SOCIO - ECONOMIC, PHYSICAL HOUSING, LOCATION, AND SOCIAL - PSYCHOLOGICAL MEASURES USED AS PREDICTORS OF HOUSING SATISFACTION

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ABSTRACT

SOCIO-ECONOMIC, PHYSICAL HOUSING, LOCATION, AND SOCIAL-PSYCHOLOGICAL MEASURES USED AS PREDICTORS OF HOUSING SATISFACTION

By

Tracey Anne Feild

The purpose of this study was to examine the relative importance of four groups of variables, socio-economic, physical housing, location, and social-psychological, as predictors of housing satisfaction. Social-psychological variables were included as measures of general feelings, attitudes, and beliefs about life and specifically interpersonal relationships. This attempted to explore the notion that one's contentment and satisfaction with life and the interpersonal relations one has affects contentment or satisfaction with the house.

The data used came from a larger interdisciplinary field study entitled, "Functioning of the Family Ecosystem in a World of Changing Energy Availability," funded by the Michigan Agricultural Experiment Station. Data on housing satisfaction, housing facilities, and family data were obtained using self-administered questionnaires. Demographic data were obtained through personal interviews. Census data were also used.

The hypotheses were tested using multiple regression analysis to determine the independent contribution of each of the four groups of variables individually; and the contribution, direction of relationship, and relative importance of each variable with all variables in the equation.

It was found that with all independent variables in the equation, 21 percent of the variance was explained (R^2=.216). The most meaningful independent variables in predicting housing satisfaction in order of importance were: Value per room, bedroom deficit, family effectiveness, median education of the surrounding area, and percent of owner-occupied single-family dwelling units in the area.

The findings indicate that as groups of variables, physical housing factors were most important as predictors of housing satisfaction. There appears to be room for further study in determining social-psychological and neighborhood measures predicting satisfaction. Socio-economic variables appear to have little predictive value for housing satisfaction.

Though directions of relationships hypothesized were supported, the level of meaningfulness of each of the variables and each group of variables varied substantially indicating some measures were not useful within each of the groups. Further research into the area of predictors of housing satisfaction is warranted.

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CHAPTER I

INTRODUCTION

Human beings function as part of various and complex structures or systems. One of the basic social organizations is the family. Most everyone is born into, grows up within, and eventually begins one's own family. In addition to a social structure, Americans are very much a part of a spatial structure. They function within their social unit in a particular place in space. For the family this "place" in its most basic form is the house. Identification with a place, a house, a neighborhood, a city or state is often as important as identification with a social structure such as a family, a country club, a religious, or an income group. The two types of structures, social and spatial, cannot always be distinguished, the discrete values of each are often vague. One's place in the social structure may determine one's place spatially and vice versa. A change of place in one structure may cause or be caused by a change in the other. Some researchers recently have attempted to look at the interactions between social systems and spatial systems. The emphasis on the relationships between these two types of systems has surfaced within the last ten years in modern urban America under the label of man-environment studies with emphasis on the quality of life. Although the concept of quality of life seems

broad and poorly defined, various dimensions that make up the concept have been studied. One of the most important dimensions studied is housing. In what type of house does the family live? Does the house meet the family's needs both physically and psychologically? In what kind of neighborhood is the house located? Does the neighborhood meet the family's needs? Would they prefer to be housed elsewhere? Or are they satisfied there? The answers to these questions may well determine any one family's satisfaction with their housing, and thus reveal one dimension of their quality of life.

Problem Statement

This study examined the concept of housing satisfaction and its relationship to four groups of measures: socio-economic, physical housing, neighborhood or location and social-psychological factors. Socio-economic factors and physical housing factors have long been used by researchers as important factors in determining housing satisfaction. Neighborhood or location factors have been considered important but perhaps not as important as physical housing and socio-economic factors except when related to status increases due to changes in socio-economic characteristics. Social-psychological factors as defined in this study related to housing satisfaction have not been examined until this research and are hypothesized to be at least equally important to housing satisfaction as the other three factors. The first three groups of factors are based on an objective reality. How much income does the family have? How many children does the family have? Are they expecting

more children? How many bedrooms does the house have? How well does the family's socio-economic status fit in with that of the neighborhood? However, social-psychological factors are based on the subjective reality of perceptions, attitudes and feelings more attuned to the idea of housing satisfaction. Housing satisfaction as measured here doesn't deal with specific properties about the house itself, but to feelings about the house. Foote, et al. confirmed this belief:

> Dissatisfaction with housing contains a subjective element. There is some uniformity between level of satisfaction and objective characteristics of the dwelling, its cost and its surrounding environment and location. But correlation is not complete, since satisfaction is always partly a subjective phenomenon, varying from family to family, and depending upon the different standards by which they judge, as well as the different goals which they look forward to achieving (1960, p. 157).

Thus, standards and goals of housing satisfaction are surely related to their specific feelings, attitudes, and beliefs. A combination of these four groups of factors,therefore, should play an important role in determining housing satisfaction.

Mobility and Satisfaction

The idea of satisfaction with one's house is itself composed of a number of dimensions. Many researchers in the area have related satisfaction to mobility. "The Consumer Votes by Moving" (Abu-Lughod and Foley, 1966) is a popular notion based on the belief that when a family becomes dissatisfied with its home, it can move to another. Gladhart, in a study of family mobility, viewed the decision to move in this manner:

> In my view, the elements involved in a voluntary mobility decision include: (1) a family whose composition has changed, (2) a house which has not changed, (3) a normative context which defines the match between the house and the family as undesirable (1973, p. 7).

Physical housing factors related to changing family needs play an important role in housing satisfaction. Changing family needs are related to changes in the family life cycle, changes in family size and changes in socio-economic life style characteristics. Changing family need also is related to family perceptions of housing need. A rise in socio-economic status may be followed by a move to a "better" home or a home more suited to increased status. Leslie and Richardson synthesized this combination of factors:

> The verbalization of specific complaints about the present dwelling and the anticipation of more satisfactory features in a new dwelling may be the vehicle for the translation of life cycle and career pattern variables into individual decisions to move (1961, p. 901).

A socio-economic status increase is related directly to spatial location. The desired change of housing can be unrelated to the quality of the house itself, but instead, to the neighborhood in which the house is located. Alvin Schorr stated:

> The physical move is a social move, an evidence of aspiration and a functional step in improving one's social or economic situation (1963, p. 11).

Historically in the American city, the status move has been outward from the city center to the suburban ring, at the cost of job accessibility. The private automobile, however, virtually has eliminated accessibility as a problem for middle America.

Neighborhood factors are weighed with physical housing factors and socio-economic factors in determining housing satisfaction.

Not only must the physical and social structure of the family fit the physical space to attain a degree of housing satisfaction, but the social structure of the family must fit the social system or climate of the neighborhood environment surrounding the house. Both criteria must be met to arrive at an acceptable satisfaction level. If the social structure of the neighborhood does not meet the minimum expected or desired by the family, the fit does not exist and the family moves. Morris and Winter enlarged this point:

> The location of the dwelling unit and the nature of the area are prime determinants of the family's satisfaction with the dwelling and of its ability to accomplish other nonhousing goals. The quality of the children's education, for example, is greatly determined by the location of the dwelling (1975, p. 83).

Physical housing factors, socio-economic factors, and neighborhood or location factors traditionally have been examined to determine satisfaction with housing as manifested through voluntary residential mobility. Sabagh, Van Arsdol, and Butler (1969) in a discussion of determinants of residential mobility concluded that metropolitan residence changes are composed of four dimensions: (1) family life cycle, (2) social mobility, both intergenerational and career, (3) residential environment including changing characteristics of residence and neighborhood, and (4) social and locality participation which includes neighborliness and satisfaction with the nature and extent of participation.

Barriers to Mobility and Satisfaction

Voluntary residential mobility is based on the assumption that other housing is available at similar cost or that increased

income offsets increased cost. For the low-income family, this may not be so. Sylvia Lane summed up the problem of the low-income family:

> Consider the Negro family with a shelter-paying ability below the entry point for the cheapest suppliers. The family finds shelter by violating the housing laws in many ways or it moves outside normal market channels. Movement outside normal market channels forces it to accept poor quality housing, to use the housing more intensely, and to remain underhoused . . . . The housing they occupy . . . is not what they would buy if they had a free market choice (1974).

A family who has no choice in its housing due to economic restrictions may be far less satisfied than one who has choices via economic flexibility.

Beyond purely economic barriers, racial and ethnic discrimination confines housing opportunities to small, spatially well-defined and often overcrowded areas especially for those minority families who happen to be low-income. Another important barrier to mobility is referred to by geographers as "distance decay." This means that the probability of a family having knowledge or information about available housing and their preferences for that housing usually declines regularly with distance from the family's present location. Brown, Horton, and Wittick elaborated:

> The prime constraint on a migrant household's search pattern is provided by its awareness space, which may be defined as that set of locations within the urban area about which the migrant possesses some knowledge (1970, p. 176).

The awareness space is derived from the household's activity space, or locations with which the household has direct contact through various activities, and its indirect contact space, or locations

about which the household has some knowledge through indirect contacts such as friends, relatives, or mass media. However, Brown et al. indicated that the searching for alternative housing units takes place within the household's search space:

> The search space is contained within its awareness space and comprises those locations within the urban area which the migrant household perceives as being likely to satisfy its aspirations with regard to a new residence. Thus, it is explicitly recognized that, on the basis of criteria relevant to the utility of a residential site (such as its accessibility to urban amenities or its social environment), certain locations within the urban area will be eliminated from consideration before search begins (1970, p. 176).

If the awareness space is small, the search space could be almost nonexistent, no move will be made, housing satisfaction remains low. The fact that housing alternatives do or may exist is meaningless if not perceived within the household's search space. Socio-economic characteristics such as low-income, low educational attainment, or racial or ethnic discrimination tend to lessen the family's awareness as well as search space. Therefore, their housing satisfaction may be low, but this dissatisfaction would not be manifested in a move. For this reason voluntary mobility cannot be used as the only measure of housing satisfaction.

Modes of Adjustment to Housing

Morris and Winter (1975) viewed mobility as one facet of family housing adjustment. They suggested that if housing does not fit needs, a housing deficit exists. This deficit may be reduced by one or more of the following ways: (1) residential

mobility, (2) residential adaptation, or (3) family adapation.

Morris and Winter also suggested:

> Because of the presence of constraints, both intra- and extrafamilial, the family may be forced to compromise or relax their norms and utilize reasonable housing goals. Such compromises are achieved by the development of preferences for both means and goals that are relaxations of norms (1975, p. 79).

Although the middle or upper income family may choose the first mode of adjustment, to move when the house no longer fits their needs, they also may choose the second mode of housing adjustment, residential adaptation. This would entail modification of the home in some way through redecoration or remodeling.

