort of home, and competence in a familiar environment (O'Bryant, 1983; O'Bryant & McGloshen, 1987; O'Bryant & Nocera, 1985). However, these studies have been restricted to an urban sample.

Methodology

A two phase method was used in the process of obtaining data for this study. In both phase one and phase two, Dillman's (1978) Total Design Method serves as the guide for the instrument development and data collection procedures.

Phase One

The sample was chosen from non-SMSA counties using a geographical stratification in two Southern states. Systematic random sampling identified 4800 individual households from telephone directories in the 16 selected counties. A self-administered questionnaire designed to elicit respondents' socio-demographic and housing characteristics, residential satisfaction, and mobility intentions was mailed to potential respondents in the Fall of 1988. Completed questionnaires were returned by 1648 households for a return rate of 40 percent.

Phase Two

The phase two sample consists of a subset of the sample used in phase one. Potential respondents were randomly chosen from the questionnaires completed and returned by respondents in phase one.

An in-depth interview schedule designed to provoke a greater depth of information was used as the data collection instrument in phase two. Like the phase one instrument, the in-depth interview schedule elicited respondent's socio-demographic and housing characteristics, residential satisfaction, and mobility intentions; however, the inquiry included more open-ended questions. In addition, the schedule derived respondents' subjective value of home through a version of O'Bryant's (1983) Attachment-to-Home Scale. An additional instrument was used to obtain housing information from county property assessment records on each residence in the phase two sample.

In the Summer of 1990, telephone interviews were attempted with 209 individuals, with usable data obtained from 198. County property assessment records were examined for the residences of the 198 respondents, with complete data available for 146 cases.

Findings

Characteristics of Respondents

Demographic data are presented in Table 9. The age of respondents ranged from 20 to 84 with a mean of approximately 52 years. Participation in the study was

fairly well divided between males (57%) and females (43%) An overwhelming majority of the respondents were white and married. Household size of the sample was small ($\bar{X}$=2.4) with the majority having only one or two members.

Insert Table 9 about here

Respondents had a higher than average level of education of about 13 years. Slightly over half of the respondents were not employed, which may be indicative of the advanced age of the sample. Employed respondents were more likely to be in blue collar occupations. Family income was distributed across all categories with the majority of the households earning less than $30,000 per year.

Pearson's Product Moment Correlation assessed the relationship between age and mobility intentions. The results indicate a negative relationship with a correlation coefficient of -0.14, statistically significant at 0.05.

Socio-demographic Characteristics

Differences in the elderly and non-elderly age groups for socio-demographic characteristics are ascertained with chi square analysis (Table 10) and are as expected based on previous research. Marital status of the two groups is significantly different with the younger respondents more likely to be married. Household size is also a unique variable with the older age group more likely to have smaller households. Analysis of length of residence

indicates the older respondents have lived in their current dwelling for a longer period of time. The two age groups also vary on the respondents' self-reported health with younger households reporting better health status.

Insert Table 10 about here

Significant variations in educational attainment reveal that the younger group has completed more years of education. Differences in employment character-istics are significant for the two groups with the elderly group less likely to be employed and the younger group better represented in blue collar and white collar occupations. Income differences are substantial for the two groups with higher incomes for those under age 65.

Housing Characteristics

Chi square analysis of the age groups' housing characteristics is shown in Table 11. Although a greater proportion of elderly respondents live in a conventional single-family structure, the difference is not significant. Almost all of the respondents own or are buying their home with no significant difference in the older and younger respondents. Neither the size nor the age of the home is significantly different by age group. Additionally, although the differences are not significant, older persons' homes are in slightly better condition than the younger age group. In addition, house value for the two age groups is

similar. Monthly housing costs (including rent or mortgage payment, utilities, and insurance) are significantly greater for those under age 65. Many of these findings are in contrast to previous research.

Insert Table 11 about here

Attachment-to-Home

Before using the Attachment-to-Home Scale to assess the housing attitudes of the two age groups, principle components factor analysis of the 24 item scale was performed; orthogonal rotation produced four factors with high reliability coefficients. Factor 1 is called family tradition (a=0.82) and contains five statements related to the home as a place of family memories. Status of home ownership (a=0.82) is the title given to factor 2 which contains five statements related to the respect given to those who own their homes. Five statements related to the balance between the cost of the home and the comfort it provides forms the third factor and is named cost/comfort trade-off (a=0.81). A fourth factor containing three items related to the home as a wise investment and familiar place and is titled confidence in home (a=0.60).

Attachment-to-home subscales were derived for each respondent by summing the scores for items loading on each of the four factors. So that the subscales could be compared to one another, each factor score was divided by

the number of items loading on the factor. The four factors were then used as four separate dependent variables with possible scores ranging from 1 (low) to 6 (high).[1]

Comparison of the attachment-to-home scores for the elderly and non-elderly age groups was assessed through t-test analysis (Table 12). As indicated, the mean score for both age groups on the four factors is high.

Insert Table 12 about here

Elderly and non-elderly respondents are identical on their mean scores on the family tradition factor ($\bar{X}$=3.88, p=.99). Status of home ownership is the only factor on which the two age groups score significantly different (elderly $\bar{X}$=4.13, non-elderly $\bar{X}$=3.61, p=.00). Both age groups scored exceptionally high on the cost/comfort trade-off factor (elderly $\bar{X}$=4.94, non-elderly $\bar{X}$=4.96), but no statistically significant difference is indicated. In addition, the mean scores on the confidence in home factor were not significantly different (elderly $\bar{X}$=4.07, non-elderly $\bar{X}$=4.09).

Discussion

The first objective of this study was to determine the relationship between age and mobility intentions in a sample of rural residents. A negative relationship was found and expected, based on the literature cited.

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1 Details on the analysis of the Attachment-to-Home Scale are available from the first author.

Assessment of differences in socio-demographic and housing characteristics between elderly and non-elderly respondents constitutes the second objective of the study. Elderly respondents are significantly less likely to be married, healthy, employed, or educated. Older persons also have smaller households and less income. These findings were expected based on previous research. However, the lack of difference in housing characteristics between the two age groups was surprising. A possible explanation for this lies in the sample selection.

A closer look at the data used in this study reveals that one of the counties from which the sample was selected is a retirement/recreation area which is atypical of Southern rural communities. Of the 24 respondents from this county, 14 are over age 65. These retirement community dwellers make up nearly one-third of the 48 elderly respondents in the study. These respondents own homes of 1100 square feet or more, built since 1970, assessed as average or excellent condition, with values over $32,000. The inclusion of this community may have skewed the findings, making the housing characteristics of the elderly respondents appear to be better than what they are in a typical rural setting.

It was expected that the attachment-to-home mean factor scores would be different for the two age groups with older persons scoring higher on the factors. In fact, the mean factor scores for both age groups were high with significant

differences for only the status of home ownership factor. The older respondents are more likely than younger respondents to view their home ownership as a status symbol.

Implications

An expected finding of this study was the desire of older rural residents to "age in place." This finding coupled with the characteristics of the older respondents and their housing attitudes point toward several implications. These are given for those responsible for shaping the residential environment for the elderly as well as those researching the topic.

Although it is their preference to stay in the home to which they are so attached, the characteristics of many older persons and a lack of amenities in rural areas makes this unlikely. A significant proportion of the older respondents are in poor health. Those without a spouse will have difficulty maintaining a home independently. As rural health care facilities continue to close as a result of economic ills, rural elderly may be forced to moved to seek medical attention and personal care in a more urban setting.

Because of the older person's lack of education, residential facilities to which the rural elderly may move should be free of bureaucratic red tape. In addition, due to the low incomes of the rural elderly, residential facilities should be as inexpensive as possible.

Also, administrators and staff of housing units designed for older residents should be aware of measures to

recreate the concept of home in the new environment. Family photographs and mementos can be brought from home to make the environment more family oriented. Leadership roles and responsibilities can be assigned to the residents to replace the status held as a homeowner. As a result, the high housing satisfaction held by elderly homeowners can be maintained even though many may be renters in later life.

The necessary balance between cost and comfort can be maintained with inexpensive gestures to meet residents' needs. Tours, visits, and even overnight stays at a residential facility to which one may later move will aid in familiarizing the older person with the environment and increase confidence in the new location.

Because relocation of older persons from their community residence can be so devastating, support systems in rural areas should be established to assist those who choose to remain in their own home. Such innovative programs have been implemented in Sweden for those rural elderly who lack access to the assistance programs more often found in larger communities (Little, 1979). Sweden's program uses rural mail carriers who periodically "check in on" older residents on their delivery route. In addition, the government-sponsored program has teams of home care providers who assist with shopping, food preparation, cleaning, personal hygiene, and health care to allow older persons to remain independent in their own home for as long as possible.

While it was expected, based on previous research, that typical older rural residents do have poorer housing conditions than their younger counterparts, this study did not find any significant differences. It is believed that the inclusion of a retirement/recreation community in the sample may have lead to these findings. Additional research is needed on the housing characteristics of older rural residents, using a sample of "typical" rural elderly rather than the one employed in this study. If rural elderly residents' homes are found to be in poor condition, efforts to address their desire to age in place must also respond to their housing conditions.

