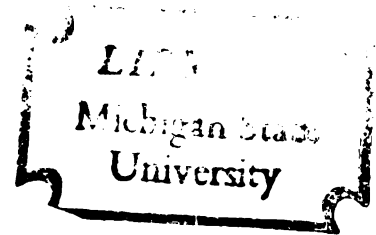This is to certify that the

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URBAN ZAMBIA: THE EFFECTS OF
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EVALUATING SQUATTER RESIDENCE IN URBAN ZAMBIA:

THE EFFECTS OF SOCIAL CLASS AND URBANIZATION

By

Anne Louise Mason

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ABSTRACT

EVALUATING SQUATTER RESIDENCE IN URBAN ZAMBIA: THE EFFECTS OF SOCIAL CLASS AND URBANIZATION

By

Anne Louise Mason

This secondary analysis of housing data from Lusaka, Zambia focuses on squatters' evaluations of their residential situation. A housing adjustment theory proposed by Morris and Winter (1975) served as a conceptual framework for the selection of variables. Indices of six dimensions of residential situation were constructed by combining male and female household heads' responses to open-ended questions on their residential likes and dislikes. Correlation coefficients were computed to test relationships between these indices and the education and urban experience of household heads and household income.

Findings indicated little support for hypothesized relationships. Examination of the responses which comprised the indices revealed that squatters generally liked aspects of economic conditions of residence, location, and interpersonal relations; but disliked aspects of house and compound quality and services. Findings suggested possibilities for further research including the development of better measures for evaluating residence and the selection of other variables and relationships for analysis.

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I am particularly grateful to David Wiley for making the data and a vast amount of relevant information available for my use. His personal enthusiasm for and knowledge of the subject matter helped to stimulate my own thinking and interest. Appreciation is also extended to the institutions which supported the research on which this study is based: the Sociology of Economic Change Training Program at the University of Wisconsin, Madison (funded through a training grant from the National Institute of Mental Health), and

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CHAPTER I

INTRODUCTION

Many countries in Africa, Asia, and Latin America are experiencing high population growth rates in urban areas. Although some of this expansion may be attributed to natural increase in population, most of the growth is a result of migration from rural areas to urban centers. Where a decline in agricultural productivity is coupled with urban economic expansion and industrialization, urban areas are particularly attractive to potential migrants. People migrate to urban areas for economic reasons primarily, e.g., to seek employment, although other factors may contribute to this trend. Zambia in southern Africa illustrates this phenomenon. Lusaka Urban District, Zambia's capital city and surrounding area, grew 93% between 1963 and 1969 (Simmance,1972, p. 20). tremendous drain has been placed on the housing market in urban centers such as Lusaka by this rapid population growth.

Ownership of housing in Zambia is dominated by the national government and private companies, who provide for civil servants and private employees respectively, and local housing authorities, although some private landlords participate in the housing market. Occupancy is, to a large extent, restricted by place of employment, and housing supply has not

1

kept pace with demand. This situation reflects a lack of resources needed to increase available housing stock as well as poor planning, lack of understanding of the problem, and conflicts between local and national housing authorities over the type and design of houses to be built (Simmance, 1972, pp. 30-37).

Contrasted with this situation is the relative success with which people have been able to meet some of their most pressing needs through the establishment and expansion of high density residential settlements around urban centers. Such areas are variously referred to as squatter areas, shanty towns, unauthorized areas, or spontaneous settlements. The term "squatter" will be used in this study with the understanding that many of the residential areas to which it applies are not necessarily considered to be illegally occupied and may, in fact, be recognized as permanent and viable residential areas.

It has been estimated that between 1969 and 1972 official housing in Lusaka increased by 4,000 but about 22,000 units were provided in the squatter areas. Further it has been estimated that of the total Lusaka population of 381,000 in 1972, over 150,000 were residents of these areas (National Housing Authority, 1972, p. 4).

Squatter areas are more than a collection of dwelling units; they embody a number of different dimensions associated with housing such as security, access to jobs, and access to some urban services. Although squatter areas may serve

as receiving points for newly arrived migrants to the city, they are also the residential locations of many people who have lived in urban areas for much, if not all, of their lives. Most of the housing in squatter areas is free or inexpensive, a positive feature both to those who have little money available for housing and to those who prefer to invest their money in other things.

Although squatter areas may lack clean water, adequate sanitation and refuse disposal systems, and improved roads, the houses within them are usually well-maintained and fairly permanent structures. They are often constructed of burnt brick, Kimberly brick (bricks made by pressing mud in molds), or concrete blocks, with thatched or corrugated metal roofs. The political party UNIP (United National Independence Party) usually controls the construction and arrangement of houses with the result that squatter areas are orderly although sometimes dense in appearance. Natural vegetation and small gardens are found in many squatter areas.

Squatter areas in Zambia are frequently located close to places of employment which minimizes transportation costs and time for those who are employed. Informal economic activity flourishes in these areas, thus the rate of unemployment among squatters is much lower than might be expected as many are self-employed. Flexibility is permitted in the construction and improvement of residences in squatter areas. Occupants make improvements when they are both needed and economically feasible rather than when mandated by a housing

contract. To a large extent, it appears that residences in squatter areas are at least as good as those which people had in rural areas and possibly better because of the potential access to urban services.

In different places and at different points in time, official policies regarding these housing areas have varied, ranging from elimination of high density areas to providing such areas with basic services such as clean water. Although the tendency of national and local authorities in Zambia was to ignore squatter areas and to fail to provide sufficient alternative housing, there has been a change in emphasis.

The Second National Development Plan for the period 1972-1976 recognized that these areas "represent assets" and "require planning improvement" rather than demolition (Simmance, p. 33). The New Housing (Statutory and Improvement Areas) Act (Republic of Zambia, 1974) gave power to local authorities to provide residents of these areas security of tenure and improved facilities (Tipple, 1976, p. 186).

In the literature dealing with housing policy and programs for urban areas of Africa, Asia, and Latin America, there appears to be growing advocacy for recognition and official support for the various dimensions of squatter residential areas, i.e., the needs that they can and do fulfill. Housing policy-makers and program planners are challenged to formulate and implement relevant responses to these needs.

Conceptual Framework

One basis for the formulation of housing policies and programs may be an understanding of residential preferences, decisions, and behaviors at the level of the household unit. The theory of housing adjustment proposed by Morris and Winter (1975), which generally suggests that families adjust their housing to meet changing needs, provides a conceptual framework for considering housing at this level. According to this framework, household members evaluate their current housing conditions in terms of both family and cultural norms which represent different dimensions of housing. Housing needs derive from these evaluations rather than from basic needs for shelter and safety.

When evaluation reveals that a housing deficit or need exists, i.e., current housing deviates from household members' norms in a dimension of importance, feelings of dissatisfaction may arise. This produces a desire to eliminate the discrepancy between current conditions and norms in order to meet the need. Household members may undertake one of several possible adjustment behaviors including residential mobility, residential adaptation, and family adaptation. However, for an adjustment to take place, constraints on the particular behavior must be overcome. These constraints include intra-familial strengths and weaknesses; economic, social, and political factors; and attractive features of the current dwelling which counteract its negative features.

The goal of the adjustment process is to maintain a balance between housing norms and housing conditions. Given changing norms and changing conditions, this is a continuous process. It is also complicated by the fact that household members may consider only one aspect of their housing at a time while other aspects serve as constraints. The aspect under consideration at one time may later serve as a constraining factor.

In general, this theoretical framework suggests a number of questions. Morris and Winter (1975) ask:

1. What are the determinants of the perception of a housing deficit?
2. What are the determinants of the kinds of deficits that are salient to families?
3. How does housing satisfaction respond to the presence and magnitude of housing deficits?
4. What are the determinants of preferences for the various housing adjustment behaviors?
5. What are the correlates of the intrafamilial constraints that deter family housing adjustment?
6. What are the correlates of the extrafamilial constraints that impinge on housing adjustment? (p. 86)

Such questions may lead to the development of testable hypotheses to seek support for the theory.