The third mode of housing adjustment, family adaptation, will be examined in greater depth. What makes a family adjust their own standards or norms to confirm to the existing reality? A family without economic or information resources may have little choice but to adjust its norms. The house may not fit their needs in a variety of ways but without the resources to change or improve housing, the only alternative available may be an adjustment in their own standards. However, why is it necessary for adjustment behavior to occur? It may be possible for the family not to adjust its norms, but instead, to live with a constant dissatisfaction. There may be certain psychological attributes or personality types that do not conform to family housing adjustment behavior.

Theoretical Framework

Uriel and Edna Foa (1973) suggested that human beings need access to material or economic resources as well as to particularistic

resources. Particularistic resources are those that deal with one's interactions with other human beings (interaction, love, etc.). Access to interpersonal relations and the quality of these relationships, according to the Foas, strongly affects one's perceptions of, and needs for economic or material resources. The Foas theorized that unless a minimum need for particularistic resources is fulfilled no quantity of economic or material resources will satisfy the need. They suggested that in modern, urban America, people do not have access to a sufficient level of particularistic resources and, therefore, attempt to substitute material resources which are more readily available. This leads to emphasis on material goods and overconsumption. The problem lies in the fact that they are not equally substitutable. Their research indicated that, "(a) the substitute is demanded in greater amounts, and (b) this greater amount produces less satisfaction" (Foa and Foa, 1973, p. 22). One might interpret this to mean that a person lacking in a particularistic resource might attempt to substitute a better or bigger home (as one example) but still not be satisfied with that home since the need is interpersonal. This dissatisfaction, in this case, would not reflect the home as much as the availability of particularistic resources. If these resources involve interpersonal relationships, one can look at several psychological concepts in an attempt to get a representation of how one views oneself in relation to others.

The most basic of these concepts might be that of self-esteem. Although self-esteem is a feeling of self-worth, it can

only be measured by how one feels towards self in relation to others. It is generally agreed that a person's self-esteem is determined largely by what others think of him/her. This suggests that one without access to particularistic resources might have low self-esteem.

Another social-psychological concept that could be used as a measure of accessibility to particularistic resources is that of social isolation, which refers to a feeling of isolation from group standards. This could be related highly to the residential mobility dimension identified by Sabagh, et al. (1969) as social and locality participation.

Closely related to social isolation is the concept of anomia referring to the individual's generalized, pervasive sense of "self-to-others belongingness" as compared to "self-to-others distance or alienation" (Srole, 1956, p. 711). If one feels very alienated from those around him/her, it may be because one's access to particularistic resources is limited.

A fourth social-psychological factor deals with an individual's belief in external control. According to Rotter, a person is said to be externally controlled:

> When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as a result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him (1966, p. 1).

An externally controlled person may not believe that any adjustment one makes in life would make any facet of life happier or more

satisfying. This individual probably would not behave in accordance with family housing adjustment theory, because adaptation or mobility would not be perceived as a means to increased housing satisfaction. Although this perhaps does not measure directly one's access to particularistic resources, it instead may determine one's ability to use resources to achieve specified goals.

The last social-psychological concept used here in relation to particularistic resources was family effectiveness which deals with the perception of the family unit by its members. How the family functions as a unit and how each of its members feels about that functioning can very much depend on the physical amenities, layout, and size of the house. A family with a house that doesn't fit its needs may pay through decreased family effectiveness. More importantly, however, the family may function poorly as a unit regardless of housing considerations, and this low effectiveness could be manifested in perceived dissatisfaction with housing. Family members who feel their family does not function well as a group may have fewer particularistic resources to turn to when needed, and thus feel unhappy and dissatisfied in general as well as with their home.

These five concepts were used to give an insight into the family's social-psychological attitudes, beliefs, and perceptions regarding the Foas' particularistic resources. Perceptions of the quality and quantity of interpersonal relationships in relation to interpersonal need may well help determine one dimension of the family's quality of life, that is satisfaction with housing.

The theoretical approach advanced in this study suggests that housing satisfaction (HS) is a function of four major groups of variables. Thus for any family (i), at any point in time (t), for any particular dwelling unit (k):

$$_iHS_t = f\ (_iSES_t,\ _kPHY_t,\ _kLOC_t,\ _iPSY_t)$$

where:

SES = socio-economic variables
PHY = physical housing variables
LOC = location variables
PSY = social-psychological variables

Specifically these groups break down into individual variables and the model becomes:

$$_iHS_t = f(_iINC_t,\ _iED_t,\ _kVALU_t,\ _kBD_t,\ _kTEN,$$

$$_kTYPE,\ _kLOC_t,\ _kMINC_t,\ _kMED_t,\ _kOWN_t,$$

$$_iEST_t,\ _iISOL_t,\ _iANO_t,\ _iEXT_t,\ _iFE_t)$$

where:

INC = family income
ED = education of wife
VALU = value per room
BD = bedroom deficit
TEN = tenure status
TYPE = structure type
LOC = location
MINC = median income of area
MED = median education of area
OWN = percent owner-occupied, single family dwellings in neighborhood
EST = self-esteem
ISOL = social isolation
ANO = anomia
EXT = external control
FE = family effectiveness

Figure 1.--Model.

Discursive Definitions

Dependent Variable

1. Satisfaction with housing: This was a fifteen-item Likert-type scale used as the major dependent variable. The scale was designed to determine the family's overall satisfaction with the housing unit. (See Appendix A, p. 75.)

Independent Variables

1. Socio-economic factors: Defined as family income and education of wife. Specifically these variables were:

   a. Family income: Total gross family income for 1973.

   b. Education of wife: Total number of years of formal education, including vocational and technical school, of the wife of the household.

2. Physical housing variables: Made up of four measures of physical housing quality. Specifically these variables were:

   a. Tenure status: Used as a dummy variable where owner-occupied status equaled one and renter-occupied status equaled zero.

   b. Structure type: Used as a dummy variable where single-family dwelling type equaled one and nonsingle family dwelling type equaled zero.

   c. Value per room: Designed as a measure of housing quality computed for owner-occupied units as the value of the house divided by the number of rooms. For renter-occupied units, it was computed as the yearly rent muliplied by 10 and divided by the number of rooms.

d. Bedroom deficit: Determined by using a measure of bedroom need computed by taking cultural norms of sharing of bedrooms dependent on ages and sex of children. The need was subtracted from the number of bedrooms the housing unit actually had to determine a plus or minus bedroom deficit.

3. Location factors: Made up of four measures designed to determine the overall quality of the neighborhood in relation to the individual sample households. Specifically they were:

a. Location: Used as a dummy variable where urban equaled one and rural location equaled zero. Urban was defined as being located in the city of Lansing, East Lansing, or the surrounding suburbs, while rural was defined as being located in a township with no urbanized area.

b. Median income: Defined as median total family income of tracts or minor civil divisions for 1969 adjusted for time difference to make it more comparable to 1973 income.

c. Median education: Defined as the median years of schooling completed in the tract or township in which the household was located.

d. Percent of units owner-occupied: Made up of the percent of units in the neighborhood that were single family dwellings and were owner-occupied.

4. Social-psychological factors: Made up of five measures of self-to-others determined to represent accessibility to particularistic resources. Specifically these were:

a. Self-esteem: Defined as a feeling of self-worth in relation to others.

b. Social isolation: Defined as a feeling of isolation from group standards.

c. Anomia: Defined as a feeling of alienation from society.

d. External control: Defined as the belief that the consequences of one's actions are a result of luck, or chance and not necessarily related to the action itself.

e. Family effectiveness: Defined as the ability of the family to function as a unit as perceived by the individual members.

Assumptions

1. Survey research is an appropriate means of gaining objective and subjective measures related to housing satisfaction.

2. The measures used in this study are valid and reliable. (Reliability will be discussed in Chapter 3).

3. The adult female (or wife) is assumed to be a representative spokesperson for the family's attitudes and beliefs.

Hypotheses

Ho 1: Satisfaction with housing is related to socio-economic factors, physical housing factors, location factors, and social-psychological factors, each explaining equal amounts of the variance.

Ho 2: Socio-economic characteristics are related positively to satisfaction with housing.

a. Family income is related positively to housing satisfaction.

b. Wife's education is related positively to housing satisfaction.

Ho 3: Physical housing factors vary in direction of relationships with housing satisfaction by these variables:

a. Ownership tenure is related more positively to housing satisfaction than renter tenure status.

b. Single family dwelling type is related more positively to housing satisfaction than other dwelling types.

c. Value per room is related positively to housing satisfaction.

d. Bedroom deficit is related negatively to housing satisfaction.

Ho 4: Locational factors are related positively to satisfaction with housing.

a. Living in rural areas is related more positively to housing satisfaction than living in urban areas.

b. Median income of the area is related positively to housing satisfaction.

c. Median education is related positively to housing satisfaction.

d. The percentage of owner-occupied, single family dwellings in the area is related positively to housing satisfaction.

Ho 5: Social-psychological factors vary in direction of relationships with housing satisfaction by these variables:

a. Self-esteem is related positively to housing satisfaction.

b. Social isolation is related negatively to housing satisfaction.

c. Anomia is related negatively to housing satisfaction.

d. External control is related negatively to housing satisfaction.

e. Family effectiveness is related positively to housing satisfaction.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter focuses on two themes. The first section deals with housing satisfaction literature, particularly that related to intra-urban mobility. This body of literature was felt to be more appropriate than housing satisfaction literature for the present investigation for the following reason. Housing satisfaction literature in general deals with specific aspects of the home and the subjective evaluation of these aspects. In this study, the dependent variable was a scale made up of the subjective evaluations in terms of satisfactions with physical attributes of the house. But none of these attributes was examined individually. Rather these attributes or qualities were combined to measure an overall satisfaction giving far more depth than a single question on overall satisfaction. The point is that the specific qualities or features that comprise satisfaction were not being studied here. This investigation focused on broader categories of factors that could have affected these subjective evaluations regardless of the objective realities. The mobility literature dealt with these broader categories. In fact, it may well be that movers, present or near future, are better able to express broader areas of dissatisfaction than are nonmovers or those asked to express what they like about their

houses. Residential mobility literature was more attuned to general areas of dissatisfaction. Since the purpose of this investigation was to examine the relative importance of groups of variables, the mobility literature was far more useful.

The second section dealt with specific research done in the areas of the social-psychological variables used in this study as they have not been specifically related to housing satisfaction in the past, but instead to a broader feeling about, or outlook on life. The feeling here was that if these variables were related to satisfaction with life, then they could be related directly to satisfaction with the house.

Housing Satisfactions and Dissatisfactions

The classic study dealing with mobility and satisfaction is that of Peter Rossi (1955). It examined the mobility patterns of households in Philadelphia. Of those interviewed who were recent movers, 61 percent had moved voluntarily, while 39 percent were considered forced moves caused by evictions, dwelling destructions and intercity migration. Rossi summarized:

> Among voluntary moves--where the household had a clear voice between staying and moving--the most important factor impelling households to move was dissatisfaction with the amount of space in their old dwelling. Other factors in order of their importance were complaints about former neighborhoods and about the costs of rent and maintenance in their old homes (1955, p. 9).