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Table 9

Characteristics of Respondents[a]

		f	%
Age:			
	less than 34	35	17.9
	35 - 44	41	21.1
	45 - 54	28	14.3
	55 - 64	42	22.1
	65 and over	48	25.6
Sex:			
	male	112	56.6
	female	86	43.4
Race:			
	white	178	89.9
	non-white	20	10.1
Marital status:			
	married	164	82.8
	not married	34	17.2
Household size:			
	1	33	16.7
	2	81	40.9
	3	39	19.7
	4	35	17.7
	5	10	5.1

Table 9 (continued)

		f	%
Education:			
	11 years or less	43	21.8
	high school grad.	73	37.1
	some college	43	21.8
	college degree	38	19.1
Occupation:			
	not employed	106	53.5
	service	10	5.1
	blue collar	47	23.7
	white collar	35	17.7
Income:			
	less than $5,000	6	3.0
	5,000 - 9,999	24	12.2
	10,000 - 14,999	23	11.7
	15,000 - 19,999	20	10.2
	20,000 - 24,999	22	11.2
	25,000 - 29,999	18	9.1
	30,000 - 39,999	39	19.8
	40,000 - 49,999	26	13.2
	50,000 or greater	19	9.6

[a] n=198

Table 10

Chi Square Analysis of Socio-demographic Characteristics

Variable	Elderly[a] n	(%)	Non-elderly[b] n	(%)	X^2	p
Marital status					6.41	0.01
Married	34	(70.83)	130	(86.67)		
Not married	14	(29.17)	20	(13.33)		
Family size					32.99	0.00
One	16	(33.33)	17	(11.33)		
Two	28	(58.33)	53	(35.33)		
Three	3	(6.25)	36	(24.00)		
Four or more	1	(2.08)	44	(29.34)		
Length of residence					6.86	0.07
1 - 5 years	7	(14.58)	30	(20.00)		
6 - 10 years	8	(16.67)	41	(27.33)		
11 - 20 years	15	(31.25)	49	(32.67)		
More than 20	18	(37.50)	30	(20.00)		

Table 10 (continued)

Variable	Elderly[a] n	(%)	Non-elderly[b] n	(%)	X^2	p
Respondent health					28.79	0.00
Poor	7	(14.89)	6	(4.00)		
Fair	18	(38.30)	19	(12.67)		
Good	18	(38.30)	71	(47.33)		
Excellent	4	(8.51)	54	(36.00)		
Education					22.38	0.00
0 - 11 years	22	(45.83)	22	(14.67)		
H.S. grad.	16	(33.33)	57	(38.00)		
Some college	5	(10.42)	38	(25.33)		
College grad.	5	(10.42)	33	(10.42)		
Occupation					34.52	0.00
Not employed	43	(89.58)	63	(42.00)		
Service	0	(0.00)	10	(6.67)		
Blue collar	5	(10.42)	42	(28.00)		
White collar	0	(0.00)	35	(23.33)		

Table 10 (continued)

Variable	Elderly[a] n	(%)	Non-elderly[b] n	(%)	X^2	p
Income					23.90	0.00
<$10,000	16	(33.33)	15	(10.00)		
$10-29,999	20	(41.67)	45	(30.00)		
$30-49,999	8	(16.67)	75	(50.00)		
$50,000+	4	(8.33)	15	(10.00)		

[a] n=48 [b] n=150

Table 11

Chi Square Analysis of Housing Characteristics

Variable	Elderly[a] n	(%)	Non-elderly[b] n	(%)	X^2	p
Tenure					0.57	0.45
Rent	1	(2.17)	7	(4.70)		
Own/buying	45	(97.83)	142	(95.30)		
House-type					2.57	0.11
Conventional	44	(91.67)	123	(82.00)		
Other	4	(8.33)	27	(18.00)		
Size (sq. ft.)					4.40	0.36
800 or less	8	(16.67)	27	(18.00)		
801 - 1200	16	(33.33)	44	(29.33)		
1201 - 1600	20	(41.67)	48	(32.00)		
1601 - 2000	2	(4.17)	18	(12.00)		
over 2000	2	(4.17)	13	(8.67)		

Table 11 (continued)

Variable	Elderly[a] n	(%)	Non-elderly[b] n	(%)	X^2	p
Year built					0.89	0.83
Before 1940	18	(37.50)	49	(32.67)		
1940 - 1959	6	(12.50)	16	(10.67)		
1969 - 1979	19	(39.58)	63	(42.00)		
Since 1980	5	(10.42)	22	(14.67)		
Condition					7.27	0.06
Poor	0	(0.00)	5	(4.39)		
Fair	11	(26.19)	30	(26.32)		
Average	29	(69.05)	79	(69.30)		
Excellent	2	(4.76)	0	(0.00)		

Table 11 (continued)

Variable	Elderly[a] n	(%)	Non-elderly[b] n	(%)	X^2	p
Assessed value					7.72	0.10
<$10,000	8	(16.67)	31	(20.67)		
$10-24,999	16	(33.33)	36	(24.00)		
$25-39,999	12	(25.00)	58	(38.67)		
$40-64,999	11	(22.92)	17	(11.33)		
$65,000+	1	(2.08)	8	(5.33)		
Monthly cost					11.76	0.00
<$200	29	(60.42)	53	(35.33)		
$200 - 499	16	(33.33)	62	(41.33)		
$500 - 799	2	(4.17)	28	(18.67)		
$800 or more	1	(2.08)	7	(4.67)		

[a] n=48 [b] n=150

Table 12

T-test Between Elderly and Non-Elderly Respondents: Attachment-to-Home Mean Factor Scores

Factor	Elderly[a]	Non-elderly[b]	T	p-value
Family tradition	3.88	3.88	-0.0061	0.9911
Status of home ownership	4.13	3.61	-0.3198	0.0019
Cost/comfort trade-off	4.94	4.96	0.1174	0.9069
Confidence in home	4.07	4.09	0.1699	0.8655

[a] n=48 [b] n=150

CHAPTER VI

PSYCHOLOGICAL ATTACHMENT-TO-HOME AS AN INTERVENING VARIABLE IN A MODEL OF RESIDENTIAL MOBILITY INTENTIONS

MANUSCRIPT FOR PUBLICATION

JOURNAL TITLE: HOUSING AND SOCIETY

PSYCHOLOGICAL ATTACHMENT-TO-HOME AS AN INTERVENING VARIABLE IN A MODEL OF RESIDENTIAL MOBILITY INTENTIONS

ABSTRACT

The desire to move is a complex social science topic resulting from a interrelated set of variables. A limited number of studies have used path analysis to examine the direct and indirect influence of a variety of factors that affect mobility intentions, but the variables used may be incomplete. This study incorporates psychological attachment-to-home as an additional factor in a mobility intentions model and investigates its role as an intervening variable between background characteristics and the desire to move. Data are analyzed for 132 subjects who responded to a mail questionnaire and an in-depth interview. Property assessment records for the respondents' residences are also used in the study. Path analysis reveals that psychological attachment-to-home serves as an intervening variable in the mobility intentions model as a response to characteristics of the respondents and their residences.

Psychological Attachment-to-Home as an Intervening Variable in a Model of Mobility Intentions

Path analysis has become an increasingly popular tool in social science research to estimate the magnitude of the relationship between variables in complex systems. The primary advantage of path analysis is the ability to identify direct and indirect variable relationships providing explanations for underlying causal processes.

As a complex social science issue, previous investigations of mobility intentions have used path analysis to determine direct and indirect influences on the desire to move (McHugh, Gober, & Reid, 1990; Morris, Crull, & Winter, 1976; Speare, 1974; Stewart & McKown, 1977). However, results of other research suggests that an additional variable, psychological attachment-to-home, may add significant information to previous models of mobility intentions (Earhart & Weber, 1991; O'Bryant & McGloshen, 1987). As a result, further analysis is needed to determine the causal behavior of the mobility variables in light of this new information.

The purpose of this study is to determine whether psychological attachment-to-home acts as a response to characteristics of the respondents and their residences to influence housing satisfaction and the desire to move. If psychological attachment-to-home is an intervening variable it should be more strongly related to the desire to move than any of the socio-demographic or housing

characteristics. It is also necessary that the independent variables be related to psychological attachment-to-home. As a result, the effect of the independent variables on mobility intentions can be explained as an indirect effect which acts through psychological attachment-to-home. The model being tested in this study is shown in Figure 2.

Insert Figure 2 about here

Background of Path Analysis

According to Asher (1981), path analysis provides information about the linkages between interval level (or quasi-interval level) variables by connecting these variables with estimates of the strength of the relationship. Exogenous variables are those that are antecedent to the dependent variable and are assumed to be given. Intervening or endogenous variables are those that directly affect the dependent variable but are also affected by the exogenous or independent variables as intervening between the independent and dependent variables.

The path estimates or coefficients are obtained through a series of multiple regression equations. Path coefficients are synonymous with standardized regression coefficients and are interpreted as how much change a unit increase in one variable will produce in another variable when other variables are controlled.

Review of Related Literature

Individual predictors of mobility intentions

Previous investigations of mobility intentions conclude that socio-demographic characteristics are significant predictors of the desire to move. Family size appears to be the only factor consistently documented as having a positive relationship to mobility intentions (Rossi, 1955; Speare, 1974). Negative influences on mobility intentions have been found with both age and length of residence (McHugh, et al., 1990; Rossi, 1955; Speare, 1970, 1974). Other socio-demographic characteristics, including sex, race, employment, education, and income have been studied as relating to mobility intentions; however, the investigations have been few and the results contradictory from one study to another.

Of the housing characteristics studied, tenure status has the greatest influence on mobility intentions with renters more likely to report a desire to move (McHugh et al., 1990; Morris, et al., 1976; Rossi, 1955; Speare, 1970, 1974; Stewart & McKown, 1977). Other residential characteristics investigated as mobility predictors include house age, size, quality, value, and structure type, but with too little attention to make specific conclusions.