When applied specifically to the context of squatters in Zambia, the housing adjustment theory leads to questions such as (1) How do squatters feel about their residential situation? (2) Can squatters be differentiated from each other or from other urban residents in terms of their feelings and behaviors related to their residential situation? (3) What

aspects of their residential situation do squatters consider
to be the most important to them? (4) Why do squatters prefer
particular residential locations? (5) How do squatters allo-
cate their resources with respect to their residential situ-
ation? and, (6) What actions are or can be undertaken by
squatters in terms of changing or improving upon their resi-
dential situation? Such questions imply a number of relation-
ships which might be diagrammed as follows:

| Independent Variable | Intermediate Variable | Intervening Variable | Dependent Variable |
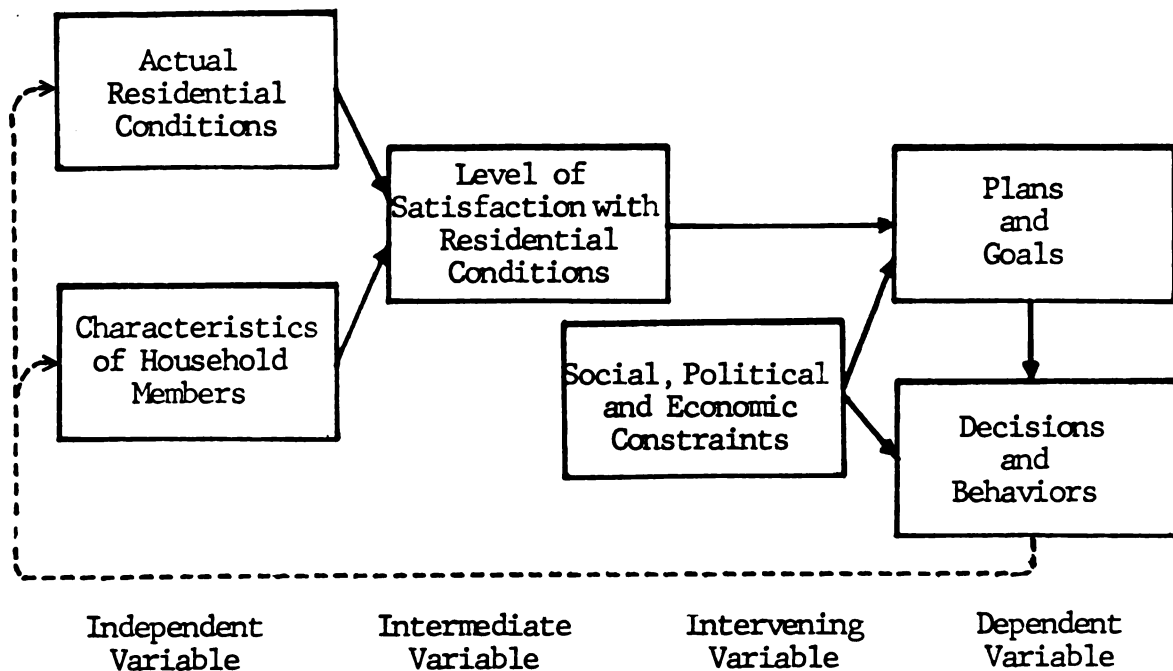
Figure 1. Relationships among Variables in a Housing Adjustment Model

These questions and this model directed the selection of var-
iables for analysis from available data.

Literature related to housing adjustment, particularly
that related to residential mobility, emphasizes the influence
of characteristics of household members such as stage in the
family life cycle, on housing preferences, decisions, and

behaviors. For example, family expansion may lead to dissat-
isfaction with house size and, subsequently, to a decision
to adjust housing by enlarging the structure or by moving to
a larger one. This research has been conducted primarily in
the continental United States.

In the context of squatters in Zambia, it seems possible
that the effects of life cycle changes on housing preferences,
decisions, and behaviors may be confounded by influences of
rapid urbanization and social changes. Members of families
at different stages of the life cycle may have had vastly
different experiences with respect to the educational and
income-generating opportunities available to them and to their
urban living experience. This notion has led to the consider-
ation of basic characteristics of household members that
relate to social class and urbanization. Such characteristics
may be related to squatters' housing preferences, decisions,
and behaviors. For example, as the number of years that
people have lived in a city increases, the importance that
they place on urban services such as piped water may also
increase.

Evaluation of current residential situation is a funda-
mental component of the housing adjustment process as desribed
by Morris and Winter (1975). Evaluations may reflect both
basic dimensions of residential situation, i.e., areas of need
which may be important to household members, and attitudes
about these dimensions, i.e., potential sources of residential
satisfaction or dissatisfaction.

The theory of housing adjustment links these evaluations to people's residential decisions and behaviors. Hence, examination of these evaluations and the factors related to them may contribute to an understanding of why and how people make specific decisions regarding their residential situation. With such information policy-makers or program planners may be in a position to be sensitive to potential changes in housing patterns in the context of larger social change and to plan and implement relevant policies and programs.

Purposes

Housing adjustment is a complex process involving many components which vary from one context to another. It is beyond the scope of this study to test a full model of housing adjustment; this study will be limited to consideration of evaluations of residential situation by male and female heads of household and selected characteristics of these individuals. The study attempts through secondary analysis of data collected on housing in Zambia to contribute to an understanding of relationships between evaluations of residential situation by male and female heads of squatter households and their education and urban experience and total household income. Findings of this study may be useful to future analyses of household members' residential preferences, decisions, and behaviors. The following research questions have guided this study:

1. What dimensions are identified by male and female heads of household in their evaluations of their residential situation?

2. What relationships exist between education and urban experience of male and female heads of household and total household income and household heads' evaluations in these different dimensions of residential situation?

Assumptions

This study is based on secondary analysis of data collected in a study in which the author was in no way involved. It is assumed that the procedures followed in the original study relating to the design and administration of the survey instrument and the coding and tabulating of data have yielded information that is both reliable and valid.

Definitions

Compound. Refers to a residential area or neighborhood in which residents may share facilities such as schools, markets, and clinics; and participate in political and social institutions.

Head of Household. Refers to a person having the responsibility of looking after other members of the household. In this study, the male head of household has economic responsibility for other household members; the female head of household is the spouse or partner of the male head. In cases where no male head is present, the female head of household corresponds to the woman who bears responsibility for other household members.

Household. Refers to a group of people who reside together and form an economic unit. In this study population, a household may include male and female heads of household, their children, and possibly other children and adults who are dependent on the heads of household.

Evaluation of Residential Situation. Refers to male and female household heads' assessments of their residential or housing situation. In this study, residence refers to not only an actual dwelling unit but also its surrounding neighborhood. It therefore encompasses several different dimensions. The measure of evaluation used in this study is based on male and female heads' mentions of likes and dislikes of the residential situation. More frequent mention implies greater importance of a dimension of residential situation.

Squatter. Refers to a resident of a high density residential area which may not be sanctioned officially or managed by city government, but which may be recognized as a permanent and viable residential area by housing and government officials.

Hypotheses

Possible relationships between characteristics of household heads and housing needs, which may be reflected by evaluations of residential conditions, are implied by the housing adjustment model. Several characteristics were selected for consideration in this study including education of male and female heads of household, urban experience of male and

female heads of household, and total household income. It was felt that such characteristics could have similar impacts on residential evaluations.

Literature on squatters suggests that the different needs fulfilled by squatter compounds vary in importance to household members as their characteristics change. It appears, for example, that for those who are newly arrived in urban areas or those with a very low level of income, the low cost of squatter residences and their proximity to places of employment are their most important features. However, residents' concern with these features may be replaced as other dimensions of these compounds such as quality of houses or compound as well as services take on more importance. Such shifts may occur as people change social class and develop the means and aspirations to improve upon their residential situation.

For this study, measures of evaluation were developed by combining the male and female household heads' responses to questions conerning their likes and dislikes of their residential situation. Evaluation in a particular dimension of residential situation represents, therefore, the frequency with which responses were provided in that dimension. Given the implications of the literature on squatters, it was generally hypothesized that as characteristics of those individuals change, the frequency of their responses in some dimensions will decrease as it increases in others.