In choosing their present homes, the respondents' desires were rank-ordered as follows: space in the dwelling, dwelling design features, dwelling location and cost. However, in the actual decision, cost was paramount.

Rossi (1955) also considered a series of household characteristics he felt would influence satisfaction with the present residence, and hence the desire to move. One of these was tenure status. He found a distinct difference between renters and owners with renters having a higher inclination to move. This can be explained in part by the fact that buying a house entails a greater commitment legally and financially than does renting. Involved here is the "axiom of cumulative inertia" (McGinnis, et al., 1963) meaning that the probability of an individual staying in a particular place increases with increasing length of residence. Speare explained in his study of Rhode Island residents:

> [Cumulative inertia] . . . is the product of various economic and social ties a person has at a particular location. The renter moving into a housing unit has fewer ties. Often his commitment to his landlord can be dissolved with a month's notice . . . . However the process of buying and selling a house involves certain costs and financial risks which renting does not. Thus the homeowner acquires an economic bond to a particular location when he buys a home (1970, p. 452).

This extra commitment and homeownership itself have an important effect on satisfaction. Rossi concluded that the very state of ownership produced a certain contentment with the dwelling regardless of its inadequacies, and what's more this contentment extended to the neighbors and neighborhood. Satisfied persons, especially owners, tended to view their neighbors as homogeneous although this may not have been the case, while dissatisfied persons, especially renters, saw diversity even when it did not exist. Gladhart's findings apparently contradict the axiom of cumulative inertia as related to mobility. He suggested a possible explanation:

> If the mobility of owners . . . is principally dependent upon questions of satisfaction with the current dwelling, then the effect of increased duration in a house may be to increase dissatisfaction with the dwelling until a move is induced (1973, p. 68).

In this way time would make matters worse, the small dissatisfactions would mount up until the move is made.

Rossi also explained the types of features each family had in mind in the search for a new home (see Table 1). He concluded:

> The findings of this study indicate the major function of mobility to be the process by which families adjust their housing to the housing needs that are generated by the shifts in family composition that accompany life cycle changes (1955, p. 9).

Consistent with this conclusion most researchers have shown that families in the earlier life cycle stages are more apt to have high mobility dependent on family size, age of the head, tenure and tenure preferences, number of rooms and attitudes towards amount of space. Rossi found that space complaints were twice as common for families who had had an increase in family size. In addition, 45 percent of all movers gave space problems as an important reason for moving.

Roistacher (1974) found in a recent national survey that "movers are more likely to be the young, selecting home, mates, and jobs, all three of which are searches that tend to settle down with age" (p. 50).

The life cycle thesis has been confirmed by Leslie and Richardson (1961) in a study of a Lafayette, Indiana, subdivision which examined association between upward mobility and residential mobility. This study also added the neighborhood or location dimension. The authors concluded that social mobility expectations,

TABLE 1.--Array of Specifications of Importance to the Families as They Looked for Their New Homes.[a]

Specifications[b]		Percentages
I.	Specific Dwelling Unit Attributes:	
	Particular space dimensions	51
	Particular design requirements (heating, layout, utilities)	50
	Costs (rent, maintenance, or purchase price)	19
	Other dwelling unit attributes	16
II.	Specific Neighborhood Attributes:	
	Social Composition	6
	Location	26
	Other Neighborhood Attributes	9
III.	Other Considerations	5
IV.	Vague Considerations	13
V.	None ("looking for anything")	5
	100% Equals	(444)

[a]Peter Rossi, Why Families Move, p. 154

[b]The specific wording of the question which elicited the reasons in this table was as follows: "What were the important things you had in mind about a place when you were looking around?"

"Other dwelling unit attributes" included such qualities as cleanliness (mainly referring to furnished units), details of construction (frame, brick, detached, attached), and so on.

"Other considerations" consisted primarily of "availability," e.g., "I needed a place right away and I would have taken anything that was available."

"Vague considerations" included such responses as "a better apartment," "nicer neighborhood," etc. In part, the large number of vague responses indicates poor interviewing since such responses should ideally be followed with probes to bring out specific details. But, in large part, the high proportion of such responses indicates the difficulty respondents felt in verbalizing such matters.

class differences perceived by respondents between themselves and their neighbors, education and house attitude were highly significant in relation to mobility and mobility expectations. What's more they found that a family whose social status had changed was more likely to move to a neighborhood or home that better expressed its new status. This finding was substantiated by Chevan in a study of couples in the Philadelphia-Trenton metropolitan area in 1960 (1971).

Butler and associates in a national survey of 1500 urban households in 1966-1969, looked at particular housing satisfactions and dissatisfactions. They concluded that number of rooms and number of bedrooms were the most important considerations. They also looked at broader areas of satisfaction and concluded that:

> Examination of the variation in satisfaction with respect to geographic region, standard metropolitan statistical area size, central city and suburbs, and households of various characteristics shows that dissatisfaction appears to be more common in young households, in larger households, in non-white households, and in households that are renting (Butler, et al., 1969, p. 21).

They also concluded that overall dwelling unit satisfaction is most strongly associated with type of dwelling unit and the appearance of the dwelling unit, inside and out; and strongly associated with most neighborhood aspects. The group also pointed out that, although more households are dissatisfied with apartments than single-family dwellings, this was partly due to household type living in apartments. However, Michelson confirmed this hypothesis and found that people living in single family houses on spacious lots evaluated their neighborhood environments more highly than those living in nonsingle family dwelling units (1969).

There is some empirical evidence to indicate that at least at the community level, location of the house makes a difference in the satisfaction, rural residents being more satisfied than urban residents (Marans, and Rodgers, 1972).

Fredland (1974) used linear regression models to estimate the influence of a variety of factors on the probability of moving. See Figure 2. He concluded that a family will choose a dwelling that yields optimum satisfaction over as long a period as can be foreseen because of the costs of moving. His results indicated that a lack of sufficient room is highly related to mobility and that mobility is higher in older neighborhoods than elsewhere even when controlling for a variety of other factors. Fredland also found that job changes are not among the principal causes of local residential mobility, although he did find that, for owners, a change of job having the same or higher status raises mobility 3 percent. This appears to support the findings of Leslie and Richardson (1961) that families move in response to career status changes. Fredland did not believe these moves to be in response to commuting considerations.

In a synthesis of intraurban mobility, Simmons (1968) concluded:

> The most meaningful aspect of the housing adjustments are the size and facilities of the dwelling unit, followed by the social environment of the neighborhood. The physical site and access to other parts of the city are relatively insignificant (p. 637).

$_{t}I$ = Family income in year t.

$_{t}F$ = Family demographic characteristics and preference patterns in year t.

HUQ = Housing unit quality.

HUS = Housing unit size.

NQ = Neighborhood quality.

LE = Location relative to head's employment.

TS = Tenure status (owner or renter).

$_{t}CP$ = Cost parameters (e.g. interest, tax rates, insurance costs) in year t.

Then for any housing unit (i), for any given family, the annual monetary evaluation of the satisfaction yielded can be explained generally as:

$$_{t}S_{i} = S(HUQ_{i}, HUS_{i}, NQ_{i}, LE_{i}, {}_{t}F, {}_{t}I)$$

Cost is expressed as:

$$_{t}C_{i} = C(HUQ_{i}, HUS_{i}, LE_{i}, TS_{i}, {}_{t}CP_{i})$$

Net satisfaction with unit (i), in year (t), $_{t}N_{i}$ becomes:

$$_{t}N_{i} = {}_{t}S_{i} - {}_{t}C_{i}$$

Figure 2.--Model for Viewing the Decision to Move.*

*Source: Daniel R. Fredland, Residential Mobility and Home Purchase.

Backler (1974), in a study of upper class residential moves in Detroit, found that changes in neighborhood stimulate the decision to move for upper class residents.

Bell (1958) studied suburban moves and residence and found "that people with rising income and social status seem highly motivated to find neighbors like themselves" (1958, p. 237).

Steffans (1964) in a study of North Carolina residents looked at likes and dislikes about previous residences and important considerations in deciding on present neighborhoods. He found that higher income groups were more concerned about the physical characteristics of the neighborhood than were other groups. This has been confirmed by Backler (1974). The most important considerations in selecting a future home were rank-ordered as follows:

1. financial considerations;
2. size and character of dwelling;
3. social environment and people in neighborhood;
4. physical character of neighborhood.

Less important were:

1. accessibility of site;
2. physical character of site;
3. availability of services and facilities.

Lansing, Mueller, and Barth (1964) found the expressed reasons for plans to move rank-ordered as follows: The house itself, cost considerations, nearness to place of work including occupation changes and neighborhood considerations.

Herbert Gans (1967) in his study of the Levittowners concluded that house related reasons for moving greatly predominated over community related reasons, and that the need for more space was the primary motive.

Greenbie (1969) investigated the relative importance of house and neighborhood in decisions to move in a 1968 study of Madison, Wisconsin, families living in owner-occupied, single-family dwelling units. He concluded that the house was more important than the neighborhood. Approximately four out of every ten families would have replaced the house and remained in the former neighborhood had it been feasible.

Hartman examined the effects on mental health of forced relocations in Boston's West End. He found that:

> Among those who liked the West End very much, almost everyone with good housing (98 percent) liked his apartment, and only a slightly smaller proportion of those with poor housing (86 percent) liked their apartments. As feelings about the area itself became less positive, however, rates of satisfaction with apartments of comparable quality decreased. And only then did objective quality of the housing appear to affect attitudes towards the apartment (1963, p. 122).

Fish (1974) compared the determinants of residential satisfaction and mobility for high and low income households in homogeneous and heterogeneous neighborhoods. She found that satisfaction with the house and neighborhood was higher in homogeneous neighborhoods. She concluded that this was due to a higher degree of social organization in homogeneous neighborhoods, and hence less social isolation. Other researchers have examined low income families and found a reasonable degree of satisfaction even in the face of poor housing conditions. In these cases, satisfaction has been associated with attachments to friends and family in the neighborhood (Hollingshead and Rogler, 1963; Suttles, 1968).

Foote (1960) in an in-depth investigation into housing choices and constraints found that the two most important motives for moving were the dwelling unit itself and the social qualities of the neighbors. He concluded that the higher the socio-economic status, the higher the contentment with neighbors due to a freer choice to live among neighbors of comparable status.

Weiss, Kenney, and Steffans (1966) in a study of the home purchase decision concluded that the quality and character of the homes in the neighborhood was the most important criterion for locational choice mentioned by the respondents. Aligned with this were the findings of Lansing, Mueller, and Barth:

> Feelings about the kind of people living in a neighborhood and the physical characteristics of the neighborhood are more influential in determining over-all attitudes toward the neighborhood than is convenience of location (1964, p. 34).

Foote (1960) indicated that of the movers who complained about their previous neighborhood, half were dissatisfied by its social qualities. These dissatisfactions were related to either real or perceived differences in income, ethnic, racial, or class identification and those of the neighbors.