The mobility intentions investigation by Morris et al. (1976) found normative housing deficits to influence the desire to move. Normative housing deficits, defined as the difference in housing characteristics prescribed for a

household by society and actual housing characteristics of the household, exist for renters and those who live in other than single-family detached dwellings, as well as those whose homes are small or of poor quality. Deficits can be reduced by moving to a more socially acceptable dwelling unit.

Recent research by Earhart and Weber (1991) and O'Bryant and McGloshen (1987) suggests that mobility intentions are shaped more by one's psychological attachment to their residence than socio-demographic or housing characteristics. Such investigations reveal that those persons who view their home as a reservoir of family memories, a cost-effective comfortable place to live, a status symbol, and a familiar environment, have a greater desire to remain in that home.

Contentment with one's environment has been studied by a variety of investigators as a predictor of mobility intentions (Heaton, Fredrickson, Fuguitt, & Zuiches, 1979; McHugh, et al., 1990; Morris, et al., 1976; Rossi, 1955; Speare, 1974; Stewart & McKown, 1977). These studies overwhelmingly conclude that satisfaction with the dwelling, the neighborhood, and the community negatively influence the desire to move.

Mobility Models Using Path Analysis

Path analysis was used in mobility models as early as 1974 in Speare's investigation of residential satisfaction as an intervening variable in mobility decision-making

(Speare, 1974). The resulting model indicated that individual characteristics (age of head and length of residence) and housing characteristics (home ownership and room crowding) influence the desire to move through their effect on an index of residential satisfaction. Further use of path analysis by Stewart and McKown (1977) showed similar results, that characteristics of the family and their housing operate through residential satisfaction variables to indirectly affect the desire to change housing.

More recent use of path analytical techniques delineates the role of residential satisfaction as an intervening variable in a model of mobility expectations. McHugh, et al. (1990) found that residential satisfaction does act as an intervening variable, but the effects are different for home owners and renters in their plans to change location in the short-term and long-term.

In the mobility intentions model developed by Morris, et al. (1976), normative housing deficits are introduced into the path analysis model as intervening variables between socioeconomic and demographic characteristics and residential satisfaction. The results indicate that the propensity to move is a response to housing satisfaction which is achieved when actual housing characteristics match those prescribed by society.

Methodology

A two phase method was used in the process of obtaining data for this study. In both phase one and phase two,

Dillman's (1978) Total Design Method serves as the guide for the instrument development and data collection procedures.

Phase One

The sample was chosen from non-SMSA counties using a geographical stratification in two Southern states. Systematic random sampling identified 4800 individual households from telephone directories in the 16 selected counties. A self-administered questionnaire designed to elicit respondents' socio-demographic and housing characteristics, residential satisfaction, and mobility intentions was mailed to potential respondents in the Fall of 1988. Completed questionnaires were returned by 1648 households for a return rate of 40 percent.

Phase Two

The phase two sample consists of a subset of the sample used in phase one. Potential respondents were randomly chosen from the questionnaires completed and returned by the phase one respondents.

An in-depth interview schedule designed to provoke a greater depth of information was used as the data collection instrument in phase two. Like the phase one instrument, the in-depth interview schedule elicited respondent's socio-demographic and housing characteristics, residential satisfaction, and mobility intentions; however, the inquiry included more open-ended questions. In addition, the schedule derived respondents' subjective value of home through a version of O'Bryant's (1983) Attachment-to-Home

Scale. An additional instrument was used to obtain housing information from county property assessment records on each residence in the phase two sample.

In the Summer of 1990, telephone interviews were attempted with 209 individuals, with usable data obtained from 198. County property assessment records were examined for the residences of the 198 respondents, with complete data available for 146 cases. This study uses the 132 respondents who had complete sets of data for all the variables examined in the study.

Results

Characteristics of Respondents

Demographic data are presented in Table 13. Respondent age ranges from 20 to 84 with a mean of approximately 52 years. Participation in the study is fairly well divided between males (56.6%) and females (43.4%) An overwhelming majority of the respondents are white and married. Household size of the sample is small ($\bar{X}$=2.4) with the majority having only one or two members.

Insert Table 13 about here

Respondents have a higher than average level of education of approximately 13 years. Slightly over half of the respondents are not employed, which may be indicative of the advanced age of the sample. Employed respondents are more likely to be in blue collar occupations. Family

income, distributed across all categories, reveals the majority of the households earn less than $30,000 per year.

Principle components factor analysis of the 24 item Attachment-to-Home Scale with orthogonal rotation produced four factors. The resulting factors are similar to those found by O'Bryant (1983), and have high reliability coefficients. Factor 1 is called family tradition (a=0.82) and contains five statements related to the home as a place of family memories. Status of home ownership (a=0.82) is the title given to factor 2 which contains five statements related to the respect given to those who own their homes. Five statements related to the balance between the cost of the home and the comfort it provides forms the third factor and is named cost/comfort trade-off (a=0.81). A fourth factor containing three items related to the home as a wise investment and familiar place is titled confidence in home (a=0.60). A factor score for each of the four attachment-to-home subscales was derived for each respondent by summing the scores for items loading on each factor. The four factors were then used as four separate variables.[1]

A correlation matrix of the independent variables was examined for multicollinearity. House size and assessed value have the highest correlation at 0.72. Many of the other variables are correlated with each other at levels of 0.30 to 0.50. However, this multicollinearity did not present a problem.

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1 Details on the analysis of the Attachment-to-Home Scale are available from the first author.

To connect the variables with path coefficients, a series of multiple regression analyses were used. The first equation uses mobility intentions as the dependent variable with socio-demographic characteristics, housing characteristics, attachment-to-home factors, and residential satisfaction as the independent variables. Such an analysis was necessary to establish the preliminary relationship of the variables that influence the desire to move. Additional analysis was necessary to identify psychological attachment-to-home as an intervening variable in the mobility intentions model. This analysis included seven multiple regression equations--the exogenous variables regressed on the four attachment-to-home factors as dependent variables, and the exogenous and intervening variables regressed on the three residential satisfaction variables as dependent variables.

Path coefficients significant at p=.05 or greater resulting from the analysis are retained as shown in Figure 3. The preliminary findings reveal that dwelling satisfaction, neighborhood satisfaction, family tradition, and cost/comfort trade-off all have a negative influence on the desire to move; however, the two attachment-to-home factors exhibit a stronger relationship with the dependent variable than do the residential satisfaction variables. None of the socio-demographic or housing characteristics are significantly related to mobility intentions.

Insert Figure 3 about here

The additional analysis on the intervening variables indicates a number of socio-demographic and housing characteristics impact the attachment-to-home factors. Those variables positively related to the family tradition factor include length of residence, respondent age, and house size. Occupation, income, and value of home are negatively related to the perception of home as a storehouse for family memories.

The status of home owner factor is positively influenced by race and negatively influenced by occcupation. However, this is of little concern since the factor did not affect mobility intentions.

Family size is the only variable to influence the cost/comfort trade-off factor, and the relationship is negative. This factor in turn affects dwelling satisfaction. Family size also has a direct negative influence on contentment with the dwelling unit.

Housing tenure status is negatively related to the confidence in home factor which is positively related to community satisfaction. Yet, neither confidence in home nor community satisfaction are related to mobility intentions.

Conclusions

The objective of this study was to use path analysis to determine whether psychological attachment- to-home can be

considered as an intervening variable between characteristics of the respondents and their residences and mobility intentions. For this to be true it would be necessary for the background variables to be significantly related to the attachment-to-home factors, and further, for the attachment-to-home factors to be significantly related to mobility intentions.

Findings reveal that that the above contention holds true. While none of the exogenous variables are directly related to mobility intentions, six variables (length of residence, age, income, occupation, house size, and house value) are significantly related to the family tradition factor. The family tradition factor is, in turn, one of the strongest predictors of mobility intentions. Further, family size is significantly related to the cost/comfort trade-off factor, which is the strongest predictor of mobility intentions in the entire model.

Implications

The results of this study are noteworthy, but further research is necessary to refine the use of psychological attachment-to-home as a component in models of mobility intentions. Suggestions are made for using additional variables as well as different samples.

The explained variation of mobility intentions for the full model was 34 percent. As a result, additional variables need to be investigated for their impact on the desire to move.

Sample composition can affect the results of a study. Although a sample may be randomly chosen, its size can be factor, especially in studies such as this that have a large number of variables. Because complete data were available for only 132 respondents, this may limit the findings. Further research with more respondents is warranted to improve the representativeness of the sample.

In addition, because the sample was confined to a rural population, characteristics intrinsic to this group may have impacted the study. This rural sample was especially homogenous in marital status, race, and housing tenure status. While race and tenure were found to significantly effect other parts of the model, their full impact may not have been realized due to lack of variation in these characteristics. Future investigations of mobility intentions and psychological attachment-to-home should employ more varied samples as would be found in urban locations.