The following specific hypotheses have guided this analysis:

H1. Frequency of mention of economic conditions of residence is negatively related to:

    a. education of male household head
    b. urban experience of male household head
    c. education of female household head
    d. urban experience of female household head
    e. total household income

H2. Frequency of mention of location is negatively related to:

    a. education of male household head
    b. urban experience of male household head
    c. education of female household head
    d. urban experience of female household head
    e. total household income

H3. Frequency of mention of house quality is positively related to:

    a. education of male household head
    b. urban experience of male household head
    c. education of female household head
    d. urban experience of female household head
    e. total household income

H4. Frequency of mention of compound quality is positively related to:

    a. education of male household head
    b. urban experience of male household head
    c. education of female household head
    d. urban experience of female household head
    e. total household income

H5. Frequency of mention of services is positively related to:

    a. education of male household head
    b. urban experience of male household head
    c. education of female household head
    d. urban experience of female household head
    e. total household income

In the original survey, respondents frequently mentioned aspects of interpersonal relations in their evaluations of their residential situation. In the literature reviewed there

appeared to be no basis for relating evaluation in this dimension to the characteristics of household heads that have been selected for this analysis. Therefore the following hypothesis was derived:

H6. Frequency of mention of interpersonal relations is <u>not</u> related to:
  a. education of male household head
  b. urban experience of male household head
  c. education of female household head
  d. urban experience of female household head
  e. total household income

CHAPTER II

REVIEW OF RELATED LITERATURE

The research and related literature will be reviewed under two major headings: housing adjustment behavior and squatter housing.

Housing Adjustment Behavior

Various theoretical papers and reports of empirical analyses on housing adjustment were reviewed as background to this study. None were directly related to the topic under study, i.e., residential evaluations and characteristics of members of squatter households in Lusaka, Zambia. However, they have provided some insights into some cf the components of housing decisions and behaviors. Specifically, studies contributed to the selection of variables included in this study and suggested some avenues for the interpretation of study findings.

In 1955 Rossi published a landmark study on why short-distance residential shifts take place. His analysis was performed on three levels: the level of mobility in urban areas, mobility of different types of families, and motivations underlying residential shifts. From his findings Rossi concluded that mobility is "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" (p. 9).

Rossi created a Mobility Potential Index from characteristics of the household such as life cycle and tenure status variables which represented housing needs. He also devised a Complaints Index from residents' attitudes about their housing environment which represented whether present housing met the needs of families. Analysis of the Complaints Index assessed the importance of different kinds of dissatisfaction to residential mobility. Out of the 14 questions used to construct the Complaints Index, six dimensions were abstracted including dwelling unit space, utilities, distance, physical environment, social environment, and housing costs.

The two indices were found to be good predictors of residential mobility which Rossi operationalized as desires and plans concerning mobility in the future. The relationships between the indices and mobility desires and plans are thus determined by household needs, dissatisfaction, and aspirations.

Sabagh, Van Arsdol, and Butler (1969) described a conceptual framework for the study of residential mobility which evolved out of Rossi's mobility accounting scheme. They found that some of the factors related to mobility are changes in family life cycle, social mobility aspirations, changes in residential environment, and patterns of social and locality participation. They also discussed some intervening factors

which may facilitate or impede residential mobility including availability of residential opportunities, availability of resources, and availability of residences sought by the family.

Wolpert (1966) promoted a theoretical stress-threshold model of mobility which has paved the way for further research. According to this model, which described the relationships between individuals and their environment, stressors are introduced from the environment at different stages of the family life cycle. Stress in the environment or action space of household members may cause strain, and it affects their decision behavior. Household members undertake adjustment processes to reduce this strain. Sources of stress vary for different households as do people's responses to it.

Brown and Moore (1971) further developed the concept of household decision-making in the process of residential mobility using this stress-threshold model. They suggested that if place utility, a measure of individual satisfaction with a residence, diverges too much from needs, household members may decide to move in order to bring their residence into adjustment with their needs. Stresses in the environment derive from this disparity between needs and characteristics of a residence and may be reduced not only by moving but also by adjusting present housing or by adjusting the household.

Brown and Moore suggested that an understanding of the decision-making process at the individual or household level

may indicate variables to be included in formulations at the aggregate level. An understanding of the nature of individual responses to environmental conditions will provide a basis for evaluating decisions related to planning for the growth and development of urban areas.

Clark and Cadwallader (1973) proposed a model which takes into account the overall environment of the household as the context in which decisions are made. The decision to move is a function of the household members' present level of satisfaction and the level of satisfaction they perceive may be attained elsewhere. The difference between these levels is a measure of stress, and decision to move is an adjustment to this stress. Possible stressors include size and facilities of dwelling unit, kind of people living in the neighborhood, proximity of household location for interaction with relatives and friends, proximity to work place, and amount of air pollution.

Speare (1974) also worked with the stress-threshold model to analyze data from Rhode Island residents. The study was designed in an effort to answer the question of why people move and thus to help explain the relationship between voluntary mobility and other variables. He found that residential satisfaction functions as an intervening variable between individual and residence variables such as age of household head, duration of residence, home ownership, and room crowding, on the one hand, and mobility on the other. The more satisfied individuals are with their residences, the less likely

they are to consider moving.

Newman and Duncan (1979) used longitudinal data on a national sample of families to explore the incidence of perceived housing and neighborhood problems, the relationship between these problems and satisfaction with house and neighborhood, and the impact of these problems on actual mobility. This study, also set in the stress-threshold framework explored by others, found links between problems and discontent, but there appeared to be no strong links between problems and actual moves.

Morris and Winter (1975) provided a conceptual and theoretical framework for the study of housing adjustment behavior. Family members are viewed as evaluating their housing in terms of cultural norms and family norms. When housing does not meet norms, it tends to give rise to dissatisfaction producing a normative deficit. Residential mobility, residential adaptation, and family adaptation are modes of adjustment. Various constraints operate to impinge on household members' ability to engage in successful adjustment behavior. It is the combination of these constraints, current housing conditions and norms which influence adjustment behavior of household members.

Few studies on housing adjustment appear to have been undertaken outside of the continental United States. One exception is a study by Okraku (1971) in San Juan, Puerto Rico, which examined the appropriateness of the family life cycle concept as it related to residential mobility in a developing area. Okraku found that the life cycle concept may be of

value under different cultural and socioeconomic conditions, although careful consideration must be given to whether the basic assumptions of the life cycle concept (such as family nuclearity) are satisfied.

In some respects these studies have raised questions concerning the viability of housing adjustment as a model for the study of housing behaviors in non-Western societies, the appropriateness of the model in a context characterized by limited resources and a lack of housing alternatives, the relevance to other contexts of variables found to be related to housing adjustment in these studies, and the potential significance of hypothesized relationships using data from other societies. Much further research needs to be undertaken. The purpose of this study is not to test a full model of housing adjustment which includes many different components. Rather, this study considers the evaluation of residential situation that occurs in the housing adjustment process and possible relationships between evaluations made by male and female heads of household and characteristics of those individuals.

Taken together the studies reviewed indicate that housing adjustment is a complex but essentially rational process on the part of household members. Housing adjustments may take place when a certain level of stress or dissatisfaction is reached provided that there are no constraints on this action. Dissastisfaction may arise with respect to various aspects of housing as a result of changes in either characteristics

of household members or their residential situation.

These studies suggest that several groups of variables
need to be considered in an effort to understand housing
adjustment behavior. These include characteristics of the
household and its members; characteristics of the residential
situation of the household; household members' feelings with
respect to that situation; and housing plans, decisions, and
behaviors of household members. Data to investigate all of
these aspects of housing adjustment were not readily available.
Given this constraint, but also an interest in limiting the
scope of this study, only some variables related to charac-
teristics of household members and their feelings about their
residential situation were selected for analysis.

Squatter Housing

Recent literature on squatters and squatter housing
with particular attention to the African context was reviewed
in order to gain a better understanding of the problem under
study and to determine what relationships might be usefully
tested given the available data.

Most of the studies that were reviewed provided discus-
sion related to the establishment and growth of squatter
settlements. African countries have experienced high rates
of urban growth, particularly in their post-independence
periods, that can be attributed to rural-urban migration.
Simmance (1972) noted that in Zambia a decline in the rural
economy has been accompanied by economic growth and industri-

alization in urban centers. In the 1960s the gap between
levels of real income in rural and urban areas widened as
incomes in cities rose rapidly and those in rural areas in-
creased very little. Similarly, the promise of economic oppor-
tunities in urban areas has attracted many people. Bates
(1974) cited lack of private investment in rural areas and
failure of policy-makers to counteract the tendency for capital
accumulation in urban areas as the primary cause of the rural-
urban disparity in Zambia.