The purpose of this investigation was to examine the relative importance of four groups of factors in determining housing satisfaction. For this reason, mobility literature has been reviewed in hopes of identifying broad categories of satisfaction and dissatisfaction. Most researchers tie mobility directly to dissatisfaction with some area of housing characteristics (Butler

et al., 1969; Butler et al., 1964; Backler, 1974; Rossi, 1955). Rossi identified push and pull factors. "Push" factors tend to create a desire for leaving the present residence and "pull" factors create a desire for living in another location. When the threshold is reached, the move is made (Rossi, 1955; Armiger, Jr., 1960). Rossi identified the "push" factors in order of importance:

1. Dissatisfaction with the amount of space;
2. Complaints about the neighborhood (particularly socially);
3. Cost complaints.

However, moving is not always possible as pointed out by Roistacher:

> Although many families with poor housing quality might desire to improve it, they may be unable to for the very reason that they faced these conditions initially, that is, they have insufficient income to pay for a higher quality dwelling unit (1974, p. 68).

In summary, the main cause of dissatisfaction is tied to space constraints within the dwelling related to family life cycle changes (Rossi, 1955; Roistacher, 1974; Leslie and Richardson, 1961; Butler et al., 1969).

Beyond definitive space problems, overall dwelling quality is important. Satisfaction also seems tied to the tenure status of the residents, owners being more satisfied than renters (Rossi, 1955; Speare, 1970). Another area of difference is type of dwelling unit with single family dwellings being most satisfying (Butler et al., 1969; Michelson, 1969).

The selection of the home, choice factors involved, alternatives available and the ability to satisfy one's material desires

in a home are all realted to socio-economic characteristics of the household (Lane, 1972; Roistacher, 1974; Foote, 1961).

Neighborhood factors including the social composition of the neighborhood and the fit of the household social status to that of the neighbors has also been identified as being extremely important (Leslie and Richardson, 1961; Chevan, 1971; Fredland, 1974; Backler, 1974). Satisfaction with the neighborhood has also been related to social participation with neighbors (Fish, 1974; Hartman, 1963; Hollingshead and Rogler, 1963).

Although factors related to the community or neighborhood and the family's income or education are not directly related to the house itself, it is assumed that they will affect perceptions of housing satisfaction. For example, a family who is entirely satisfied with their house suddenly increases its income substantially. Because of the status increase, the very same house may not be so satisfying because the neighborhood is of a lower status than the family feels is appropriate for its increased wealth. This dissatisfaction with the neighborhood could easily be manifested in complaints about the house itself. Thus satisfaction with the dwelling decreases because of changes in income and perceptions of neighborhood.

Perceptions of Self and Effect on Outlook

The social-psychological concepts used in this study were an attempt to arrive at an understanding of how one related to those around her/him.

Rosenberg (1965) studied the concept of self-esteem among adolescents. He found a statistically significant (.05) association between self-esteem and the appearance of depression. He also found that the lower the self-esteem, the more likely one is to express feelings of unhappiness and discouragement. He concluded that low self-esteem implied self-dissatisfaction (Rosenberg, 1965). In the same way that dissatisfaction with the neighborhood could be expressed in dwelling unit dissatisfaction, such is the way that self-dissatisfaction could be expressed.

In a study of social integration Srole's (1956) findings supported the hypothesis that linked the "individual state of anomia and interpersonal dysfunction in the social realm" (1956, p. 716). Bell (1957) found that anomia is inversely related to economic status and suggested that anomia may result in those who expect economic success and have the least access to it. He concluded:

> Anomie is also related to social isolation. There is wide variability in personal demoralization among urbanites as related to differences in frequency of informal and formal group participation, age and position in the class structure.
>
> The relationships between neighborhood economic status and anomie suggests that the economic character of the neighborhood population as a unit may play an important part in sorting out persons having different degrees of anomie. It also may directly affect the personal morale of the residents (1957, p. 115).

Dean (1961) studied the factors involved in feelings of social isolation. He found that:

> Residential areas with the highest schizophrenic rates are those characterized by anonymity, spatial mobility, smaller percentage of voting, low social participation, greater unemployment, fewer memberships in lodges and fraternal organizations, more job turnovers, fewer visits from friends, etc. (Dean, 1961, p. 756).

Fish (1974) also explored social isolation as a lack of social organization caused in part by neighborhood heterogeneity.

Rotter's (1971) investigations into internal-external control, or the beliefs that rewards come from one's own behavior or from external sources, uncovered some interesting findings. Lower-class children are more external while children from richer, better educated families are more internal. Internal and external control, however, also seem related to cultural backgrounds and race as well as to socio-economic characteristics. Rotter also found that external persons feel at the mercy of their environments, being manipulated by outside forces.

The last social-psychological measure to be discussed here is that of family effectiveness. In extensive family research, Van der Veen and associates concluded:

> The parents of less adequately functioning families see their families as being less what they want them to be and are dissatisfied with more qualities of their families. They see their families as not meeting their hopes and expectations (1964, p. 54).

The above social-psychological concepts are meaningful in an individual's general outlook on life and satisfaction with life. Because of this, they are felt to be directly related to outlook on and satisfaction with the housing environment. In the context of the Foas' theory, if in fact these measures do represent accessibility to particularistic resources, one would expect a direct relationship between these variables and housing satisfaction.

CHAPTER III

METHODOLOGY

Collection of the Data

The data for this study were gathered as part of an interdisciplinary study entitled, "Functioning of the Family Ecosystem in a World of Changing Energy Availability," funded by the Michigan Agricultrual Experiment Station. This project was a field survey carried out in the greater metropolitan area of Lansing, Michigan, during the months of May and June, 1974.

The data used in this study were a small portion of the data gathered for the larger interdisciplinary investigation. The interview schedules used to elicit this data were (a) a set of self-administered questionnaires about housing facilities and family; and (b) interviewer-administered questionnaires to gather family demographic data. Data collection for this study also included property tax assessment data gathered from local tax offices; and 1970 census data. The census data used included the published Lansing S.M.S.A. housing data for census tracts and blocks, and the unpublished Fourth Count housing data for minor civil divisions made available through computer tapes.

Upon completion of questionnaires and interview schedules, the data were checked by the research team for completeness and

Individuality of responses. The raw data were transferred to coding sheets by trained coders. All keypunching and verification were done by a commercial firm. Cards were verified further against the raw data.

The Sampled Community

The sample was selected from the greater metropolitan area of Lansing, Michigan. The Lansing Standard Metropolitan Statistical Area (S.M.S.A.) is considered to be a well-defined social, economic, and political metropolitan area characterized by a diversity of functions. It is the seat of state government, the site of a major university, and the location of light and heavy industry related to the automotive industry. The Lansing S.M.S.A. is a central area of commercial enterprise surrounded by a productive agricultural sector.

The Lansing S.M.S.A. has a total population of 378,000 persons and 89,610 families (1970 Census). A multi-stage probability sample of urban, suburban, and rural families was drawn from the tri-county area of the S.M.S.A. Some portions of Clinton, Eaton, and Ingham counties fall within the S.M.S.A. which is considered to be a viable geographic area with a heterogeneous population. Ten census tracts were randomly selected, each tract having a probability proportionate to the number of households therein. Over 600 households were selected from the 34 blocks contained within the ten census tracts by use of the 1973 Polk City Directory.

In the rural areas, townships with no incorporated places, and specific sections within townships were selected from the counties in the S.M.S.A. Households were selected from the randomly selected addresses within the sections. Sampling procedures assured attainment of at least 150 urban and 50 rural families.

The final sample contained 217 families, 160 urban and 57 rural. A comparison was made between the census data of 1970 for the Lansing S.M.S.A. and the sample to assess the representativeness of the sample. The sample was determined to be closely representative of Lansing S.M.S.A. families (Zuiches et al., 1975).

The sample of 217 has since been reduced for the purposes of this study to 198. Elimination of cases was done on the basis of missing data, no wives present in the household, or the wife of the family not serving as the respondent.

Description of the Sample

Some basic demographic characteristics of the sample (n = 198) are presented in table format.

TABLE 2.--Urban-Rural Breakdown of Sample.

Category	Number	Percent
Urban	151	76.3
Rural	47	23.7
	198	100.0%

Table 2 shows a close correspondence to the desired 150-50 split of the original sample selection.

TABLE 3.--Tenure Status of Sample.

Category	Number	Percent
Owner	138	69.7
Renter	60	30.3
	198	100.0%

The 69.7% owner-occupied tenure status is very similar to the 1970 Census which shows 62.9% of single family dwellings are owner-occupied in the Lansing S.M.S.A. (U. S. Bureau of Census, 1970, pp. 846-47).

TABLE 4.--Structure Type of Sampled Households.

Category	Number	Percent
Single family dwelling units	145	73.2
Nonsingle family dwelling units	53	26.8
	198	100.0%

Again this figure is closely related to 1970 Census figures which indicate that 69.4% of dwelling units were single family dwelling units in the Lansing S.M.S.A. (U. S. Bureau of Census, 1970, pp. 846-47). A more detailed description of dwelling type is offered in Table 5.

TABLE 5.--Dwelling Type of Sampled Households.

Category	Number	Percent
Single family	145	73.2
Single family converted to multiple family	3	1.5
Mobile home	12	6.1
Duplex	7	3.5
Four-plex	1	0.5
Townhouse	12	6.1
Apt. house 3-10	10	5.1
Apt. house 10-20	3	1.5
High rise	5	2.5
	198	100.0%

Selected family characteristics are presented in the following tables.

TABLE 6.--Family Type.

Type	Number	Percent
Adults, no children	53	26.7
Oldest child under 12	79	39.9
Oldest child 12-18	33	16.7
Oldest child over 18	33	16.7
	198	100.0%

As can be seen families in all stages of the family life cycle are represented in the sample with younger families dominating. This information is reinforced by the ages of the wives.

TABLE 7.--Age of Wife.

Age	Number	Percent
19-30	75	37.8
31-40	54	27.3
41-50	33	16.7
51-60	25	12.6
Over 60	9	4.6
Missing data	2	1.0
	198	100.0%

The following table indicates the range of family income in the sample.

TABLE 8.--Family Income.

Income	Number	Percent
Less than $4,999	16	8.1
$ 5,000-$ 9,999	42	21.2
$10,000-$14,999	59	29.8
$15,000-$24,999	54	27.3
$25,000-$49,999	23	11.6
$50,000 +	4	2.0
	198	100.0%

The median family income of the sample is $13,425 compared to $11,213 for Lansing S.M.S.A. families in the 1970 Census (U. S. Bureau of Census, 1970).

TABLE 9.--Educational Attainment of the Wife.

Years Completed	Number	Percent
0-11	38	19.2
12 years	88	44.4
1-3 years college	37	18.7
4 years college or more	35	17.6
	198	100.0%

The median number of years completed is 12.1. As can be seen approximately 80% of the adult females in the sample have at least earned a high school diploma. The high educational attainment of the sample may be explained partially by the presence of a large university within the Lansing S.M.S.A.