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Table 13

Characteristics of Respondents

		f	%
Age:			
	less than 34	35	17.9
	35 - 44	41	21.1
	45 - 54	28	14.3
	55 - 64	42	22.1
	65 and over	48	25.6
Sex:			
	male	112	56.6
	female	86	43.4
Race:			
	white	178	89.9
	non-white	20	10.1
Marital status:			
	married	164	82.8
	not married	34	17.2
Household size:			
	1	33	16.7
	2	81	40.9
	3	39	19.7
	4	35	17.7
	5	10	5.1

Table 13 (continued)

		f	%
Education:			
	11 years or less	43	21.8
	high school grad.	73	37.1
	some college	43	21.8
	college degree	38	19.1
Occupation:			
	not employed	106	53.5
	service	10	5.1
	blue collar	47	23.7
	white collar	35	17.7
Income:			
	less than $5,000	6	3.0
	5,000 - 9,999	24	12.2
	10,000 - 14,999	23	11.7
	15,000 - 19,999	20	10.2
	20,000 - 24,999	22	11.2
	25,000 - 29,999	18	9.1
	30,000 - 39,999	39	19.8
	40,000 - 49,999	26	13.2
	50,000 or greater	19	9.6

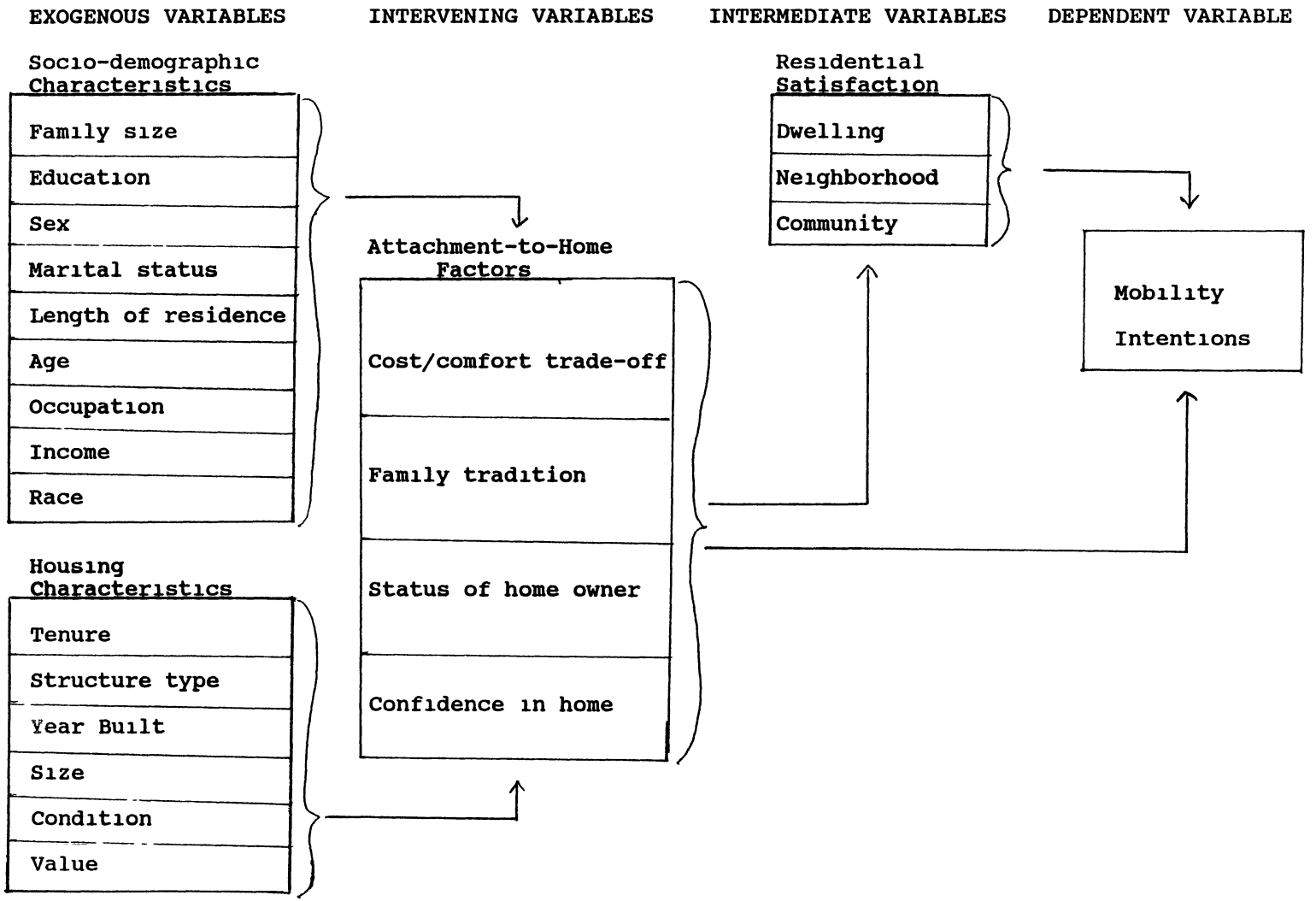

Figure 2: Proposed Model of Mobility Intentions

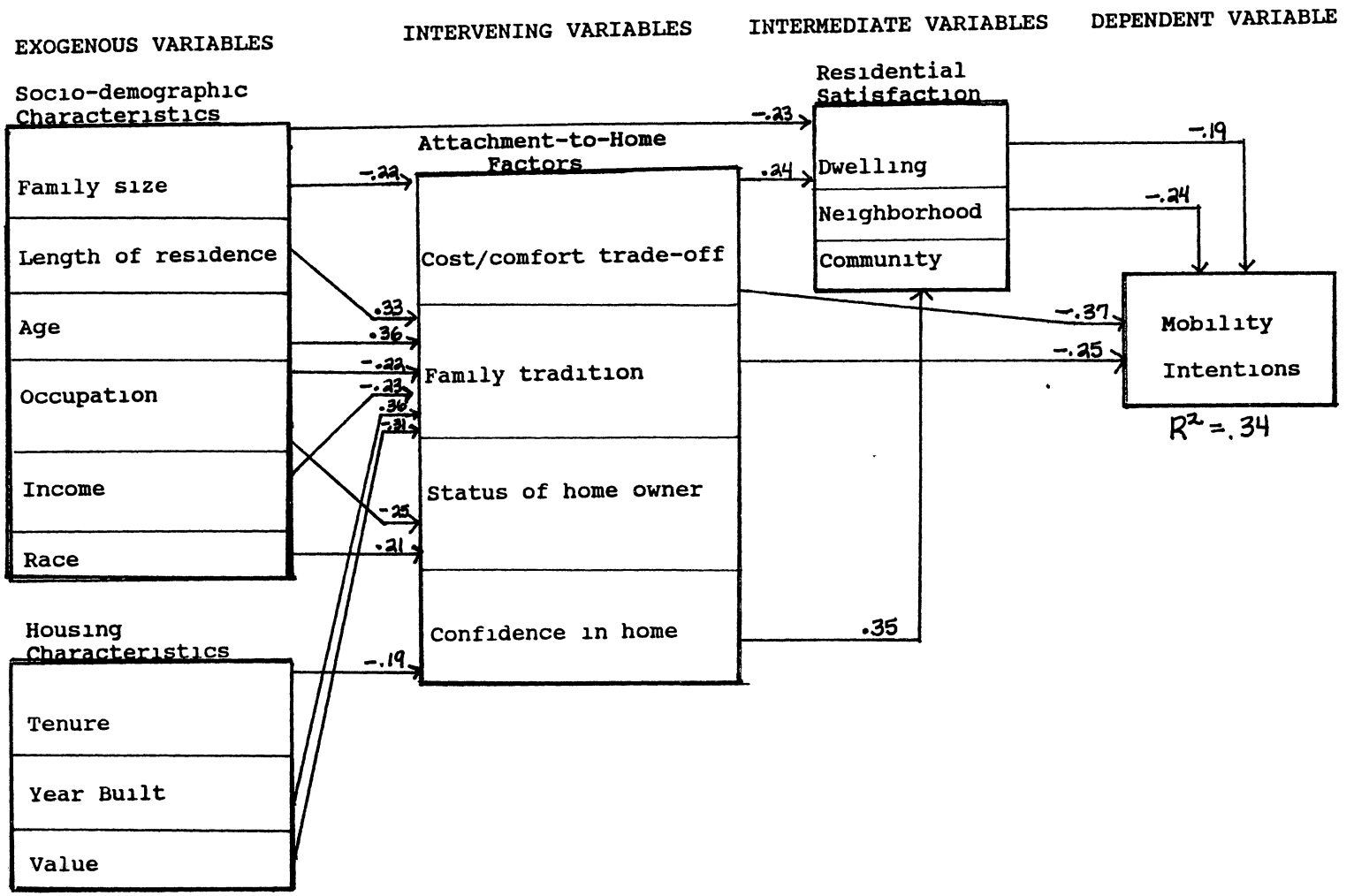

Figure 3: Tested Model of Mobility Intentions

APPENDIXES

APPENDIX A

SAMPLE COUNTIES AND POPULATION

Oklahoma Sample

Southeast Quadrant

	County	Population 1980
1.	Pittsburg	40,524
2.	McCurtain	36,151
3.	Pontotoc	32,598
4.	Bryan	30,535
5.	Garvin	27,856
6.	Seminole	17,203
7.	Choctaw	17,203(1)
8.	McIntosh	15,562
9.	Hughes	14,338
10.	Atoka	12,748
11.	Murray	12,147
12.	Pushmataha	11,773
13.	Haskell	11,010
14.	Marshall	10,356
15.	Johnson	10,356
16.	Latimer	9,840
17.	Coal	6,041(1,2)

Southwest Quadrant

1.	Carter	43,610
2.	Stephens	43,419
3.	Grady	39,490
4.	Caddo	30,905
5.	Jackson	30,356(1,2)
6.	Beckham	19,243
7.	Washita	13,798
8.	Kiowa	12,711
9.	Tillman	12,398
10.	Jefferson	8,183
11.	Love	7,469
12.	Cotton	7,338
13.	Greer	7,028(1)
14.	Harmon	4,519