With the growth in population in cities, a tremendous
demand has been placed on the housing sector. Governments
have been unable to provide for the construction of a suffi-
cient number of dwellings for city inhabitants. Simmance
(1972) cited Lusaka as an example. In 1969 the Lusaka City
Council had a waiting list for housing for 16,345 families
and 3,636 single persons, but completed only 668 houses
during the year (p. 29).

People have had to provide dwellings for themselves,
and squatter settlements have grown rapidly. Although such
self-help activity has met people's immediate needs, squatter
areas lack basic services making their existence problematic
for authorities. Stren (1975) and others pointed out that
this expansion of squatter areas is not purely a technical
problem of providing dwelling structures, but must be viewed
in a larger socioeconomic context. For example, residents
perceive distinct economic advantages to living in
squatter compounds and might prefer to continue living there

even if they had alternatives.

Much of the literature reviewed indicated that inappropriate housing standards have further aggravated the problem. Payne (1977) suggested that many standards have omitted the criterion of acceptability as perceived by urban residents, particularly low income groups. Standards have also promoted housing that low income groups simply cannot afford. Similarly, Mabogunje (1978) emphasized that standards should evolve from people's biological, psychological, and social needs rather than reflect a middle class technocratic perception of what these needs are.

Policies towards squatters and squatter housing have changed over time. Tipple (1976) described how the First National Development Plan, 1966-1970, of Zambia proposed that 76 percent of the houses built in that period should be in site and service schemes. In site and service schemes, local housing authorities lay out plots; provide roads, water, and sanitation; issue roofing loans; supervise construction; and charge modest rents. Residents construct their own dwellings (Simmance, 1972, p. 32). This type of housing is based on the belief that independence had established the right of every citizen to own urban land and that site and service schemes would assure this right in an orderly fashion. The government officially intended to move the growing number of squatters to site and service areas. However, the policy and the efforts were not successful, and new directions have been taken. Through the Housing (Statutory and Improvement Areas)

Act of 1974, the government has accepted the view that
squatters have rights to security of tenure and improved
facilities. This change in policy has paved the way for the
promotion of local participation in the provision and improve-
ment of housing.

Martin (1977) wrote in support of such policy changes.
He suggested that the Zambian government and housing authori-
ties probably could not afford to construct enough housing
for all, that people could not afford such housing if it were
available, and that initial outlays for site and service
schemes were too expensive. He concluded that upgrading of
existing squatter areas is the only alternative.

Perceptions of squatter areas and their residents as
presented in the literature reviewed lend support to a policy
that promotes upgrading and calls for involvement of people
in the provision of housing. In the context of squatting,
many authors applied the concept of housing as a process of
meeting certain needs (as opposed to being a dwelling unit)
and considered housing in terms of a dwelling environment
including not only the dwelling structure itself but also the
surrounding community.

Turner and Fichter (1972) emphasized that housing
should be viewed in terms of the various functions
that it performs such as shelter, location, and security.
The priority that people accord to different functions
changes as their needs change. For example, people with low
income have low priority for "modern" shelter but have high

priority for proximity to jobs. These priorities reverse as incomes rise. Mabogunje (1978) also linked the housing process in the context of low-cost housing to people's changing socioeconomic conditions and stressed that housing can serve as a means to other ends.

Although it was stressed by a number of authors that characteristics of squatter areas vary across cultures and even within cultures, some common features seem to exist. Herbert (1978) described the functions of squatter housing areas as providing shelter at affordable rates, serving as receiving areas for new arrivals to the city, serving as sites for employment in commerce and cottage industries, providing shelter close to employment, providing a context for strong social linkages and support, and encouraging and rewarding small-scale private investment in building. To this list of basic functions Martin (1977) added the notion that because of less rigid controls or standards than those often applied to "official" housing, squatter housing provides residents with the opportunity to make improvements in their housing when they both desire and can afford it.

Andrews, Christie, and Martin (1973) described several squatter areas in Lusaka, Zambia, in terms of both achievements and needs. They emphasized that most of the areas are well-situated in relation to work places, that the organization among individual houses both permits privacy for households and facilitates interaction among neighbors, that community organization is maintained by the political party UNIP

(United National Independence Party), and that residents have demonstrated initiative in meeting what needs they can. Nevertheless, most squatter areas lack clean water supply, well-maintained roads, and sufficient number of schools and clinics.

The Zambian National Housing Authority (1972) prepared a report for the Ministry of Local Government and Housing which summarized available information on squatters in Lusaka. Findings indicated that there is a fairly high employment rate among squatters but that their educational level is low (most of those with higher levels of education are in jobs which provide for housing). Few of the houses have piped water, most people use pit latrines, few roads in squatter areas are maintained, and residents are generally within reach of schools and clinics. There is evidence of much self-help in construction of clinics, schools, and community organizations; in maintenance of roads; in care of elderly people; and in improvement of houses. Residents are generally satisfied; they mention liking the social environment, the physical environment, and the convenient location. Services is the most frequently mentioned area for improvement.

Some of the literature reviewed was concerned with specific attributes or behavior patterns of squatters in particular or new urban residents in general. Gugler (1969) discussed the phenomenon of urbanization and emphasized that mere presence in an urban setting can have important impacts

on a person because of contacts with different people, jobs, and authorities.

Lloyd (1979b) suggested that the perceptions of residents of urban settlements may be based on their experiences. He offered a decision-making approach for understanding squatters and their behavior. Squatters act in order to improve their quality of life, but their goals are dictated by their social position and their resources, particularly economic ones. What may be considered an unaffordable luxury at one point in time may be desirable and attainable at another. Many housing behaviors in this context may be a result of planned choices, but some reflect a lack of alternatives. Lloyd (1979a) suggested that in order to develop policies and programs for squatters it is important to understand their perceptions of opportunities available to them and to recognize their aspirations.

In the literature reviewed, squatter housing was generally considered to be an inevitable response to an urban housing shortage created by rural-urban migration. Further it was viewed as offering a viable alternative to counterpart "official" housing. Although squatter housing meets many needs, others remain unmet. A policy of upgrading is in order. Squatters were presented as people with initiative and a willingness to help themselves. However, they are constrained in their activities by a lack of resources. As conditions change (such as an increase in their income or experience in an urban area, some needs are met or become

less crucial whereas others become more important.

The literature reviewed seems to indicate that for those with the fewest resources, i.e. those with little income, education, or experience living in urban areas; squatter areas meet immediate needs for low-cost housing which is close to place of employment. These economic and locational dimensions of residence may be replaced in importance to squatters by other dimensions, such as house and compound quality and provision of services, as characteristics of squatters change. In a society undergoing rapid social change and urbanization as is Zambia, characteristics that relate to social class and urbanization, such as income, education, and urban experience, may bear some relationship to people's housing needs. The nature of and changes in these relationships may be reflected in people's evaluations of their residential situation.

CHAPTER III

PROCEDURES

This study was a secondary analysis of data collected in a survey of residents of households in urban Zambia. In the original study, the household was the unit of analysis with the male head as the point of entry. This study was undertaken to determine the content of household heads' evaluations of their residential situation and to test relationships between these evaluations and selected characteristics of these individuals. The characteristics selected included years of education of male and female heads of household, years of urban residence of male and female heads of household, and total household income.

Collection of Data

The data used in this study were collected in 1973 for a housing survey of three Zambian cities (Lusaka, Kitwe, and Ndola). The survey, Zambia Study of Urbanization and Housing, was directed by David S. Wiley, then of the Department of Sociology, University of Wisconsin, Madison.*

Data collected for the total study involved two randomly selected samples. The first sample focused on the household as the unit of analysis whereas the second focused on the individual as the unit of analysis. The first sample was used in this study.

Cluster sampling was used to select compounds from which households were then selected. The compounds were of three general types determined by the type of management: compounds managed by the city council; compounds managed by particular companies; and squatter compounds under no official management but which have, in many cases, been recognized by local housing authorities and in government policy as permanent residential areas.