Occupation characteristics are listed in the table below. Both husbands and wives have been included in this table to give a more complete picture of occupational status. The classifications are based on the census occupation classifications.

TABLE 10.--Occupational Status of Husbands and Wives.

Classification	% Males	% Females
Professional	20.8	17.6
Managerial	10.9	6.8
Sales, clerical	10.9	47.3
Blue collar	45.3	11.5
Service and Household Workers, Laborers	12.0	16.9
	(n=192) 100.0%	(n=148) 100.0%

About half of the male work force have blue collar professions and approximately two-thirds of wives are employed outside the home.

Operational Definitions

Most of the variables used have been transformed in some way for the purposes of this study. The following discussion will operationally define the variables used in this investigation.

Dependent Variable

Satisfaction with Housing.--This variable was a scale consisting of 15 items. Each item had a possible value from one to five (see Appendix A, page 75). A score of one was given for the highest satisfaction, a score of five was given for the lowest satisfaction. The items in the scale focused on specific physical properties of the housing unit itself dealing with (a) facilities, i.e., size, number, and arrangement of rooms; (b) utilities, i.e., lighting, heating, and plumbing; and (c) environment, i.e., privacy and noise. One item, satisfaction with cooling system, which was originally in the interview schedule, was deleted from the scale because of missing data due to inadequate question composition. Recoding of the values was done such that the highest satisfaction yielded the highest score, the lowest satisfaction the lowest score. Thus the possible low score was 15 and the possible high score was 75.

Eleven cases had one item missing from the total of 15. For each of these cases, the mean score of each respondent's scale was used as a substitute. This would in no way affect the

statistical outcome of the value of the scale for that respondent. In five more cases, two items were missing. The same procedure was used on these cases with the view that in both situations the number of missing cases was small enough so as not to jeopardize the results. A reliability analysis of the final scale yielded a Cronbach alpha coefficient of .8729.

As most people tend to be relatively satisfied with their homes, the distribution was not normal, but somewhat skewed as can be seen in the following table.

TABLE 11.--Descriptive Statistics on Satisfaction Scale.

Mean	57.293	Standard error	.649	Median	57.714
Mode	60.000	Standard deviation	9.128	Variance	83.325
Kurtosis	.012	Skewness	-.152	Range	46.000
Minimum	29.000	Maximum	75.000		

Independent Variables

Socio-economic Variables.--The two variables used were total family income for 1973 and wife's educational attainment as measures of socio-economic status of the family.

Family Income: The data for this variable were gathered into 21 discrete groupings. Then the mid-point of each grouping was used as the total gross family income for 1973.

Education of Wife: The data were collected as number of years and type of schooling completed by the wife of the family.

These were recoded into number of years only, with technical schooling such as beauty school and key punch school being coded as one year beyond high school.

Physical Housing Variables.--The variables used in this grouping were felt to be measures of housing quality and family fit associated with life cycle considerations.

Tenure Status: This variable was used as a measure of owner or renter status and as such defined the family's relationship or commitment to the dwelling unit. It was used as a dummy variable with the value of one given to owners and the value of zero given to renters.

Structure Type: This variable was included as a measure of housing quality as well as a measure of housing constraint. It was used as a dummy variable with single family dwelling units being given a value of one and nonsingle family dwelling units being given a value of zero. Only single family dwelling units physically separated from other dwelling units which were permanently located on a plot of land were considered in this grouping. All other dwelling unit types including duplexes, single family homes converted to multiple family dwelling units, apartments, and mobile homes were considered as nonsingle family dwelling units. Although it might be argued that a mobile home has far fewer constraints than an apartment, the nature of mobile home parks is far more confining than single family dwelling living.

Also it was felt that as a measure of housing quality, single family homes and mobile homes were not comparable.

Value per Room: This variable was used as a measure of housing quality and was computed differently for owners than for renters.

For owners, the procedure was as follows: Two variables were available for total value of the dwelling unit. The first of these variables was obtained from the direct question to the respondents, "How much do you think you could get for this house if you wanted to sell it?" There were obvious problems related to the use of these data. The accuracy of the respondent's assessment was difficult to gauge. The other source of data came from local property tax assessments. However, there were also problems with these data. First, the date of the assessment was not collected. A two or three year old assessment compared with a recent assessment would not have reflected true values. What's more there were many missing values in the assessment data. It was decided to use the first source of data, the respondent's own assessment of the value of her own home. These data were closely checked for obvious flaws. It was discovered that four farmers had given the value of their entire property rather than just that of the dwelling unit. In these instances, and in several cases of missing data, the assessment value (reported to be one-half of the market value) was doubled and used as a substitute. This figure for the value of the home was divided by the number of rooms in the dwelling unit to compute the value per room of the dwelling unit.

For renters the variable used as the base figure was contract rent per month. This figure was converted to a yearly rent. The yearly rent was divided by the number of rooms in the apartment or house. As such the rental and owner value per room figures were not comparable, the value per room for owners being in the thousands of dollars and the value per room for the renters being in the hundreds of dollars. Because of this the value per room for the renters was multiplied by ten as an attempt to make the two groups of figures equitable in the analysis. This procedure has precedent in real estate market assessment for rental property, though is perhaps slightly high for the Lansing area.

Bedroom Deficit: This variable examined the fit between the family and the housing space related to life cycle changes. It consisted of a scale developed by Gladhart (1973) based on a bedroom need score. The score was ascertained by computing the number of bedrooms a family would need based on American normative standards for the sharing of bedrooms taking age and sex differences into consideration. The deficit was computed by subtracting the bedroom need score from the number of bedrooms the present dwelling unit actually has. This resulted in a range of scores on either side of zero. A positive score represented an excess of bedrooms, a negative score represented the actual deficit.

Social-Psychological Variables.--The variables included in this grouping have been used in previous studies. Their inclusion was an attempt to ascertain some of the basic feelings of the

individual in relation to others. For reliability coefficients of all measures, see Appendix B, page 81. For this study the wife's scores on all five measures were used as the basis for analysis.

Self-esteem: This was a 10-item scale developed by Rosenberg (1965) to measure the self-acceptance aspect of self-esteem. (See Appendix A.) There were four possible values for each item. Values for all items were added to ascertain the scale score. A high score represented high self-esteem.

Social Isolation: This variable was a nine-item scale developed by Dean (1961) as one part of a three part alienation scale to measure alienation from group standards (see Appendix A). The scale was composed of the sum of the nine items presented in standard Likert format with item value ranges from zero to four. A high score represented high social isolation.

Anomia: This variable consisted of a five item scale developed by Srole (1956), designed to measure the individual's sense of malintegration (see Appendix A). This was a Likert-type scale with a range of item values from zero to four. The high summed scale score represented high anomia.

External Control: This variable consisted of an 11 item Likert-type scale abbreviated by Valecha (1962) from the original 29-item scale developed by Rotter (1966). It was reduced further by Schiamberg and Morrison (App. A, p. 79). The scale was developed to ascertain the individual's belief in the responsibility for the consequences of one's actions. The scale consisted of eight question

pairs using a forced choice format with internal statements paired with external statements. Possible range of scores was zero to eight. High scores represented external control while low scores represented internal control.

Family Effectiveness: This variable was a 40-item Likert-type scale originally developed by Van der Veen (1964) and used here in the abbreviated version shortened by Imig (1971). The scale was designed to ascertain the individual's view of her family as a unit. The range of item values was from one to five. After the item values were summed, the higher total scores represented high family effectiveness; the lower scores represented lower family effectiveness.

Location Variables.--These variables were included as measures of neighborhood quality.

Location: This variable was defined as urban or rural. The urban classification was made up of all persons living in the Lansing urban area, while rural was defined as a location in a township with no incorporated places. The variable was used as a dummy variable with urban being given the value of one, and rural the value of zero.

Median Income: This variable represented the median income for each of the 10 tracts or two townships in which the households were located as reported in the 1970 Census. The purpose was to give an indication of the socio-economic quality of the neighborhood.

These figures were adjusted by 1.278 for income and cost of living increases based on census figures for the Mid-Central states (U. S. Bureau of the Census, 1975). Although the rate of increase between the urban and rural areas has not been uniform, the absolute increases were not necessary for the purposes of this study.

Median Education: This variable represented the median school years completed for each of the 10 census tracts and two townships in which the sample households were located as reported by the 1970 Census. This variable was also included as a measure of socio-economic quality of the area.

Percent Owner-occupied Units: This variable was considered a measure of neighborhood quality. For the urban areas, census block data were used to form neighborhood groupings around sampled blocks. The purpose of these groupings was to account for "the people across the street." No attempt was being made to define neighborhood, instead an arbitrary grouping was delineated composed of various surrounding census blocks. The purpose was to establish very small neighborhoods made up of the blocks contiguous to the sample blocks. These groupings should be more sensitive to individual housing satisfaction than census tracts. Unfortunately, very sketchy data were available at the block level hence the usage of tract data elsewhere. The criteria for the selection of neighborhood groupings are listed in Appendix C.

For the rural households, however, this variable was computed at the township level because data at a smaller unit of analysis were not available.

Other Variables Considered for Usage

Numerous other variables were considered for use in the original conceptualization including race, percent of income spent on housing, length of residence, accessiblity to work, shopping, a cultural measure of need for flexible, diversified housing space, and a plethora of neighborhood or location variables. Most of these were eliminated for reasons of missing data or lack of variation. Most other location variables were eliminated because of too much suppressed data at the township level. A decision was made to keep the rural respondents in the sample at the cost of more location variables.

Statistical Analysis

Analysis was done by means of CDC 6500 computer using the Statistical Package for the Social Sciences program.

As has been mentioned previously, three sets of dummy variables have been used. The purpose of a dummy variable is to show membership in a given category of a variable that cannot be defined as continuous. As used here, all dummy variables are dichotomous. Kerlinger and Pedhazur defined dummy variable as follows:

> A dummy variable is a vector in which members of a given category are assigned an arbitrary number, while all others--that is, subjects not belonging to the given category--are assigned another arbitrary number (1973, p. 105).

Dummy variables used in this study were: Tenure status (owner = 1), renter = 0), structure type (single family dwelling = 1, nonsingle family = 0), and location (urban = 1, rural = 0).

Multiple regression was used in two phases. As an analytical procedure multiple regression was felt to be appropriate because it allows one to examine the collective and individual contributions of independent variables on the variance in a dependent variable. In the first part of the procedure, each group of variables (socio-economic, physical housing, location, and social-psychological) was put into the equation by itself with the dependent variable to get the relative variance explained by each group of variables.

Next a multiple regression was done with all variables entered into the equation to get an indication of the contribution of each variable when controlling for all others.

CHAPTER IV

FINDINGS AND DISCUSSION

The results of the statistical analysis are contained in this chapter.