(1) selected for Phase 1
(2) selected for Phase 2

Northwest Quadrant

	County	Population 1980
1.	Custer	25,995
2.	Woodward	21,172
3.	Texas	17,727
4.	Kingfisher	14,187
5.	Blaine	13,443
6.	Woods	10,923
7.	Major	8,772(1,2)
8.	Alfalfa	7,077
9.	Beaver	6,806(1)
10.	Grant	6,518
11.	Dewey	5,922
12.	Ellis	5,596
13.	Roger Mills	4,799
14.	Harper	4,715
15.	Cimarron	3,648

Northeast Quadrant

1.	Muskogee	66,936
2.	Payne	62,435
3.	Kay	49,852
4.	Washington	48,113
5.	Okmulgee	39,169(1,2)
6.	Ottawa	32,870
7.	Cherokee	30,684
8.	Logan	26,881
9.	Lincoln	26,601
10.	Delaware	23,946
11.	Adair	18,515
12.	Pawnee	15,310
13.	Craig	15,014(1)
14.	Noble	11,573
15.	Nowata	11,486
16.	Okfuskee	11,125

(1) selected for Phase 1
(2) selected for Phase 2

County	Community	Population 1980
	Southeast Quadrant	
Coal	Bromide	28
	Centrahoma	166
	Phillips	178
	Lehigh	284
	Tupelo	542
	Coalgate	2001
Choctaw	Soper	465
	Boswell	702
	Fort Towson	789
	Southwest Quadrant	
Greer	Willow	162
	Granite	1617
Jackson	Elmer	131
	Martha	219
	Headrick	223
	East Duke	484
	Eldorado	688
	Olustee	721
	Blair	1092
	Northwest Quadrant	
Beaver	Knowles	44
	Gate	146
	Forgan	611
	Beaver	1939
Major	Meno	171
	Ames	314
	Ringwood	389
	Cleo Springs	514
	Northeast Quadrant	
Craig	Bluejacket	247
	Big Cabin	252
	Ketchum	326
	Welch	697
Okmulgee	Bryant	74
	Grayson	150
	Winchester	150
	Hoffman	407
	Dewar	1048
	Morris	1288
	Beggs	1428

Arkansas Sample

Southeast Quadrant

	County	Population 1980
1.	Phillips	34,772
2.	Lonoke	34,518(1,2)
3.	Ashley	26,538
4.	Arkansas	24,175
5.	Desha	19,760
6.	Drew	17,910
7.	Lee	15,539(1)
8.	Monroe	14,052
9.	Bradley	13,803
10.	Lincoln	13,369
11.	Prairie	10,140
12.	Cleveland	7,868

Southwest Quadrant

1.	Garland	70,531
2.	Saline	53,161
3.	Union	48,573
4.	Ouachita	30,541(1)
5.	Hot Spring	26,819
6.	Columbia	26,644
7.	Hempstead	23,635
8.	Clark	23,326
9.	Logan	20,144
10.	Yell	17,026
11.	Polk	17,007
12.	Sevier	14,060
13.	Little River	13,952
14.	Howard	13,459(1,2)
15.	Grant	13,008
16.	Nevada	11,097
17.	Dallas	10,515
18.	Pike	10,373
19.	Lafayette	10,213
20.	Montgomery	7.266
21.	Perry	7.771
22.	Clahoun	6,079

(1) selected for Phase 1
(2) selected for Phase 2

Northwest Quadrant

	County	Population 1980
1.	Benton	78,115(1)
2.	Pope	39,021
3.	Crawford	36,892
4.	Baxter	27,409
5.	Boone	26,067
6.	Conway	19,509
7.	Johnson	17,423
8.	Carroll	16,203
9.	Franklin	14,705
10.	Van Buren	13,357
11.	Madison	11,373
12.	Marion	11,334
13.	Searcy	8,847(1,2)
14.	Newton	7,756

Northeast Quadrant

1.	Craighead	63,239
2.	Mississippi	59,517
3.	White	50,835
4.	Faulkner	46,192(1)
5.	St. Francis	30,858
6.	Greene	30,744
7.	Independence	30,147
8.	Poinsett	27,032
9.	Jackson	21,646
10.	Clay	20,616
11.	Cross	20,434
12.	Lawrence	18,447
13.	Cleburen	16,909
14.	Randolph	16,834
15.	Sharp	14,607(1,2)
16.	Woodruff	11,222
17.	Izard	10,768
18.	Fulton	9,975
19.	Stone	9,022

(1) selected for Phase 1
(2) selected for Phase 2

County	Community	Population 1980
	Southeast Quadrant	
Lee	Aubrey	267
	Haynes	359
	Moro	327
	Rondo	330
Lonoke	Allport	295
	Austin	269
	Coy	183
	Humnoke	442
	Keo	208
	Ward	981
	Southwest Quadrant	
Howard	Dierks	1249
	Mineral Springs	936
	Tollette	407
Ouachita	Bearden	1191
	Chidester	342
	East Camden	632
	Louann	202
	Stephens	1366
	Northeast Quadrant	
Faulkner	Enola	186
	Greenbrier	1423
	Guy	209
	Mayflower	1381
	Mount Vernon	157
	Vilonia	736
	Wooster	378
Sharp	Ash Flat	524
	Evening Shade	397
	Hardy	643
	Sidney	270
	Williford	169

Northwest Quadrant

Benton	Avoca	256
	Bethel Heights	296
	Cave Springs	429
	Centerton	425
	Decatur	1013
	Garfield	187
	Gateway	75
	Gravette	1218
	Highfill	72
	Little Flock	663
	Lowell	1078
	Pea Ridge	1488
	Sentry	1462
	Sulphur Springs	496
Searcy	Gilbert	43
	Leslie	501
	Marshall	1595

APPENDIX B

MAIL QUESTIONNAIRE

AND CORRESPONDENCE

September 26, 1988

Adequate housing is a major concern of Americans today. Many housing problems exist because residents find it difficult to identify criteria in defining adequate housing. Housing researchers at Oklahoma State University and the University of Arkansas at Pine Bluff are jointly studying this problem. The purpose of this study is to find out what factors influence households in making housing decisions. Your opinions are important because they will help state officials and community leaders make important decisions about adequate housing.

Your household is one that was selected from your community to give their opinion on this subject. Your name was selected at random. It is important that each questionnaire be completed and returned in order to have the results truly represent the people of Oklahoma. We would like you or someone in your household over the age of 18 to complete the enclosed questionnaire.

Your answers will be completely confidential. The questionnaire has an identification number for mailing purposes only. This is so that we may check your name off the mailing list when your questionnaire is returned. Please do not write your name on the questionnaire.

When you have completed the questionnaire, please mail it in the enclosed stamped envelope by Oct. 10, 1988. I will be happy to answer any questions you might have regarding the study. Please write or call at (405) 744-5048. Thank you for your assistance.

Sincerely,

Mi Kyoung Ha, Graduate Research Associate

Margaret Weber, Professor and Project Director

MJW/mh

Enclosure

HOUSING DECISIONS

This questionnaire is designed to identify factors that influence rural families in making housing decisions and will only take approximately 10-15 minutes of your time. We want to know how important various housing related factors are to you and your family. We also want to know how the presence or absence of these factors in a housing unit would affect your decision to purchase a house.

The questionnaire asks specific questions about your present home and about a home that you would consider "ideal" for your family. Be careful to respond according to the dwelling (present home or ideal home) identified in the question.

Thank you for your cooperation in this project.

[redacted]

Please circle the number below the statement that best describes your response.

1. How satisfied are you with your present dwelling?

Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Very Dissatisfied
5	4	3	2	1

2. How satisfied are you with your neighborhood environment?

Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Very Dissatisfied
5	4	3	2	1

3. How satisfied are you with the following features of your home?

   Circle your response as follows:

   5. VS = Very satisfied
   4. S = Satisfied
   3. NSD = Neither satisfied nor dissatisfied
   2. D = Dissatisfied
   1. VD = Very dissatisfied

	VS	S	NSD	D	VD
1. House Size	5	4	3	2	1
2. House Location	5	4	3	2	1
3. House Condition	5	4	3	2	1
4. Arrangement of rooms	5	4	3	2	1
5. Number of bedrooms	5	4	3	2	1
6. Type of house	5	4	3	2	1

4. Would you like to move into another dwelling within the next couple of years?

   1. Yes
   2. No (If NO, skip to question #7.)
   3. Maybe

5. Why would you like to move? (Circle as many as apply)

   1. Present house is wrong size
   2. Plan to build or buy
   3. Improve location
   4. Dissatisfied with conditions of present dwelling
   5. Change in family structure
   6. Plan to change jobs
   7. Other (specify) _____
   8. NA

6. How much do you feel you could afford to pay per month for a house?

   1. Under $100
   2. $100 - $199
   3. $200 - $299
   4. $300 - $399
   5. $400 - $499
   6. $500 - $699
   7. Over $700

7. Do you have definite plans to move into a new or different house within the next couple of years?

   1. Yes
   2. No

Look at each pair of value questions below and circle the number for the value that is most important in that pair to you. It may be difficult to decide, but you should make a choice for each pair.

8. 1. Social standing and formal social life are important to me.
   2. Personal enjoyment, self expression and beauty are important to me.

9. 1. Physical and mental health and the well-being of my family are important to me.
   2. Durability and economy are important to me.

10. 1. Personal enjoyment, self expression and beauty are important to me.
    2. Physical and mental health and the well-being of my family are important to me.

11. 1. Durability and economy are important to me.
    2. Social standing and formal social life are important to me.

12. 1. Personal enjoyment, self expression and beauty are important to me.
    2. Durability and economy are important to me.

13. 1. Physical and mental health and the well-being of my family are important to me.
    2. Social standing and formal social ife are important to me.