A sampling design was developed which would make it possible to draw a random sample of households yet would not scatter these households over large areas. This would facilitate collection of data by interviewers who walked from house to house. Therefore, sampling units were created of approximately 65 houses each (identified primarily from aerial photographs). Ten households were randomly selected from each sampling unit for detailed structured interviews with both the male and female heads of each household. The total number of households from all compound types in all three cities from which interviews were taken was 3,270.

For the purposes of this study, a sub-sample of all 1,068 households in squatter compounds in Lusaka was used. The sub-sample was selected because it was large enough to permit confidence in findings without necessitating the interpretation of the influence of city size or compound type on the variables and relationships under study. This is not to suggest that such influences are not important but rather that they will be left to future analyses.

Responses from both male and female heads of household were included, thus responses were obtained from 2,136 individuals. In the case of single-headed households, the male or female head present responded to both male and female head sections of the questionnaire. These responses were included in the present analysis. In the sample of 1,068 households involved in the present analysis, the sections of the questionnaire intended for male heads of household were responded to by 954 male heads and 107 other respondents (7 missing cases). The section of the questionnaire intended for female heads of household was responded to by 942 female heads and 121 other respondents (5 missing cases).

Description of the Survey Instrument

The survey on which this study was based was undertaken to examine characteristics of households and household members which might affect evaluations, attitudes, and decisions concerning housing and other social services in various urban compounds or residential areas. Questions in the survey

instrument were designed to elicit information on social and demographic characteristics of household members including mortality and fertility, life cycle stage, health, education, occupation, and ethnic origin; housing and compound evaluations; and personal aspirations and plans.

The instrument was comprised of 150 questions in several sections. Nine questions answered by the household member with whom the interviewer had initial contact covered names, ages, languages, educational status, and length of residence in household of all household members. Six questions answered by the interviewer, based on observation, covered characteristics of the house including availability of electricity; size and shape of house; wall, roof, and door composition; and the state of repair of the house. Thirty-three questions answered by all respondents covered residential history, ethnic background, religion, occupation, income, and health.

Female heads of household responded to another 19 questions on their evaluations of their residential situation. All female respondents answered five questions on their fertility and infant mortality. Male heads of household answered 37 questions on their evaluations of their residential situation and on other residential experiences, decisions, and aspirations. Respondents selected randomly for the second part of the study answered another 41 questions on residential history, experiences with crime, personal aspirations, occupational history, friendship patterns, perceptions of urban

and rural life, and organizational affiliations. However, these were not utilized in the current analysis because of the interest in using households rather than individuals as the unit of analysis.

The questions were originally written in English and then translated into both Bemba and Nyanja, two languages widely spoken in Zambia.

Measurement of Variables

Two categories of variables, residential evaluations and characteristics of household members, were derived from questions in the original survey instrument and analyzed in this study.

Evaluations of Residential Situation

Both male and female heads of household in the survey sample answered questions concerning evaluations of their residential situation. The following questions from the female head section of the instrument were selected for analysis in this study:

57. What things do you like best about this compound?

58. What things do you dislike the most about this compound?

The following questions from the male head section of the instrument were also used:

86. What things do you like best about this compound?

87. What things do you dislike the most about this compound?

Each of these four questions was open-ended and permitted an unlimited number of responses. Detailed coding was developed for the primary analysis of the data; 100 different response categories were recorded for the entire study population with 88 appearing from the sample of Lusaka households.[*]

For this study the responses were assigned to six dimensions. To a large extent these groupings had been determined by the original coders who had sorted and combined all of these into five dimensions. This researcher independently sorted the response categories into groups which were nearly identical to the five created by the original coders. The only exception was the creation of a dimension of location by this researcher; this dimension had been incorporated into compound quality by original coders. Because of the high level of agreement between the response groupings made by this researcher and those made by original coders, and because all of the original responses were not available to the researcher, it was decided not to use item analysis or factor analysis to determine dimensions of residential situation.

The categories thus generated appear to conform to those identified in literature on housing adjustment and on squatters. They represent basic dimensions of residential situation and include: economic conditions, location, house

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[*]A number of coders were involved in this process until a level of 1% error between coders and supervisors was achieved.

quality, compound quality, services, and interpersonal relations. The complete lists of responses grouped into each of these dimensions are found in Tables 3, 4, 5, 6, 7, and 8.

Several of the responses to the evaluation questions were not incorporated into any of the six dimensions. These included the responses "nothing," "everything," and "do not know." Because the intent of this study was to examine relationships between evaluations of particular dimensions of residential situation and characteristics of household members, it was decided not to analyze these responses directly. However, these responses did have an effect on the indices of evaluation of residential situation that were created because the indices were developed out of a single pool of responses in which "nothing," "everything," and "do not know" were included. These findings do indicate, however, generally negative feelings about residential situation. Nearly 50 percent of the female heads of household mentioned no likes of their residential situation. The same was true of nearly 40 percent of the male heads of household. The distribution of these responses is provided in Table 1.

The measures of evaluation were based on the notion that residential situation is comprised of several basic dimensions which encompass both positive and negative features. Mention of a particular dimension, in terms of either a like or a dislike, was an indication that the dimension was important to the respondent. The more frequently a dimension was mentioned, the more important it was. On this basis, the likes

Table 1. Responses to Evaluation Questions Not Included in
Evaluation Indices

Response	Number of Responses[a]				
	Female Likes[b]	Female Dislikes[b]	Male Likes[b]	Male Dislikes[b]	Total Responses[c]
"Nothing"	431	103	258	100	892
"Everything"	0	0	2	4	6
Missing					
"Do not know"	2	2	4	1	9
Did not respond	84	77	125	121	407
Total[d]	517	182	389	226	1,314
Percent of Column N	48	17	36	21	31

[a]Includes those responses which were not combined into the
six evaluation indices.

[b]$N=1,068$

[c]$N=4,272$

[d]Column totals do not equal N because the interview questions
were open-ended. Some respondents did not provide these
particular responses.

and dislikes of both male and female heads in each household
were combined to create indices indicating the relative levels
of importance of these six dimensions of residential situa-
tion to the household heads. All of the responses were used
with no consideration given to the order in which they were
provided by respondents. The six indices thus created on the
basis of frequency of mention were:

1. Evaluation of economic conditions of
   residence
2. Evaluation of location
3. Evaluation of house quality
4. Evaluation of compound quality
5. Evaluation of services
6. Evaluation of interpersonal relations

Each household unit received a score on each of the six
indices. The score on a particular index for a household
was determined by counting the total number of responses pro-
vided by the male and female heads that could be grouped into
the dimension measured by the index. For example, if the
female head of household liked the neighbors (in the dimension
of interpersonal relations) and the male head of household
disliked them and no other responses were given in this dimen-
sion, then a score of two would be registered in the index
interpersonal relations for that household.

To eliminate missing cases in the creation of the indices,
those cases where the first response to any one of the evalua-
tion questions was missing or marked "do not know" were elimi-
nated. However, in some cases where "do not know" had been
given as the first response, other responses had been given

as the first response, other responses had been given subsequently. These responses were lost in the creation of the indices.

There were some problems in creating indices in this manner. Because the indices were based on open-ended questions, it was not certain that respondents gave all relevant responses to interview questions or that coders correctly understood the intended meaning of some of the responses given. It was not known whether respondents provided valid responses or whether they were influenced in some way by the interviewers or the interview situation.

There was no one question contributing to the creation of the indices with a sufficient number of responses which could be used to test the internal validity of the indices. Nor were there other questions within the survey instrument which could be used for external validation.

The validity of the indices depended on the validity of the basis on which they were created, i.e. that mention of a dimension indicates its importance to the respondent. Nevertheless, it was felt that such indices based on respondents' original responses to questions could offer some insights into the importance of different dimensions of the residential situation of squatters in Lusaka, Zambia.

Table 2 provides the distribution of cases on the six indices which were created. The majority of households scored "0" on all of the indices except interpersonal relations and services. This reflects the dominance of these categories in

the responses given by household heads to the open-ended
evaluation questions. The large number of cases scoring
"0" on the indices may also be attributed, in part, to the
high frequency with which "nothing" was given as a response.