The first set of regression analyses was done to determine the relative importance of each group of variables in explaining the variance in housing satisfaction. Each group of variables, socio-economic, physical housing, location, and social-psychological was entered into the regression equation individually. The variance explained, therefore, was for that group of variables only and did not take into consideration the correlations among variables nor controlling for other variables. Hypothesis 1 indicates the hypothesized predicting value for each of the four groups of variables.

Ho 1: Satisfaction with housing is related to socio-economic factors, physical housing factors, location factors, and social-psychological factors, each explaining equal amounts of the variance.

Findings

The findings of these multiple regression analyses are summarized in Tables 12 through 15.

TABLE 12.--Regression Results for Socio-Economic Variables with Housing Satisfaction.

Socio-Economic Variables	b	Std. Error	F	beta	Probability of sampling error, one-tailed test
Family income	.0002	.00006	9.783	.224	<.005
Education	.189	.241	.620	.056	>.75
Multiple R .243		df regression	2.	F	
R Square .059		df residual	195.	6.124	<.025

TABLE 13.--Regression Results for Physical Housing Variables with Housing Satisfaction.

Physical Housing Variable	b	Std. Error	F	beta	Probability of sampling error, one-tailed test
Tenure	1.028	1.790	.330	.052	>.75
Structure	1.401	1.845	.577	.068	>.75
Value per room	.001	.0003	13.375	.245	<.001
Bedroom deficit	2.048	.598	11.719	.236	<.001
Multiple R .392		df regression	4.	F	
R Square .154		df residual	193.	8.753	<.001

TABLE 14.--Regression Results for Location Variables with Housing Satisfaction.

Location Variables	b	Std. Error	F	Beta	Probability of sampling error, one-tailed test
Location	-3.771	1.608	5.499	-.177	<.001
Median Income	.0006	.0003	6.191	.179	<.001
Median Education	1.495	.606	6.084	.196	<.001
Owner units	3.977	3.224	1.522	.095	<.25
Multiple R .254	df regression		4.	F	
R Square .064	df residual		193.	3.336	<.025

TABLE 15.--Regression Results for Social-Psychological Variables with Housing Satisfaction.

Social-psychological Variables	b	Std. Error	F	Beta	Probability of Sampling error, one-tailed test
Self-esteem	-.131	.158	.681	-.061	>.25
Social isolation	-.171	.161	1.123	-.083	>.25
Anomia	-.753	.466	2.611	-.127	<.10
External control	.147	.337	.190	-.033	>.25
Family Effectiveness	.148	.078	3.590	.149	<.01
Multiple R .268	df regression		5.	F	
R Square .072	df residual		192.	2.977	<.025

Discussion

As is shown in these tables the null hypothesis was rejected. The physical housing varibles explain 15.4% (R^2=.154) of the

variance, twice as much as any one of the other groups. The three other groups are closely aligned, however, with social-psychological variables explaining 7.2% (R^2=.072) of the variance, location factors explaining 6.5% (R^2=.065) of the variance, and socio-economic factors explaining 5.9% (R^2=.059) of the variance.

The next multiple regression was done with all variables entered into the equation. Table 16 is the result of that. Throughout this chapter standardized regression coefficients will be discussed, because they are felt to be more appropriate for looking at relative contributions of variables. However, the raw betas have also been included in Table 16.

Ho 2: Socio-economic characteristics are related positively to satisfaction with housing.

a. Family income is related positively to housing satisfaction.

b. Education of wife is related positively to housing satisfaction.

Findings

The findings of this multiple regression analysis using standardized (β) regression coefficients are presented in Table 16.

Discussion

Both variables are related positively to satisfaction with housing, therefore, the hypothesis is supported. However, the probability of sampling error is great. This suggests that given the other information income and education are not good predictors

TABLE 16.--Regression Coefficients, Standard Errors, F-Ratios, Probability of Sampling Error, and Multiple Correlations of Independent Variables on Satisfaction with Housing.

Independent Variables	Satisfaction with Housing				
	b	Std. Error	beta	F	Probability of sampling error, one-tailed test
Socio-economic Variables					
Family income	.000002	.00007	.002	.001	>.25
Education of wife	.026	.259	.007	.009	>.25
Physical housing variables					
Tenure status	1.308	1.937	.066	.456	>.25
Structure type	1.346	1.921	.066	.491	>.25
Value per room	.001	.0004	.235	8.504	<.001
Bedroom deficit	1.467	.647	.169	5.137	<.001
Location variables					
Location	-.636	1.677	-.029	.144	>.25
Median income	.0002	.0003	.047	.375	>.25
Median education	.900	.618	.118	2.121	<.025
Percent owner units	4.000	3.270	.096	1.496	<.25
Social-psychological variables					
Self-esteem	.003	.155	.001	.0002	>.25
Social isolation	-.059	.163	-.029	.133	>.25
Anomia	-.230	.491	-.039	.219	>.25
External control	-.309	.328	-.069	.883	>.25
Family effectiveness	.169	.076	.169	4.953	<.001
Overall F				3.334	<.001

Multiple R .464 R Square .216 df regression 15. df residual 182.

Percentile Points of F distribution at 12 and ∞ degrees of freedom:

Percentile	Tabled F
75 = .25	1.24
90 = .10	1.55
95 = .05	1.75
97.5 = .025	1.94
99 = .01	2.18
99.5 = .005	2.36
99.9 = .001	2.74

of housing satisfaction. The standardized regression coefficients are low for both variables.

In comparison with Table 13, it is interesting to note the great reduction in the F value for family income when controlling for all other variables.

Ho 3: Physical housing factors vary in direction of relationship with housing satisfaction by these variables:

a. Ownership tenure is related more positively to housing satisfaction than renter tenure status.

b. Single family dwelling type is related more positively to housing satisfaction than other dwelling types.

c. Value per room is related positively to housing satisfaction.

d. Bedroom deficit is related negatively to housing satisfaction.

Findings

The standardized regression coefficients for the physical housing variables are presented in Table 16.

Discussion

All of the physical housing variables are positively related to housing satisfaction but at differnt levels of sampling error. Tenure and structure type have F's much smaller than the 25 percentile level so the probability of sampling error is greater than 25 percent. However, the F levels jump considerably for the other two variables, value per room and bedroom deficit, both of which have probabilities of sampling error much less than .001 percent. This

is an interesting finding and suggests that perhaps tenure and structure type are not as valuable as predictors of housing satisfaction as had been assumed. Bedroom deficit, closely related to life cycle changes is an important measure, and value per room is the most important of the group as a measure of housing quality.

It must be noted that the positive relationship between housing satisfaction and bedroom deficit is due to the values given the bedroom deficit variable: a positive value signifies a surplus of bedrooms, while a negative value signifies a deficit. Therefore, while deficit itself is related negatively to housing satisfaction, as hypothesized, the variable is related positively to housing satisfaction. All hypotheses are supported.

Whether used in the equation by themselves (see Table 13) or in conjunction with all other variables, the value of the physical housing variables as predictors of housing satisfaction is similar. Tenure and structure type are not valuable predictors while value per room and bedroom deficit are valuable predictors.

Ho 4: Location variables are related positively to housing satisfaction.

a. Living in rural areas is related more positively to housing satisfaction than living in urban areas.

b. Median income of the area is related positively to housing satisfaction.

c. Median education is related positively to housing satisfaction.

d. The percentage of owner-occupied, single-family dwellings in the area is related positively to housing satisfaction.

Findings

The standardized regression coefficients for the location variables are presented in Table 16.

Discussion

Median income, median education, and percent owner-occupied units are positively related to housing satisfaction. A negative beta is shown for the location variable which was a dummy variable with rural location equal to zero and urban equal to one. Therefore rural location is positively related to housing satisfaction. The hypothesis is supported. The relative size of the F's is interesting to note. Median education seems to be the most important of the variables with a probability of sampling error less than .025. Yet another socio-economic variable, median income has a small F with a probability of sampling error greater than .25. This may mean that as a measure of social status, median education of an area is more valuable than income.

By comparing the results of the location variables in Table 16 with the results of the equation in which only the location variables were used as independent variables (Table 14), the differences are apparent. When controlling for all other variables in the equation, location and median income dropped out as important variables, median education lost in importance somewhat, while the importance of percent owner-occupied, single family dwellings in neighborhood remained about the same. The fact that there was no change in the value of the percent owner-occupied units variable

suggests that none of the additional three groups of variables have measured the same dimension of housing satisfaction dealing with neighborhood quality.

Ho 5: Social-psychological factors vary in direction of relationships with housing satisfaction by these variables.

a. Self-esteem is related positively to housing satisfaction.

b. Social isolation is related negatively to housing satisfaction.

c. Anomia is related negatively to housing satisfaction.

d. External control is related negatively to housing satisfaction.

e. Family effectiveness is related positively to housing satisfaction.

Findings

The standardized regression coefficients for the social-psychological variables are presented in Table 16.

Discussion

As shown by the betas, self-esteem and family effectiveness are related positively to satisfaction with housing, while social isolation, anomia, and external control are related negatively to satisfaction with housing. Thus the hypothesis is supported. Family effectiveness is the most important of these variables in explaining the variance with a low probability of sampling error (<.001). This is an important finding though it seems logical. This variable is the most micro of the five social-psychological

variables. It deals specifically with the family, the social unit equivalent to the spatial unit--the house. It seems likely that family effectiveness and satisfaction with housing have compatible levels of measurement, i.e., the micro level. None of the other social-psychological variables serve as good predictors of housing satisfaction.

An interesting comparison can be made between the value of the social-psychological variables in Table 16 and their values alone as independent variables in Table 15. The most puzzling difference is the change in the direction of relationship of self-esteem to housing satisfaction. In both cases the variable is unimportant as a predictor of housing satisfaction (>.25). The change in relationship could be due to sampling error or measurement problems. In any case the variable seems to merit further investigation.

When controlling for all other variables rather than just the social-psychological variables, the F-ratio of family effectiveness jumps noticeably. The F-value for external control also raises slightly while the others decrease.

Conclusions

By examining the standardized betas and F's in Table 16, the relative magnitude of each of the variables can be ascertained. However, the R square gives the percentage of the variance explained by all the variables in the equation. In this case the equation explains 21% (R^2=.216) of the variance in housing satisfaction.

This is a relatively low R square as almost 80% of the variance in housing satisfaction is not explained by the variables in the equation. The individual variables used in this equation can be examined more closely by rank ordering them by importance of predictive value when all variables are entered into the equation. This rank ordering is done in Table 17.

TABLE 17.--Rank Ordering of Independent Variables by Size of Standardized Regression Coefficient and F-Ratio with Satisfaction with Housing.