14. Describe your response to the following situation. The city is building a sanitary landfill and going to locate it behind your house. What would your reaction be?

_____

_____

_____

_____

_____

15. The following list includes characteristics important to people in their housing. Please circle the number that indicates the importance each characteristic has in what you would consider to be an *ideal* home, then circle the number that indicates the importance each characteristic has in your *present* home. Add any additional characteristics you think are important in the blanks following each list.

Important	*Neutral*	*Unimportant*		*Very Satisfied*	*Satisfied*	*Neutral*	*Dissatisfied*	*Very Dissatisfied*	*Not Present In My Home*
									Present Home
3	2	1	away from unpleasant conditions	5	4	3	2	1	9
3	2	1	away from hazardous chemical plants	5	4	3	2	1	9
3	2	1	away from a sanitary landfill	5	4	3	2	1	9
3	2	1	away from dangerous features (ex. uncovered well)	5	4	3	2	1	9

Ideal Home: Important	Neutral	Unimportant		Present Home: Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Not Present In My Home
3	2	1	away from heavy traffic street	5	4	3	2	1	9
3	2	1	away from noisy place(s)	5	4	3	2	1	9
3	2	1	safe from flooding	5	4	3	2	1	9
3	2	1	safe from tornados	5	4	3	2	1	9
3	2	1	safe from land-sliding	5	4	3	2	1	9
3	2	1	soil quality for building	5	4	3	2	1	9
3	2	1	unpolluted drinking water	5	4	3	2	1	9
3	2	1	unpolluted air	5	4	3	2	1	9
			Environment/Public Services						
3	2	1	adequate water supply for your home	5	4	3	2	1	9
3	2	1	adequate sewer system for your home	5	4	3	2	1	9
3	2	1	paved streets	5	4	3	2	1	9
3	2	1	paved side walks	5	4	3	2	1	9
3	2	1	adequate curbs and gutters	5	4	3	2	1	9
3	2	1	adequate drainage system	5	4	3	2	1	9
3	2	1	public park facilities (ex lakes, forests)	5	4	3	2	1	9
3	2	1	adequate recreational facilities (ex tennis, golf, hiking)	5	4	3	2	1	9

Ideal Home: Important	Neutral	Unimportant		Present Home: Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Not Present In My Home
			Landscaping						
3	2	1	high and dry land	5	4	3	2	1	9
3	2	1	well graded land	5	4	3	2	1	9
3	2	1	located at other than a corner lot	5	4	3	2	1	9
3	2	1	in an uncrowded neighborhood	5	4	3	2	1	9
3	2	1	natural view	5	4	3	2	1	9
3	2	1	buildings are well kept	5	4	3	2	1	9
3	2	1	outdoor areas are well kept	5	4	3	2	1	9
3	2	1	distance from adjacent dwellings	5	4	3	2	1	9
			Privacy						
3	2	1	unable to hear neighbor's when indoors	5	4	3	2	1	9
3	2	1	windows do not directly face neighbor's windows	5	4	3	2	1	9
3	2	1	trees and shrubs	5	4	3	2	1	9
3	2	1	retaining wall around lawn	5	4	3	2	1	9
			Policy						
3	2	1	built by some building code	5	4	3	2	1	9
3	2	1	adhere to some type of occupancy code	5	4	3	2	1	9
3	2	1	located away from businesses	5	4	3	2	1	9

Ideal Home (Important / Neutral / Unimportant)				Present Home (Very Satisfied / Satisfied / Neutral / Dissatisfied / Very Dissatisfied / Not Present In My Home)					
3	2	1	located away from manufacturing plants	5	4	3	2	1	9
3	2	1	located away from apartments	5	4	3	2	1	9
3	2	1	located away from mobile/ manufactured houses	5	4	3	2	1	9
3	2	1	located with similar housing types	5	4	3	2	1	9
3	2	1	located away from undesirable land uses	5	4	3	2	1	9
Location									
3	2	1	close to work	5	4	3	2	1	9
3	2	1	near police/fire protection	5	4	3	2	1	9
3	2	1	close to shopping areas	5	4	3	2	1	9
3	2	1	close to schools	5	4	3	2	1	9
3	2	1	close to hospitals	5	4	3	2	1	9
3	2	1	close to family	5	4	3	2	1	9
3	2	1	in good neighborhood	5	4	3	2	1	9
3	2	1	in old established neighborhood	5	4	3	2	1	9
3	2	1	in new development	5	4	3	2	1	9
3	2	1	show status in community	5	4	3	2	1	9

Ideal Home (Important / Neutral / Unimportant)				Present Home (Very Satisfied / Satisfied / Neutral / Dissatisfied / Very Dissatisfied / Not Present In My Home)					
3	2	1	as good as homes of friends/ neighbors	5	4	3	2	1	9
3	2	1	a single family structure	5	4	3	2	1	9
3	2	1	as good as homes of people I work with	5	4	3	2	1	9
Economic									
3	2	1	own	5	4	3	2	1	9
3	2	1	affordable	5	4	3	2	1	9
3	2	1	low-cost maintenance features	5	4	3	2	1	9
3	2	1	low utility costs	5	4	3	2	1	9
3	2	1	sell at profit	5	4	3	2	1	9
3	2	1	good investment	5	4	3	2	1	9
3	2	1	provide tax advantages	5	4	3	2	1	9
3	2	1	self-sufficient	5	4	3	2	1	9
Amenities									
3	2	1	adequate space	5	4	3	2	1	9
3	2	1	exercise room	5	4	3	2	1	9
3	2	1	swimming pool	5	4	3	2	1	9
3	2	1	yard	5	4	3	2	1	9

Important	Neutral	Unimportant		Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Not Present In My Home
Ideal Home				Present Home					
3	2	1	family or hobby room	5	4	3	2	1	9
3	2	1	space for indoor activities	5	4	3	2	1	9
3	2	1	space for family meals	5	4	3	2	1	9
3	2	1	space for formal dining	5	4	3	2	1	9
3	2	1	individual space for each family member	5	4	3	2	1	9
3	2	1	kitchen appliances beyond the basic	5	4	3	2	1	9
3	2	1	adequate storage	5	4	3	2	1	9
3	2	1	carpeted floors	5	4	3	2	1	9
3	2	1	space for noninterference of other family members	5	4	3	2	1	9
3	2	1	space for outdoor activities	5	4	3	2	1	9
3	2	1	comfortable	5	4	3	2	1	9
3	2	1	easy to maintain	5	4	3	2	1	9
3	2	1	provide for the needs of children	5	4	3	2	1	9
3	2	1	social interaction	5	4	3	2	1	9
			Appearance/Aesthetics						
3	2	1	attractive interior	5	4	3	2	1	9
3	2	1	traditional in style	5	4	3	2	1	9
3	2	1	unusual in style	5	4	3	2	1	9

Important	Neutral	Unimportant		Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Not Present In My Home
Ideal Home				Present Home					
3	2	1	eye catching	5	4	3	2	1	9
3	2	1	a popular design	5	4	3	2	1	9
3	2	1	brick or stone	5	4	3	2	1	9
3	2	1	mixture of materials	5	4	3	2	1	9
3	2	1	bright and cheery	5	4	3	2	1	9
3	2	1	attractive exterior	5	4	3	2	1	9
3	2	1	landscaped yard	5	4	3	2	1	9
3	2	1	reflect individual taste	5	4	3	2	1	9
3	2	1	fit the environment	5	4	3	2	1	9
3	2	1	harmonize in architectural style with landscaping	5	4	3	2	1	9
3	2	1	custom designed	5	4	3	2	1	9
			Technical						
3	2	1	latest technology	5	4	3	2	1	9
3	2	1	new building materials	5	4	3	2	1	9
3	2	1	built to last	5	4	3	2	1	9
3	2	1	good quality	5	4	3	2	1	9
3	2	1	built of low-maintenance materials	5	4	3	2	1	9
3	2	1	well insulated	5	4	3	2	1	9

Ideal Home: Important	Neutral	Unimportant		Present Home: Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Not Present In My Home
3	2	1	energy efficient	5	4	3	2	1	9
3	2	1	adequate temperature control	5	4	3	2	1	9
3	2	1	well ventilated	5	4	3	2	1	9
			Structural						
3	2	1	complete plumbing	5	4	3	2	1	9
3	2	1	storm windows and doors	5	4	3	2	1	9
3	2	1	built-in cabinets	5	4	3	2	1	9
3	2	1	carport/garage	5	4	3	2	1	9
3	2	1	central heat	5	4	3	2	1	9
3	2	1	central air	5	4	3	2	1	9
3	2	1	for single family occupancy	5	4	3	2	1	9
3	2	1	manufactured or mobile	5	4	3	2	1	9
3	2	1	for multi-family occupancy	5	4	3	2	1	9
3	2	1	built on site	5	4	3	2	1	9
3	2	1	solar energy features	5	4	3	2	1	9
3	2	1	earth sheltering features	5	4	3	2	1	9
3	2	1	fire retardant materials	5	4	3	2	1	9
3	2	1	structurally sound	5	4	3	2	1	9
3	2	1	soundproof wall, quietness	5	4	3	2	1	9
3	2	1	convenient kitchen design	5	4	3	2	1	9

Ideal Home: Important	Neutral	Unimportant		Present Home: Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Not Present In My Home
3	2	1	convenient bathroom design	5	4	3	2	1	9
3	2	1	ceiling height	5	4	3	2	1	9
3	2	1	sunlight for each room	5	4	3	2	1	9