Once the indices were created, the frequency and distri-
bution of individual responses which had been incorporated
into the indices were examined. The findings of these
analyses are indicated in Tables 3, 4, 5, 6, 7, and 8. Exami-
nation of all responses to the evaluation questions provided
an insight into the potential difficulty of using these in-
dices as analytical tools. The indices were based on the
notion that each of the six dimensions of residential situa-
tion consisted of counterbalanacing positive (likes) and
negative (dislikes) features which, when combined, would
constitute a "neutral" dimension of residential situation.
However, it was evident that aspects of economic conditions
of residence, location, and interpersonal relations appeared
most frequently as likes, while house quality, compound quality,
and services appeared as dislikes.

It was decided to create other indices in addition to
the six originally proposed which would include only likes or
dislikes depending on which seemed to dominate in each dimen-
sion. The indices were constructed in a manner similar to
the original indices, i.e. by counting in each dimension the
number of combined likes of male and female heads of household
or the combined dislikes of male and female heads. The

Table 2. Evaluations of Residential Situation (Distribution of Scores on Indices)

Dimension of Evaluation	Number and Percent of Households at Each Score																						Total[a]	
	0		1		2		3		4		5		6		7		8		9		10			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%[b]
Economic conditions	598	70	180	21	65	8	10	1	2	0													855	100
Location	781	91	63	7	8	1	3	0															855	100
House quality	453	53	233	27	131	15	36	4	2	0													855	100
Compound quality	659	77	161	19	25	3	7	1	3	0													855	100
Services	36	4	78	9	177	21	173	20	160	19	93	11	60	7	42	5	22	3	11	1	3	0	855	100
Interpersonal relations	267	31	303	35	203	24	58	7	19	2	2	0	3	0									855	100

[a] Total N is the number of households for which at least one response to the residential evaluation questions could be grouped into one of the six dimensions.

[b] Percents may not total to 100 because of rounding.

indices thus created included:

1. Likes of economic conditions of residence
2. Likes of location
3. Dislikes of house quality
4. Dislikes of compound quality
5. Dislikes of services
6. Likes of interpersonal relations

The distribution of cases on these indices is indicated in Table A in the Appendix.

In order to better understand the composition of the original indices, it was decided to examine separately the responses of male and female heads. It was observed that they demonstrated slightly different response patterns to the evaluation questions.

Indices were therefore created which would represent the responses in the six dimensions of male and female heads of household separately. Following the finding that each dimension was dominated by either likes or dislikes, only likes or dislikes were involved in the indices, depending on which dominated the responses in that dimension. These indices included:

1. Male likes of economic conditions of residence
2. Male likes of location
3. Male dislikes of house quality
4. Male dislikes of compound quality
5. Male dislikes of services
6. Male likes of interpersonal relations
7. Female likes of economic conditions of residence
8. Female likes of location

9. Female dislikes of house quality
10. Female dislikes of compound quality
11. Female dislikes of services
12. Female likes of interpersonal relations

The distribution of cases on these indices is indicated in Tables B and C of the Appendix.

Characteristics of Household Members

Some characteristics of household members, particularly those relating to social class and urbanization, may be associated with the extent to which household members may understand and be able to manage their residential situation and their expectations of this situation. Characteristics of household members selected for this analysis were number of years of formal education of both male and female heads of household, urban experience of both male and female heads of household measured by the number of years that they have lived in urban areas, and total household income.

These three characteristics were selected mainly because they were easily measured from available data. It was also felt that they represented characteristics which may differentiate population groups into social classes in a society undergoing such changes as rapid urbanization, increased opportunities for formal schooling and increased participation of citizens in the paid labor force giving them more income.

Other characteristics of household members may also be relevant to a study of residential evaluations and behaviors. These include personal and structural attributes of households,

social linkages of household members, and material posses-
sions of household members. These were not considered in
this study primarily because they could not be easily derived
from the available data and because it was felt that they
were not as relevant to the purposes of this study as those
that were selected.

Education. One question was selected from the original
instrument pertaining to years of formal education of heads
of household and was answered by both male and female heads.

>   20. Up to what grade or standard did you reach
>   in your education? (Response recorded as
>   total years of education.)

The distribution of education of heads of household is indi-
cated in Table D of the Appendix.

Urban Experience. One question was selected from the
original instrument pertaining to the urban experience of
household members measured by years of residence in an urban
area. This question was answered by both male and female
heads of household.

>   16. How many years of your life have you lived
>   in town? (Response recorded in total num-
>   ber of years.)

The distribution of urban experience of heads of household is
indicated in Table E of the Appendix.

Household Income. Five questions in the original instru-
ment were used to derive a measure of household income in
kwacha (Zambia's basic currency). Three questions were taken
from the section to which both male and female heads of

household responded:

    26.   How much money do you receive at the job
          you are working presently? (Response
          recorded in kwacha per month.)

    28.   Do you get a house allowance for your job?
          (If yes,) how much do they give you per
          month? (Response recorded in kwacha per
          month.)

    29.   Do you have any jobs that you do to earn
          extra money apart from your full-time job
          —jobs like selling beer or food, as a
          driver, as a builder? Tell me each of
          the things you do or make. How much do
          you make from each of these other jobs?
          (Response recorded in kwacha per month
          for each job.)

Two questions from the section to which male heads of house-

hold responded were also used:

    98.   Do you have anybody in this house who
          pays rent to you? (If yes,) how much
          rent all together do they pay you each
          month? (Response recorded in kwacha
          per month.)

    99.   Not including the money that you and
          your wife earn per month, are there
          any other people in this house who
          bring in extra money for food and other
          things needed in the house? (If yes,)
          how much per month? (Response recorded
          in kwacha per month.)

The distribution of total household income is indicated in

Table F of the Appendix.

Method of Analysis

Two stages of analysis were undertaken in this study.

The purpose of the first stage was to determine the content

of the evaluations of residential situation made by male and

female heads of household. Such analysis permitted an under-

standing of the composition of the indices of six dimensions

of residential situation created for each household on the basis of these evaluations. This involved examining the frequencies of combined positive (likes) and negative (dis-likes) responses by male and female heads of household in each response category grouped by dimensions. The positive and negative responses and the responses made by male and female heads of household were considered separately as a sub-analysis in order to gain a better understanding of the combined responses.

The second stage of analysis was undertaken to determine relationships between male and female heads' evaluation of their residential situation and their education, urban experience, and total household income. Pearson Product Moment correlations were used to assess the degree and direction of these relationships. Correlation analysis requires that variables be of an interval level of measurement. Both the variables representing characteristics of household members and the evaluations indices satisfy this requirement.

Correlation coefficients index two properties of a relationship, the magnitude and the direction. The magnitude indicates the degree to which variables vary together. The direction indicates whether the variables vary together (positively) or inversely (negatively). The coefficient has a range from +1.0 (perfect positive correlation) through 0.0 (no correlation) to -1.0 (perfect negative correlation) (Williams, 1979, p. 122). In order to interpret the magnitude of the correlation coefficients that were found, one-tailed

tailed tests of statistical significance were used. The level of significance for acceptance of the hypotheses being tested was set at p<.05.

To test the research hypotheses of the study, correlation coefficients were calculated on relationships between the six indices of evaluation of residential situation and male and female household heads' education, urban experience, and total household income. Additional correlation analyses were performed on relationships between these characteristics of household heads and the additional indices that were created.

All of the analyses in this study were performed using the Statistical Package for the Social Sciences (SPSS) (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975), Version 8a, on the Control Data Cyber 750 computer at the Michigan State University computer center.

CHAPTER IV

FINDINGS

In this chapter the results of the analyses that were
undertaken are reported. In the first section are the fin-
dings of the examination of the content of evaluations of
residential situation made by male and female heads of house-
hold. The second section includes the results of the testing
of hypothesized relationships between variables representing
education and urban experience of male and female heads of
household and total household income, and the indices of the
evaluations in six dimensions of residential situation. The
third section covers the results of additional analyses of
relationships between those characteristics of household mem-
bers and other indices that were constructed from responses to
evaluation questions.

Residential Evaluations

Frequencies of all responses to residential evaluation
questions were examined to determine how responses were dis-
tributed. This analysis contributes to an understanding
of the composition of the indices which were created for each
of the six dimensions of residential situation. It also con-
tributes to an understanding of the dimensions of residential

situation that are important to members of the study sample.