Independent Variables	Satisfaction with Housing	
	Beta	F
1. Value per room	.235	8.504
2. Bedroom deficit	.169	5.137
3. Family effectiveness	.169	4.953
4. Median education	.118	2.121
5. Percent owner units	.095	1.496
6. External control	-.069	.883
7. Structure type	.066	.491
8. Tenure status	.066	.456
9. Median Income	.047	.375
10. Anomia	-.039	.219
11. Location	-.029	.144
12. Social isolation	-.029	.133
13. Education of wife	.007	.009
14. Family income	.002	.001
15. Self-esteem	.001	.0002

Of the top five variables the first two are physical housing variables, the third is a social-psychological variable, and the fourth and fifth are location variables. Because the probability of sampling error is high for all other variables, these variables could be artificially increasing the R^2 or proportion of the variance explained by the equation. It appears from the F values that only value per room, bedroom deficit, family effectiveness, median education of the area, and percent owner-occupied, single family dwellings in neighborhood are meaningful predictors of housing satisfaction from the 15 variables originally included in the model.

CHAPTER V

CONCLUSIONS, LIMITATIONS, AND IMPLICATIONS

Conclusions

This research has attempted to add a new dimension to the study of housing satisfaction, that of subjective evaluation of housing based on feelings, attitudes, and beliefs, in addition to more often used measures such as socio-economic status, locational variables, and physical housing measures. The purpose was to determine the relative importance of each of these groups of variables as predictors of housing satisfaction. The social-psychological measures used dealt with the quality and accessibility of interpersonal relationships. In other words, they were not specifically related to housing, but instead were measures of more general feelings about life. It was implicitly hypothesized that general feelings about life and relationships with others could be predictive of satisfactions with housing.

Other variables included in the equation were socio-economic measures specifically intended to reveal the amount of choice available to a family in its housing selection. The idea is that a wider choice leads to greater satisfaction.

Another group of variables included in the analysis was locational or neighborhood variables. Feelings about the area or

the neighbors are felt to affect feelings about the home. The variables chosen attempted to measure neighborhood quality.

The fourth group of variables used in this investigation were general measures of physical housing quality.

The findings revealed that as groups of variables, the physical housing variables were the most predictive of housing satisfaction. The other three groups of variables were closely related in their predictive value with social-psychological variables explaining more variance than locational variables, and socio-economic variables being the least predictive.

As individual variables the five most predictive in order of importance were: value per room, befroom deficit, family effectiveness, median education, and percent owner occupied units.

The findings of this study indicate that housing satisfaction is most closely related to specific housing quality attributes. This suggests that in evaluating housing, people, to some extent, are able to separate the house from other facets of life. One measure used for housing quality which was the most predictive was value per room. It is interesting to note that this variable is related directly to dollar value of the dwelling unit yet income essentially is not predictive of satisfaction. This could be due partially to differential spending levels on housing.

Another physical housing variable used was bedroom deficit. The values ranged from minus three bedrooms to an excess of four bedrooms. This variable is tied to changes in family size as part of

life cycle stages. This also seems to be a worthwhile measure in predicting housing satisfaction. Both of these measures relating to housing quality can be measured objectively. The other two measures in this grouping, tenure status and dwelling type also can be measured objectively in terms of the differences between renter and owner or single family dwelling and nonsingle family dwelling. But they cannot be ranked in any order without subjective evaluation. In the past single-family, owner-occupied dwellings were the "American Dream." Renter tenure status was for the newly marrieds, the transients, and the poor. Apartment or mobile home living was for a similar population. It was assumed that no one with a family or roots in an area would choose to rent or to live in another type of dwelling. However the relative strength of these two variables is not overwhelming. The other phsycial housing variables are far more important. This could be due to changing values and norms within American Society, due to an increasingly mobile society, and due to financial considerations (large capital outlays) involved in buying single family housing. Clearly both tenure and structure type are predictive of satisfaction, but perhaps not as predictive as has been assumed.

Median education of the area was the most important location variable. In an urban area with a major state university, the emphasis on education is not surprising. In addition with the large number of families in the eary life cycle stages, there could be a great concern for the educational environment in which the children grow.

The location variable next in importance is that of percent owner-occupied, single family dwellings in area. The importance of this variable seems in conflict with the lack of importance of tenure status and structure type. But perhaps this difference can be explained. The importance of living in a neighborhood with a high percentage of owner-occupied, single family dwellings could be a reflection on the neighborhood itself. These types of neighborhoods have reputations for being relatively quiet, safe, and uncongested. This suggests not that people are satisfied living in owner-occupied, single family dwellings, but instead, are satisfied with living in the types of neighborhoods in which these types of homes are located. In other words, the concern is not with tenure status and structure type for the individual family, but with the type of neighborhood in which these alternatives are available.

The importance of median education and percent owner-occupied, single family dwelling units could be due to the large number of young families in the sample.

Median income of the area is a relatively insignificant predictor of satisfaction. It appears that social status is more important than economic status in explaining variance in housing satisfaction.

Location is also a relatively unimportant variable. It appears that the location of residence is not of great importance in predicting satisfaction. This suggests that at the level of housing satisfaction urban-rural differences may not be important,

but differences could easily show up at the neighborhood or community level not measured in this study.

Socio-economic variables came out remarkably low as predictors of housing satisfaction. Neither income nor education have significant relationships to satisfaction. There are some possible explanations of this, especially in view of the much stronger relationship between median education of the area and housing satisfaction. The importance of the median education of the area could be totally for the sake of the children in the family, not for the wife's own sake. Therefore, her education could be unimportant in predicting housing satisfaction while education of the neighborhood would be quite meaningful in predicting housing satisfaction.

It is interesting that income was not meaningful as a predictor of housing satisfaction although there has been some evidence of this in the literature. Poor people can be just as satisfied as rich people. However, these findings do not support the proposition that choice is related to satisfaction. Clearly the poor do not have the alternatives in housing that higher income families have. They may not have the money or information resources, but yet it appears they can be just as satisfied as the rich. Perhaps lower income people expect less in a house or perhaps they are better able to "make do." It is possible that in terms of housing adjustment behavior discussed by Morris and Winter (1975), the rich either move or remodel, while the poor simply adjust their standards. This seems a plausible explanation.

The social-psychological variables explained a small but somewhat meaningful proportion of the variance. Family effectiveness was the most important of these measures and was the third largest individual predictor of all the independent variables in the equation. This is an important finding, and has special implications for behavioral design at the household level. The extent to which the family has to adapt to a housing environment may be related to their family effectiveness and both of these could be tied to changing life cycle stages.

The other social-psychological variables used, self-esteem, anomia, external control, and social isolation are relatively unimportant predictors of housing satisfaction individually. This could be related to the global or broad nature of the four measures. One reason they may not relate to housing satisfaction is that perhaps those with low self-esteem, high anomia, high social isolation who are externally controlled view their homes as sanctuaries from the outside world and from negative reminders of the quality of their lives. For some, perhaps, the house is the only place one is not isolated and alienated. Perhaps once inside, one has to answer to no one but one's family, thus the importance of family effectiveness.

Limitations

The characteristics of the sampled community should be kept in mind in evaluating the results. The median income and education levels were high. The area is not plagued by racial or ethnic strife or serious overcrowding of housing or high density of population.

It might be more frutiful, especially in light of the social-psychological variables, to examine housing satisfaction in an inner city area with a substantial racial or ethnic minority in a larger metropolitan area.

It is also possible that some of the measures used could have been weak. Perhaps the satisfaction scale emphasized the physical qualities of the house too heavily, thus the high outcome of physical factors in the regression analysis.

It is also plausible that the wife's satisfaction is tied more directly to other family members' perceptions, attitudes, and beliefs. This is suggested by Hogan (1975) who discovered using data from the same study, that a strong relationship exists between wife's self-esteem and husband's values on familism. Perhaps predictors of housing satisfaction are tied to the family as a unit and cannot be ascertained by the use of data from one family member.

The neighborhood or location variables could have been expanded and refined by elimination of the rural sample. More and different kinds of neighborhood data would be useful in further analysis.

Other variables that might be useful in further analysis include race and racial composition of the neighborhood. Variables dealing directly with family life cycle could be introduced also. In addition, age of the dwelling unit and years of residence might be important predictors.

Implications and Suggestions for Future Research

The findings of this investigation while interesting were not monentous. Rather than answering the question, what determines or predicts housing satisfaction, the findings lead to another question: What is it that predicts the other 80 percent of the variance in housing satisfaction? In today's world it is not surprising that only 21 percent of the variance was explained by these four groups of variables. With the complexity of social and spatial systems in which all individuals function, simple answers no longer suffice. However perhaps a few conclusions are in order. It appears that wives are relatively objective in assessing housing satisfaction based on measures of housing quality and the fit of the family to the house. It seems more physical housing variables would have enhanced the predictive value of the equation. Perhaps more measures of family relationships such as family accessibility to relatives, time spent in the home, a measure of home-centeredness of activities, and closeness of family members would be helpful. Also an in-depth look into family spatial preferences including privacy needs and central family gathering spatial needs would be useful. It appears that satisfaction with housing is assessed at a very micro level; therefore, family level measures would seem most appropriate. Also, perhaps more specific family make-up characteristics would be appropriate including life cycle information and spread of children's ages.

The influence of neighborhood factors on housing satisfaction should not be minimized. They obviously have some effect. Yet perhaps these too should be measured at a far more micro level. Census tracts are too gross a measure of neighborhood quality. Also measures of neighborhood participation could be included.

It was stated earlier in this study that most people are satisfied with their homes as measured by the 15-item scale used here. The question must be raised as to the value of housing satisfaction research at the applied level. If the house does serve, in many instances, as a sanctuary or haven in which people feel inherently happy and safe, then perhaps some of the same dimensions that comprise this feeling can be infused into other areas of life. Are the aesthetic qualities and the physical properties of the house important? Or is the mode of functioning within the house, of getting along with others in a daily routine more important? Or perhaps the answer lies in the security factor of the home. These are questions raised by this investigation, but not answered by this investigation. The broader question to ask is this: Where does satisfaction with the house fit in relation to other quality of life measures? Perhaps this ranking varies with the amount of satisfaction. High satisfaction with housing may cause one to feel it is relatively unimportant in the scheme of life. However, very low satisfaction might change those priorities.

In terms of the Foas' theory, no substantive conclusions can be made. However, if one can accept the assumption that family

effectiveness is a measure of accessibility to particularistic resources at a micro level, there seems to be evidence that the Foas' theory may have some merit.

It is possible that particularistic resources can only be measured at a more micro level and that perhaps measures dealing with family effectiveness and neighbor and local participation might be more useful in further examination of the theory.

In view of the results, and in partial support of the Foas' theory, the amount and quality of interactions in the household and possibly in the immediate neighborhood could be of great importance to housing satisfaction. Therefore, the amount of time spent in the household could be related to housing satisfaction. Thus employment status of the wife might be an important variable to include in future research.

At this point in time, perhaps a case study comparison of several families would be useful. Several families who are highly satisfied with their houses and several who are very dissatisfied could be compared on the basis of family characteristics and family functioning as well as neighborhood participation and accessibility to close friends and relatives. This approach might give further insight into the types of family characteristics related to housing satisfaction.