16 What type of housing unit do you live in?

1 Single family house
2 Duplex
3 Apartment
4 Mobile home
5 Other, please indicate _____

17 How many bedrooms are in your house?

1 2 3 4 5 or more

18 How many bathrooms are in your house?

1 1-1/2 2 2-1/2 3 or more

19 What type of natural view does your house have? (Circle as many as apply)

1 Lake
2 River
3 Mountains
4 Fields
5 Woods
6 None of the above
7 Other _____

Ideal Home: Important	Neutral	Unimportant		Present Home: Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Not Present In My Home
3	2	1	away from heavy traffic street	5	4	3	2	1	9
3	2	1	away from noisy place(s)	5	4	3	2	1	9
3	2	1	safe from flooding	5	4	3	2	1	9
3	2	1	safe from tornados	5	4	3	2	1	9
3	2	1	safe from land-sliding	5	4	3	2	1	9
3	2	1	soil quality for building	5	4	3	2	1	9
3	2	1	unpolluted drinking water	5	4	3	2	1	9
3	2	1	unpolluted air	5	4	3	2	1	9
			Environment/Public Services						
3	2	1	adequate water supply for your home	5	4	3	2	1	9
3	2	1	adequate sewer system for your home	5	4	3	2	1	9
3	2	1	paved streets	5	4	3	2	1	9
3	2	1	paved side walks	5	4	3	2	1	9
3	2	1	adequate curbs and gutters	5	4	3	2	1	9
3	2	1	adequate drainage system	5	4	3	2	1	9
3	2	1	public park facilities (ex lakes, forests)	5	4	3	2	1	9
3	2	1	adequate recreational facilities (ex tennis, golf, hiking)	5	4	3	2	1	9

Ideal Home: Important	Neutral	Unimportant		Present Home: Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Not Present In My Home
			Landscaping						
3	2	1	high and dry land	5	4	3	2	1	9
3	2	1	well graded land	5	4	3	2	1	9
3	2	1	located at other than a corner lot	5	4	3	2	1	9
3	2	1	in an uncrowded neighborhood	5	4	3	2	1	9
3	2	1	natural view	5	4	3	2	1	9
3	2	1	buildings are well kept	5	4	3	2	1	9
3	2	1	outdoor areas are well kept	5	4	3	2	1	9
3	2	1	distance from adjacent dwellings	5	4	3	2	1	9
			Privacy						
3	2	1	unable to hear neighbor's when indoors	5	4	3	2	1	9
3	2	1	windows do not directly face neighbor's windows	5	4	3	2	1	9
3	2	1	trees and shrubs	5	4	3	2	1	9
3	2	1	retaining wall around lawn	5	4	3	2	1	9
			Policy						
3	2	1	built by some building code	5	4	3	2	1	9
3	2	1	adhere to some type of occupancy code	5	4	3	2	1	9
3	2	1	located away from businesses	5	4	3	2	1	9

A questionnaire was recently sent to you regarding Housing Decisions. Your name was selected at random from the households in your community. If you have returned the questionnaire, your time and effort are greatly appreciated. If you did not complete the questionnaire, please mail it today. It is very important that we receive your opinion so that your community may be accurately represented. If you did not receive the questionnaire or it was misplaced, please call (405) 744-5048 and another one will be mailed to you today.

Sincerely,

October 24, 1988

Several weeks ago, we wrote to you seeking your input regarding factors that influence housing decisions. As of today, we have not yet received your completed questionnaire.

This research is being conducted because of the belief that household opinions are important in defining elements of adequate housing. Additionally, research indicates that there are specific differences in housing needs and desires of rural or small town households when compared to the housing of more urban and suburban groups. Identifying these differences will enable builders, planners and other persons involved in the provision of housing to design and construct housing that more adequately fits the housing needs of your family and others like it.

We are writing to you again because of the significance each questionnaire has to usefulness of this study. Your name was drawn through a scientific sampling process in which every household in all Oklahoma communities with a population of less than 2500 inhabitants had an equal chance of being selected. This means that only about one out of every ten eligible household is being asked to complete the study.

In order for the results of the study to be truly representative of rural and small town residents in the state, it is essential that each person in the sample return their questionnaire. As mentioned in the earlier letter the questionnaire for your household should be completed by an adult (18 years of age or older) member of the household.

In the event that your questionnaire has been misplaced, a replacement is enclosed. Your cooperation is greatly appreciated.

Sincerely,

Mi Kyoung Ha
Research Associate

Margaret J. Weber
Project Leader

MJW/mh

Enclosure

APPENDIX C

IN-DEPTH INTERVIEW SCHEDULE AND CORRESPONDENCE

Within a week or so, we will be calling you as part of a research study. This is a state-wide survey in which we are seeking to understand how rural Oklahomans feel about the places they live. In 1988 you responded to a mail questionnaire related to the same project. You have been specially selected to provide additional information.

We are writing in advance of our telephone call because we have found that many people appreciate being advised that a research study is in the process, and they will be called.

Altogether the interview should only take about fifteen minutes. If we should happen to call at an inconvenient time, please tell the interviewer and she will be happy to call back later.

Your help and that of the others being asked to participate in this effort is essential to the study's success. We greatly appreciate it. We have enclosed a silver dollar as a token of our appreciation. It is our hope that you will use it as a reminder of the influence you will have on rural policies as a result of your participation in the project.

If you have any questions, please don't hesitate to ask the interviewer. Or, you may contact us at (405) 744-5048 or the address above.

Sincerely,

Carla Earhart
Graduate Research Associate
OSU College of Home Ec.

Margaret J. Weber
Project Director
OSU College of Home Ec.

HOUSING DECISIONS PROJECT INDEPTH INTERVIEW

Date	Time	Interviewer	Result

Questionnaire # _____

Telephone # _____

Name _____

Hello May I speak to _____?

(IF NO I am calling about a state-wide research project we are conducting at _____ When would it be best for me to call back?)

This is _____ I am calling about a state-wide research project we are conducting at _____ to find out how people feel about the places they live

Earlier this month you were sent a letter explaining the study Did you receive it?

(IF NO I'm sorry it didn't reach you It was a letter we sent so people would know to expect our telephone call May I read it to you? IF YES, READ LETTER)

Is this a convenient time for you to answer a few questions?

(IF NO When may I call back?)

First, I need to know how long you have lived in your current home _____ (ENTER YEARS)

(IF LESS THAN 1 1/2 YEARS Thank you so much for your time For our research purposes it is necessary that you live in your home at least a year and a half You have been very helpful Good-bye)

(IF GREATER THAN 1 1/2 YEARS, GO TO PAGE 2)

I would like to check the information you gave us from the first questionnaire

Q1 You said you were _____ Are you still _____?

1 CORRECT 2. _____(MARITAL STATUS)

Q2. When we contacted you before you said you had ____ other person(s) in your household Is this still true?

1 CORRECT 2 _____(NEW NUMBER)

Q2a. (IF ANY OTHER MEMBERS OF HOUSEHOLD) Will you please give me the age and sex of each person, other than yourself, living in your home?

(AGE) 1 _____ 2 _____ 3 _____ 4 _____ 5 _____
(SEX) 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Q3 We also need to know if you would rate your health as poor, fair, good, or excellent
(READ CHOICES AGAIN IF NECESSARY)

1 POOR 2 FAIR 3 GOOD 4 EXCELLENT

Q3a (IF HAS A SPOUSE) And, on the same scale, how would you rate your _____'s health? (READ CHOICES)

1 POOR 2 FAIR 3 GOOD 4 EXCELLENT

Q4 You indicated you had completed ___ years of school Is that right?

1 CORRECT 2 _____(YEARS)

Q5 Before, you said you were _____ Is this still correct?

1 CORRECT 2 _____(OCCUPATION)

Q6 Do you rent or own your home? 1 RENT 2. OWN

Q7 How many square feet of living space do you have in your home? _____sq ft

Q8. How would you rate the structural condition of your home? (READ CHOICES)

1 POOR 2. FAIR 3 GOOD 4 EXCELLENT

Q9 Earlier you told us you spent about $_____ a month on your mortgage payment or rent
Has this changed?

1 CORRECT 2 _____(NEW AMOUNT)

Q10 Does this include taxes and insurance on your home? 1 YES 2 NO

Q10a (IF NO) What do you estimate you spend per year for taxes and insurance on your home?

_____(AMOUNT)

Q11 Before, you said you were spending about $_____ a month on utilities, including water, gas, electricity, and sewer Is this figure correct?

1 CORRECT 2 _____(NEW AMOUNT)

Q12. What are your plans to stay or move from your home?

1 PLAN TO STAY
2. UNCERTAIN
3 PLAN TO MOVE
4 STARTED TO MOVE

Q12a (IF PLANNING TO MOVE) Why do you want to move?

1 HOUSE WRONG SIZE 2 PLAN TO BUY/BUILD
3 IMPROVE LOCATION 4 DISSATISFIED WITH CONDITION
5 CHANGE IN FAMILY 6 PLAN TO CHANGE JOBS
7 OTHER_____
_____
8 NA

Q12b How far away would you like to move? (READ CHOICES)

1 TO ANOTHER STATE 2. TO ANOTHER COUNTY
3 TO ANOTHER COMMUNITY 4 TO ANOTHER RESIDENCE

Q12c. (IF PLANNING TO STAY) Why do you want to stay?

1 PEACEFUL/QUIET 2. FAMILY HOME
3 HOME IS PAID FOR 4 HOME-BASED BUSINESS
5 GOOD COMMUNITY 6 IT'S HOME
7 OTHER_____
8 NA

Q13 Have you ever lived in another home?

1 YES 2 NO

→ Q13a. (IF YES) Why did you move from where you were living before?