Economic Conditions of Residence

The distribution of the 11 different responses grouped into the general category of economic conditions are provided in Table 3. Observation of the frequency of responses in this dimension indicates that the issues of rent cost and tenure dominate the responses. Sub-analysis of likes and dislikes spearately reveals that positive evaluations (likes) tend to appear in this category more frequently than negative evaluations (dislikes). The only economic condition about which more dislikes were expressed was the cost of goods. Responses of male and female heads of hosuehold fell in similar patterns in this dimension, although male heads mentioned relatively more likes than did females.

Location

Table 4 provides the complete distribution of the three responses grouped into the dimension of location. Both location with respect to work and location with respect to town were important. Positive evaluations (likes) of residential situation appear more frequently than negative evaluations (dislikes) in this dimension. Location was mentioned relatively more frequently by male household heads than by female household heads. Patterns of response seemed slightly different for the two groups. The most frequent response in this category of male heads was location with respect to work. For female heads location with respect to town was most frequent. This difference may be explained in part by

Table 3. Evaluation of Economic Conditions of Residence

Response	Number of Responses[a]				
	Residential Evaluation	Female Likes (N=982)[b]	Female Dislikes (N=989)[b]	Male Likes (N=939)[b]	Male Dislikes (N=946)[b]
Rent cost	138	61	7	68	2
Tenure	134	55	4	73	2
Standard of living	32	18	3	8	3
Personal plans	30	14	0	16	0
Cost of goods	23	2	13	1	7
Job or business	20	4	1	11	4
Money	8	2	3	3	0
Land cost	7	5	0	2	0
Plot fees	4	2	0	1	1
Not own house	4	1	2	1	0
Risky situation	3	1	0	2	0
Total[c]	403	165	33	186	19
Percent of total	100	41	8	46	5

[a]Includes only the responses which could be classified into this category.

[b]N is the number of respondents providing at least one response to the general open-ended interview questions.

[c]Column totals do not equal N because the interview questions were open-ended. Some respondents did not provide responses in this category; others may have provided more than one response.

Table 4. Evaluation of Location

Response	Number of Responses[a]				
Residential Evaluation	Female Likes (N=982)[b]	Female Dislikes (N=989)[b]	Male Likes (N=939)[b]	Male Dislikes (N=946)[b]
Location, near work	54	7	1	45	1
Location, near town	45	17	0	27	1
Location, general	1	1	0	0	0
Total[c]	100	25	1	72	2
Percent of total	100	25	1	72	2

[a]Includes only the responses which could be classified into this category.

[b]N is the number of respondents providing at least one response to the general open-ended interview question.

[c]Column totals do not equal N because the interview questions were open-ended. Some respondents did not provide responses in this category; others may have provided more than one response.

different roles of male and female heads. In this study
population, 92% of male heads of household had jobs whereas
only 19% of female heads did.

House Quality

Table 5 provides the complete distribution of the 15
responses grouped into the dimension of house quality.
Clearly, the issue of toilets dominates this category with
the general quality of the house as the second most frequent
response given. When likes and dislikes are considered
separately, it is evident that negative evaulations (dislikes)
of residential situation are found in this category more
frequently than are positive evaluations (likes). Response
patterns for male and female houehold heads were very similar
in this category.

Compound Quality

Table 6 provides the complete distribution of the nine
responses grouped into the dimensions of compound quality.
Both issues of general compound appearance and dust and dirt
were important. Consideration of likes and dislikes sepa-
rately reveals that negative evaluations (dislikes) of resi-
dential situation appeared in this dimension more frequently
than did positive evaluations (likes). However, if the com-
pound was perceived to be quiet, this was considered to be
a positive quality; no one rated quiet as a negative factor.
Male heads of household gave relatively more responses in
this category than did female heads of household, particularly

Table 5. Evaluation of House Quality

Response	Number of Responses[a]				
	Residential Evaluation	Female Likes (N=982)[b]	Female Dislikes (N=989)[b]	Male Likes (N=939)[b]	Male Dislikes (N=946)[b]
Toilets, gen.	362	2	182	1	177
House, gen.	135	4	74	5	52
Toilets, type	80	0	42	1	37
Plot, size	35	3	7	1	24
Toilets, cleanliness	29	0	14	0	15
House, size	25	0	11	1	13
Garden	11	4	1	5	1
Plot, gen.	8	0	2	1	5
No plot allocated	4	2	1	0	1
Plot, cleanliness	4	0	3	0	1
Floor, type	2	0	2	0	0
Other house qualities	2	0	1	0	1
Kitchen, gen.	1	0	0	0	1
Bathroom, gen.	1	0	0	0	1
Walls, type	1	0	0	0	1
Total[c]	700	15	340	15	330
Percent of total	100	2	49	2	47

[a]Includes only the responses which could be classified into this category.

[b]N is the number of respondents providing at least one response to the general open-ended interview question.

[c]Column totals do not equal N because the interview questions were open-ended. Some respondents did not provide responses in this category; others may have provided more than one response.

Table 6. Evaluation of Compound Quality

Response	Number of Responses[a]				
	Residential Evaluation	Female Likes (N=982)[b]	Female Dislikes (N=989)[b]	Male Likes (N=939)[b]	Male Dislikes (N=946)[b]
Appearance	74	6	31	5	32
Dust and dirt	63	1	33	3	26
Quiet	36	7	0	29	0
Noisy	33	2	7	3	21
Compound, general	30	9	5	13	3
Congestion	26	0	11	0	15
Mud or wet	5	0	2	1	2
Heat	4	0	1	2	1
Cold	1	0	1	0	0
Total[c]	272	25	91	56	100
Percent of total[d]	100	9	33	21	38

[a]Includes only the responses which could be classified into this category.

[b]N is the number of respondents providing at least one response to the general open-ended interview question.

[c]Column totals do not equal N because the interview questions were open-ended. Some respondents did not provide responses in this category; others may have provided more than one response.

[d]Percents do not total 100 because of rounding.

with respect to likes of compound quality.

Services

Table 7 provides the complete distribution of the 38 responses grouped into the dimension of services. This issue of water, including availability, quality, quantity, and distribution was of overwhelming concern to both male and female heads of household. Over 40 percent of all responses in this dimension dealt with water. Issues of clinics or hospitals, road quality, and quantity of schools were also mentioned frequently. When likes and dislikes were considered separately, it was evident that negative evaluations (dislikes) of residential situation appeared more frequently in this category than did positive evaluations (likes). Only the issues of distribution of schools, quantity and quality of shops, sports facilities, religious centers, and beer halls, were liked.

Although overall response patterns for male and female heads of household are similar in the dimension of services, some slight differences in specific responses are evident. Both male and female heads of household dislike their situation in terms of availability of water. Female heads of household mentioned general aspects of water relatively more frequently in their negative evaluations than did male heads. Male heads, on the average, mentioned dislikes of road quality, the electricity situation, and clinics and hospitals more frequently than did female heads of household. In general, the quantity of schools appeared in negative

evaluations by both male and female heads. Distribution of schools appeared in positive evaluations by some female heads. Welfare centers came up more frequently in negative evaluations made by female heads of household but more frequently in positive evaluations by male heads.

Interpersonal Relations

Table 8 provides the complete distribution of the nine responses grouped into the dimension of interpersonal relations. The issues of interpersonal relations in general fighting, and neighbors dominate the responses in this category. Examination of likes and dislikes separately reveals that positive evaluations (likes) appear more frequently in this category than do negative evaluations (dislikes). However, issues of crime and security and of political conflict both appeared in negative evaluations in this category. Separate consideration of male and female heads' responses indicate that male heads of household gave relatively more responses in this category than did female heads, with the most outstanding difference being the greater frequency with which male heads mentioned general aspects of interpersonal relations in their positive evaluations.