At the policy level, satisfaction with housing should be inherently interesting. In dealing with such problems as housing shortages and housing the underhoused, understanding satisfaction of

residents with dwelling units should be the prime goal. But in order to reach that goal, one must be familiar with its components. For this reason research dealing with housing satisfaction is of paramount interest and importance.

Perhaps housing programs should go hand in hand with programs designed to improve other aspects of the quality of life, material as well as particularistic. New and adequate housing by itself will not be enough to solve "housing problems," because housing problems are too closely tied to other problems. The particularistic needs of families may be as important as the material needs. While housing very clearly may be a material resource, its nature and function are so closely related to the exchange of particularistic resources that this dimension must become as much a part of the concept of housing as its physical dimension.

APPENDICES

APPENDIX A

SELECTED QUESTIONNAIRES

Housing Satisfaction Scale

How satisfied are you with: (check (✓) one best answer for each of the following 16 questions.)	Very Satisfied	Satisfied	No Opinion	Dissatisfied	Very Dissatisfied
1. The number of rooms?	____	____	____	____	____
2. The number of bedrooms?	____	____	____	____	____
3. The size of the rooms?	____	____	____	____	____
4. The arrangement of rooms?	____	____	____	____	____
5. The plumbing?	____	____	____	____	____
6. The heating?	____	____	____	____	____
7. The storage inside this house? (closets, cupboards)	____	____	____	____	____
8. The storage outside this house? (garage, shed, etc.)	____	____	____	____	____
9. The parking facilities?	____	____	____	____	____
10. The lighting? (interior)	____	____	____	____	____
11. The lighting? (exterior)	____	____	____	____	____
12. The amount of noise in and around this house?	____	____	____	____	____
13. The insulation?	____	____	____	____	____
14. The electrical outlets, switches and wiring?	____	____	____	____	____
15. Cooling system?	____	____	____	____	____
16. Privacy?	____	____	____	____	____

Self-Esteem

We would now like you to indicate how strongly you agree or disagree with the following statements. (Please check (✓) one on each line of the following statements.)

		Strongly Agree	Agree	Disagree	Strongly Disagree
1.	I feel that I'm a person of worth, at least equal to others.	____	____	____	____
2.	I feel that I have a number of good qualities.	____	____	____	____
3.	All in all, I am a failure.	____	____	____	____
4.	I am able to do things as well as most people.	____	____	____	____
5.	I feel I do not have much to be proud of.	____	____	____	____
6.	I take a positive attitude toward myself.	____	____	____	____
7.	On the whole, I am satisfied with myself.	____	____	____	____
8.	I wish I could have more respect for myself.	____	____	____	____
9.	I certainly feel useless at times.	____	____	____	____
10.	At times, I think I am no good.	____	____	____	____

Anomia

Below are some statements regarding public issues. How much do you agree with each of the following? (Please check (✓) one space for each of the 5 questions below according to your feelings.)

		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1.	There's little use in writing to public officials because they often are not really interested in the problems of the average man.	____	____	____	____	____
2.	Nowadays a person has to live pretty much for today and let tomorrow take care of itself.	____	____	____	____	____
3.	In spite of what some people say, the lot of the average man is getting worse not better.	____	____	____	____	____
4.	It is hardly fair to bring children into the world with the way things look for the future.	____	____	____	____	____
5.	These days a person does not really know whom he can count on.	____	____	____	____	____

Social Isolation

Below are some statements about people today. How much do you agree with the following. (Please place a check (✓) in one space for each of the 9 questions below according to your feelings.

		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1.	Sometimes I feel alone in the world.					
2.	One can always find friends if he shows himself friendly.					
3.	Most people today seldom feel lonely.					
4.	Real friends are as easy to find as ever.					
5.	I do not get invited out by friends as often as I'd really like.					
6.	The world in which we live is basically a friendly place.					
7.	There are few dependable ties between people any more.					
8.	People are just naturally friendly and helpful.					
9.	I do not get to visit friends as often as I'd really like.					

External Control

Below are some statements about public and private concerns. Please check (✓) one answer that you agree with more for each of the following pairs of statements. There is no right answer, just check (✓) either a or b, according to how you feel.

1. a. ___ Many of the unhappy things in people's lives are partly due to bad luck.
   b. ___ People's misfortunes result from the mistakes they make.

2. a. ___ The average citizen can have an influence in government decisions.
   b. ___ This world is run by the few people in power, and there is not much the little guy can do about it.

3. a. ___ When I make plans, I am almost certain that I can make them work.
   b. ___ It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

4. a. ___ As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
   b. ___ By taking an active part in political and social affairs, the people can control world events.

5. a. ___ There really is no such thing as "luck".
   b. ___ Most people do not realize the extent to which their lives are controlled by accidental happenings.

6. a. ___ With enough effort we can wipe out political corruption.
   b. ___ It is difficult for people to have much control over the things politicians do in office.

7. a. ___ Many times I feel that I have little influence over the things that happen to me.
   b. ___ It is impossible for me to believe that chance or luck plays an important role in my life.

8. a. ___ What happens to me is my own doing.
   b. ___ Sometimes I feel that I do not have enough control over the direction my life is taking.

The 11-item scale reduced by Valecha has been further reduced for the purposes of the larger interdisciplinary study by Dr. Lawrence B. Schiamberg and Dr. Bonnie M. Morrison, members of the research team.

Family Effectiveness

Please answer the following statements as they relate to your family. Please check (✓) the blank which best fits your feelings for each of the following 20 questions.

		Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
1.	Little problems often become big ones for us.					
2.	We are a strong competent family.					
3.	Accomplishing what we want to do seems to be difficult.					
4.	There are many conflicts in our family.					
5.	Each of us wants to tell the other what to do.					
6.	We often praise or compliment each other.					
7.	We encourage each other to develop in his or her own individual way.					
8.	Usually each of us goes his own separate way.					
9.	We tend to worry about many things.					
10.	We sometimes wish we could be an entirely different family.					
11.	We respect each other's privacy.					
12.	We do not understand each other.					
13.	Our decisions are not our own, but are forced on us by others.					
14.	We get along very well in the community.					
15.	There are serious differences in our standards and values.					
16.	We do not like each other's friends.					
17.	The family has always been very important to us.					
18.	We resent each others outside activities.					
19.	We are a disorganized family.					
20.	We do many things together.					

APPENDIX B

RELIABILITY COEFFICIENTS OF SOCIAL-PSYCHOLOGICAL SCALES

Reliability Coefficients of Social-Psychological Variables

Chronbach's Alpha

Self-esteem	.864
Anomia	.766
External control	.686
Family effectiveness	.911

Unequal-length Spearman-Brown Split Halves

Social isolation	.036*

*In the original study by Dean (1961), this reliability coefficient was .84. It appears the use of this scale with the present sample population is questionable.

APPENDIX C

CRITERIA FOR NEIGHBORHOOD GROUPINGS

CRITERIA FOR NEIGHBORHOOD GROUPINGS

1. Blocks across the street from sample families are included unless street is a main thoroughfare (usually four lanes or more).

2. At least one block on each of two sides of the sample block are included.

3. If the block is smaller than surrounding blocks, all surrounding blocks are included.

4. Blocks surrounded by sample blocks are included.

5. If the sample block is physically much larger than the average blocks because it is less developed or newly developed or is relatively rural, block alone is used as neighborhood.

6. Odd-shaped blocks that fit into spatial divisions are included.

7. If two blocks or less separate two sample blocks, the blocks are combined into one neighborhood grouping.

APPENDIX D

CORRELATION COEFFICIENTS OF VARIABLES

Variable Labels

HOUSATIS	Housing Satisfaction Scale
VAR107	Family Income
VAR305	Education of Wife
VAR450	Self-esteem
VAR452	Social Isolation
VAR454	Anomia
VAR456	External Control
VAR458	Family Effectiveness
TENURE	Tenure Status
DWELTYPE	Structure Type
VALU	Value per Room
BEDDEF	Bedroom Deficit
LOCATION	Location
MEDINCOM	Median Income of Area
MSCHOOL	Median Education of Area
OWNER	Percent Owner-occupied, Single-Family Dwelling Units in Neighborhood

VARIABLE	MEAN	STANDARD DEV	CASES
HOUSATIS	57.3248	9.1114	198
VAR107	15805.5556	10267.4301	198
VAR305	12.6212	2.7061	198
VAR450	31.5202	4.2662	198
VAR452	16.6212	4.4108	198
VAR454	1.6869	1.5324	198
VAR456	3.6818	2.0464	198
VAR458	56.9848	9.1610	198
TENURE	.6970	.4607	198
VALU	4078.0958	1839.1506	198
DWELTYPE	.7323	.4439	198
BEDDEF	.5212	1.0485	198
LOCATION	.7626	.4266	198
MEDINCOM	14068.9405	2536.7161	198
MSCHOOL	12.6237	1.1932	198
OWNER	.6977	.2181	198

CORRELATION COEFFICIENTS.

A VALUE OF 99.00000 IS PRINTED
IF A COEFFICIENT CANNOT BE COMPUTED.

VAR107	.23687											
VAR305	.10906	.23503										
VAR450	.02873	-.05696	.09894									
VAR452	-.17141	-.15368	-.01378	-.23550								
VAR454	-.19962	-.11907	-.35804	-.14889	.36539							
VAR456	-.12387	-.04669	-.13829	-.16585	.19635	.33067						
VAR458	.28225	.05191	-.00167	.30907	-.33720	-.27443	-.28782					
TENURE	.15738	.36949	-.09660	-.09759	-.20414	.07342	.17718	-.07325				
VALU	.27075	.43107	.20480	-.12538	-.00263	-.11148	.13237	.00368	-.00156			
DWELTYPE	.17601	.32712	-.13133	-.12178	-.19465	.07618	.14047	-.09962	.66868	.08891		
BEDDEF	.28456	.18691	.17996	-.00679	-.18374	-.30798	-.08721	.07338	.25504	.08471	.21731	
LOCATION	-.09379	-.07356	.08002	.06262	.07508	-.02110	-.04044	-.02950	-.29038	-.09594	-.25687	-.1793
MEDINCOM	.13375	.31747	.08634	-.13406	.04887	-.03024	-.06851	.02767	.03748	.31827	.00692	.0556
MSCHOOL	.18697	.16808	.27100	.05618	.04271	-.11418	-.04949	-.08369	-.08380	.11844	-.08328	.1220
OWNER	.03396	-.04328	-.20820	-.02819	-.04307	.05482	.03556	-.02279	.26875	-.20820	.26218	.0501
	HOUSATIS	VAR107	VAR305	VAR450	VAR452	VAR454	VAR456	VAR458	TENURE	VALU	DWELTYPE	BEDDEF

MEDINCOM	-.24223		
MSCHOOL	.29238	-.01786	
OWNER	-.18769	-.06284	-.42455
	LOCATION	MEDINCOM	MSCHOOL

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