1 JOB CHANGE 2. RETURN TO CHILDHOOD COMMUNITY
3 MARRIAGE 4 WANTED TO BUY
5 OTHER _____
_____
6 NA

→ Q13b Why did you choose this home in particular?

1 SPOUSE'S HOME 2. PRICE
3 SIZE 4 LOCATION
5 AVAILABILITY 6 FAMILY HOME
7 OTHER _____
_____
8 NA

Q14 Do you like where you live?

Q14a (IF YES) Why?

1 QUIET/PEACEFUL 2. OPEN SPACE/NATURAL SURROUNDINGS
3 SIZE OF DWELLING 4 LOCATION
5 COMFORTABLE 6 FAMILIAR
7 IT'S HOME 8 OTHER_____
_____
9 NA

Q14b (IF NO) Why not?

1 SIZE OF DWELLING 2. COST OF DWELLING
3 ECONOMY OF AREA 4 LOCATION
5 CONDITION/QUALITY OF DWELLING
6 DISTANCE TO/AVAILABILITY OF SERVICES
7 OTHER _____
8 NA

	(very satisfied				very dissatisfied)
Q15 How satisfied are you with your community?	5	4	3	2.	1

I certainly appreciate your willingness to answer all these questions. We're almost finished Next, I will read a list of statements concerning your home, and I'd like to know how strongly you agree or disagree with each statement Are you ready?

(INTERVIEWER GAUGE EXTENT OF AGREEMENT OR DISAGREEMENT FROM VERBAL CUES)

	(strongly agree					strongly disagree)
Q16 I have grown very comfortable in my present residence	6	5	4	3	2	1
Q17 Moving to another place would destroy our family tradition	6	5	4	3	2	1
Q18 People look up to persons who own their own homes.	6	5	4	3	2	1
Q19 In my home I feel like I'm truly my own boss, I don't want to give that up	6	5	4	3	2	1
Q20 Owning your own home gives you status in your neighborhood	6	5	4	3	2	1
Q21 I would not want to give up our home because it's our family home	6	5	4	3	2	1
Q22. Living in my own place is proof that I can take care of myself	6	5	4	3	2	1
Q23 My residence is costing me more than it is worth	6	5	4	3	2	1
Q24 People who own their own homes have more influence in the community than people who rent	6	5	4	3	2	1
Q25 If I had to leave my home, all my fondest memories would go with it	6	5	4	3	2	1
Q26 I am not comfortable where I am living now	6	5	4	3	2	1
Q27 A major advantage of owning your own home is that it can remain in the family after your death	6	5	4	3	2	1

	(strongly agree					strongly disagree)
Q28 I can walk around my place in the dark because I know where everything is	6	5	4	3	2	1
Q29 My residence imposes a financial burden on me	6	5	4	3	2	1
Q30 The achievement of owning your own home gives you a higher place in society	6	5	4	3	2	1
Q31 My home is no palace, but I'm used to it and feel as "snug as a bug "	6	5	4	3	2	1
Q32 My residence is a place where I can keep and enjoy all my treasured possessions	6	5	4	3	2	1
Q33 Buying your home is a wise investment	6	5	4	3	2	1
Q34 I can take care of myself whether or not I'm living in a place of my own	6	5	4	3	2	1
Q35 The things in my home really belong to my family, so I'm holding it for future generations	6	5	4	3	2	1
Q36 Owning a home makes one a more responsible community resident	6	5	4	3	2	1
Q37 Lately, I've grown tired of looking at the same four walls, I wish I had a new place	6	5	4	3	2	1
Q38 I like to relive the past by keeping lots of mementos.	6	5	4	3	2	1

	(strongly agree				strongly disagree)	
Q39 Familiarity with my home helps me feel comfortable	6	5	4	3	2	1

Q40 Now I need to check one more thing Is your households' total annual income still between $_____ and $_____?

1 CORRECT 2. _____(NEW AMOUNT)

That's it! Again, I want to thank you for answering all of our questions. You have been very helpful Would you like a summary of the results when they are available? (IF YES May I have your correct mailing address so that we can be sure you receive this information?)

CORRECT ADDRESS _____

_____

Thank you again and good-bye

APPENDIX D

PROPERTY ASSESSMENT

DATA COLLECTION INSTRUMENT

AND CORRESPONDENCE

As part of an on-going research project funded by the Agriculture Experiment Station at Oklahoma State University, we will be collecting housing-related information in your county. The purpose of this project is to learn more about housing preferences and satisfaction. We feel the size, age, condition, and assessed value of one s home is related to these concepts. Knowing that your office has such housing information, we are asking for your cooperation.

We will be visiting your county for a few days during the month of May to obtain the housing information mentioned above on 25-30 pre-selected households. Expect to hear from us in the next few days so that we can make more definite arrangements for our visit. At this time, we have names and addresses of the households. If there is anything we can do to make our data collection procedure go more smoothly, let us know when we call.

Thank you in advance for your assistance.

Sincerely,

Margaret J. Weber, Ph.D.
Project Director

Mikyoung Ha, Ph.D.
Project Assistant

Carla Earhart
Graduate Research Associate

Property Assessment Survey Instrument

NAME/ADDRESS	YR.BUILT	SIZE	CONDITION	VALUE

APPENDIX E

RECOMMENDATIONS FOR FURTHER RESEARCH

This dissertation, while meeting the specific objectives of the study, also provides recommendations for further research for those who may be interested in continuing the study of mobility intentions, psychological attachment-to-home, and/or rural elderly. These recommendations are discussed below.

Researchers of mobility intentions, or the desire to move, must pay particular attention to the methodological framework utililized. The two phase methodology, such as that used in this study, will have an attrition of respondents who are lost between the two data collection periods. Those respondents who are lost because they have already moved may leave the researcher with an inaccurate measure of the sample's mobility intentions because those with a high desire to move may have already moved. Future investigations of persons' attitudes toward relocation may want to rely on a one phase data collection method rather than the two phase method employed in this study. However, if a two phase methodology is used in future research on mobility intentions, investigators may wish to track both the movers and the stayers with a longitudinal research design.

Additional research is needed on the numerous variables that influence the desire to move. This study used socio-demographic characteristics, housing characteristics, psychological attachment-to-home, and residential satisfaction to explain 25 percent (reduced model) to 34

percent (full model) of the variation in mobility intentions. As a result, more investigation is needed using additional predictor variables not considered in this study. Recommended variables to be incorporated into a mobility intentions model include those previously researched by O'Bryant and McGloshen (1987)--availability of transportation, support from family and friends, a life satisfaction index, and a social activities index, as well as components of the normative housing deficits framework used by Morris, Crull, and Winter (1976).

This research established confidence in the Attachment-to-Home Scale by utilizing the instrument with a different respondent group and data collection method than had been used in the past, thereby paving the way for expanded use of the scale in the future. Previously administered via personal interview to urban elderly, this study used telephone interviews to adminstered the scale to rural respondents of all ages. However, the resulting factor analysis of the scale as it was used in this study was very similar to the results obtained in previous research. As a result, future investigators using the Attachment-to-Home Scale may want to use the factors in their original form as a result of the similarities found in this research.

Although the Attachment-to-Home Scale seems to be an ideal tool for predicting mobility intentions across different population groups in the United States, cultural differences between the United States and other countries

may limit its use abroad. However, as these other countries face many of the same mobility issues found in the United States, a measurement tool to predict mobility attitudes in other countries is needed. Researchers seeking a challenging project are encouraged to examine mobility intentions abroad.

Future investigations of mobility intentions should consider using heterogeneous samples more likely to be found in statewide or larger samples that would consider both urban and rural respondents. This study, based on rural respondents, lacked variation in respondents' race, marital status, and housing tenure status. As a result, differences in mobility intentions for these variables did not surface as they have in previous studies that used urban samples.

A final recommendation for future study is for researchers to be aware of the incidence of retirement communities in rural areas. Although the respondents in retirement communities are atypical of rural respondents elsewhere, the growing number of retirement communities in rural areas increases the chances of such respondents being included in a 'random sample' of rural areas. Investigators have three options in responding to retirement communities in their sample:

1) Be aware of retirement areas in the geographic area to be considered for the study and omit them before sampling.

2) If respondents from retirement communities are a part of the sample and the researcher can drop them from the study without significantly affecting the sample size, it is recommended that such respondents be eliminated.

3) If the sample size is already so small that the retirement community respondents cannot be eliminated, the research should compare the retirement community respondents to other rural respondents and discuss any differences that may have affected the study.

VITA

Carla Crosby Earhart

Candidate for the Degree of

Doctor of Philosophy

Thesis: ATTACHMENT-TO-HOME AND OTHER FACTORS AFFECTING MOBILITY INTENTIONS OF RURAL HOUSEHOLDS: IMPLICATIONS FOR HOUSING THE ELDERLY

Major Field: Home Economics

Area of Specialization: Housing

Biographical:

Personal Data: Born in Stuttgart, Arkansas, January 22, 1958, the daughter of Elsie and Ray Carlton Crosby,Jr.

Education: Graduate from Stuttgart High School, Stuttgart, Arkansas, in May 1976; received Bachelor of Science degree in Home Economics from University of Arkansas at Fayetteville in May 1980; received the Master of Science degree at Oklahoma State University in December, 1987; completed requirements for the Doctor of Philosophy degree at Oklahoma State University, July, 1991.

Professional Experience: Graduate Research Associate, Department of Design, Housing, and Merchandising, Oklahoma State University, July 1989 - May 1991; County Extension Home Economist, Oklahoma Cooperative Extension Service, Oklahoma State University, March 1981 - June 1989.