Summary

Table 9 provides a summary of all of the responses to the evaluation questions. The content of the evaluations of residential situation was dominated by concerns with services and interpersonal relations. Responses that could not be grouped into any of the specific dimensions were also very

Table 7. Evaluation of Services

Responses	Rank[b]	Number of Responses[a]				
		Residential Evaluation	Female Likes (N=982)[c]	Female Dislikes (N=989)[c]	Male Likes (N=939)[c]	Male Dislikes (N=946)[c]
Beer halls:	20	24	8	3	9	4
Buses/taxis:						
general	13	44	12	14	12	6
availability	20	24	9	6	6	3
Clinics/hospitals:						
general	3	380	26	157	17	180
quality	17	30	2	12	4	12
Electricity:						
general	10	100	1	38	1	60
quantity	37	1	0	1	0	0
Health:	18	27	2	15	1	9
Police protection:						
general	23	20	0	3	4	13
quality	34	3	0	0	0	3
Recreation facilities:	33	5	0	2	1	2
Religious centers:	27	13	5	0	8	0
Roads:						
general	23	20	3	5	0	12
quality	4	374	0	154	3	217
quantity	16	31	1	10	0	20
Schools:						
general	27	13	4	2	3	4
quantity	5	197	8	93	5	91
quality	29	11	1	4	2	4
distribution	14	43	13	7	16	7
other	37	1	0	0	1	0
Services:	34	3	0	2	0	1
Sewage/sanitation:	22	21	0	10	0	11
Shops:						
general	29	11	7	1	2	1
quantity	11	97	49	16	20	12
quality	19	26	12	7	6	1
Sports facilities:	15	35	7	7	16	5
Street lights:	23	20	0	9	0	11
Transportation:	8	104	16	29	21	38
Trash:						
general	31	7	0	4	0	3
collection:	9	103	0	59	0	44
Water:						
general	2	388	11	200	9	168
availability	1	507	8	248	7	244
quality	7	128	1	56	2	69
quantity	6	174	1	95	1	77
distribution	12	73	4	34	2	33
Welfare centers:	26	14	2	6	5	1
Other services:	32	6	1	3	1	1
State of repair:	36	2	0	1	0	1
Total[d]		3,080	214	1,313	185	1,368
Percent of Total		100	7	43	6	44

[a]Includes only the responses which could be classified into this category.

[b]Ranked by frequency of response of residential evaluation.

[c]N is the number of respondents providing at least one response to the general open-ended interview question.

[d]Column totals do not equal N because the interview questions were open-ended. Some respondents did not provide responses in this category; others may have provided more than one response.

Table 8. Evaluation of Interpersonal Relations

Response	Number of Responses[a]				
	Residential Evaluation	Female Likes (N=982)[b]	Female Dislikes (N=989)[b]	Male Likes (N=939)[b]	Male Dislikes (N=946)[b]
Interpersonal relations, general	559	208	10	324	17
Fighting	158	43	14	70	31
Neighbors	147	74	1	68	4
Crime and security	92	10	23	18	41
Friends	78	29	0	49	0
Political conflict	33	3	7	6	17
Freedom	26	6	1	18	1
Relatives	9	5	0	3	1
Drinking	5	0	1	3	1
Total[c]	1,107	378	57	559	113
Percent of total[d]	100	34	5	50	10

[a]Includes only the responses which could be classified into this category.

[b]N is the number of respondents providing at least one response to the general open-ended interview questions.

[c]Column totals do not equal N because the interview questions were open-ended. Some respondents did not provide responses in this category; others may have provided more than one response.

[d]Percents do not total 100 because of rounding

Table 9. Evaluation of Residential Situation—Summary

Response Category	Number of Responses[a]				
	Evaluation	Female Likes (N=1068)[b]	Female Dislikes (N=1068)[b]	Male Likes (N=1068)[b]	Male Dislikes (N=1068)[b]
Economic conditions	403	165	33	186	19
Location	100	25	1	72	2
House quality	700	15	340	15	330
Compound quality	272	25	91	56	100
Services	3,080	214	1,313	185	1,368
Interpersonal relations	1,107	378	57	559	113
Other responses[c]	898	431	103	260	104
Total[d]	6,560	1,253	1,938	1,333	2,036
Percent of total	100	19	30	20	31

[a]Includes all responses to residential evaluation questions.

[b]N is the number of respondents in the study sample.

[c]See Table 2.

[d]Column totals do not equal N because the interview questions were open-ended. Some respondents did not provide responses in some of the dimensions; others may have provided more than one response.

frequently provided.

When likes and dislikes of residential situation were considered separately, it was clear that the positive (likes) and negative (dislikes) responses were not distributed evenly throughout the six dimensions. More negative responses fell into the dimensions of house quality, compound quality, and services, whereas more positive responses related to economic conditions, interpersonal relations, and location.

The other responses to the evaluation question, "nothing," "everything," and "do not know," appeared most frequently in response to the interview question, "What do you like best about this compound?" In general, more female heads of household provided responses in the category of other responses than did male heads. "Nothing" was the most frequently given response by female heads of household to the question about likes. In fact, it was given more frequently by female heads to the likes question than their combined responses in any of the six dimensions. "Nothing" was the second most frequently given response to the likes question by male household heads, being surpassed only by general aspects of interpersonal relations. Beyond this point, however, these other responses were not analyzed because they were not included in the indices of residential evaluation.

When responses made by male and female heads of household were considered separately, it appeared that both gave more negative (dislikes) than positive (likes) responses to the residential evaluation questions. On the average, male

heads of household gave more responses than did female heads, although differences were slight. Overall response patterns for the two groups were similar.

Hypothesis Testing

In this section, the results of the testing of the hypotheses using Pearson Product Moment correlation analysis are reported. Table 10 provides a summary of the correlation coefficients of tested relationships.

Economic Conditions of Residence

The following hypothesis of the relationship between evaluation of economic conditions of residence and selected characteristics of household members was tested:

> H1. Frequency of mention of economic conditions of residence is negatively related to:
> a. education of male household head
> b. urban experience of male household head
> c. education of female household head
> d. urban experience of female household head
> e. total household income

Of these tested relationships, only H1a and H1e achieved an acceptable level of significance. Relationship H1a was found to be in the hypothesized negative direction. However, the magnitude of the coefficients in both cases is very slight. Such findings fail to provide strong support for H1.

Location

The following hypothesis of the relationship between evaluation of location and selected characteristics of household members was tested:

Table 10. Relationships of Education and Urban Experience of Household Heads and Total Household Income to Evaluations of Residential Situation (Pearson Product Moment Correlations)

Characteristics of Household Heads	Dimension of Evaluation					
	Economic Conditions	Location	House Quality	Compound Quality	Services	Interpersonal Relations
Education of male head	-.071*	.038	.040	.061*	.139*	.037
Urban experience of male head	.051	-.013	-.004	-.012	-.058*	.028
Education of female head	-.015	.049	.083*	.046	.047	-.015
Urban experience of female head	-.010	-.003	-.011	.007	.070*	-.001
Total household income	.090*	.021	.036	.036	.129*	-.011

*Significant at $p < .05$

H2. Frequency of mention of location is nega-
tively related to:
a. education of male household head
b. urban experience of male household head
c. education of female household head
d. urban experience of female household head
e. total household income

None of the relationships achieved an acceptable level of significance. These findings fail to provide support for H2.

House Quality

The following hypothesis of the relationship between evaluation of house quality and selected characteristics of household members was tested:

H3. Frequency of mention of house quality is positively related to:
a. education of male household head
b. urban experience of male household head
c. education of female household head
d. urban experience of female household head
e. total household income

Only H3c achieved an acceptable level of significance and the relationship appeared to be in the hypothesized direction. However, the magnitude of the relationship is very slight. These findings fail to provide strong support for H3.

Compound Quality

The following hypothesis of the relationship between evaluation of compound quality and selected characteristics of household members was tested:

H4. Frequency of mention of compound quality is positively related to:
a. education of male household head
b. urban experience of male household head
c. education of female household head
d. urban experience of female household head
e. total household income

Only relationship H4a achieved an acceptable level of significance and the relationship appeared to be in the hypothesized direction. However, the magnitude of the relationship is very slight. Such findings do not provide strong support for H4.

Services

The following hypothesis of the relationship between evaluation of services and selected characteristics of household members was tested:

> H5. Frequency of mention of services is positively related to:
> a. education of male household head
> b. urban experience of male household head
> c. education of female household head
> d. urban experience of female household head
> e. total household income

All but H5c achieved acceptable levels of significance and, of these, all but H5b were in the hypothesized direction. The magnitude of the correlation coefficients was slight in all cases. On the basis of these findings one might conclude that there is some support for hypothesized relationships between education of male head of household and total household income and evaluations of services.

Interpersonal Relations

The following hypothesis of the relationship between evaluation of interpersonal relations and selected characteristics of household members was tested:

> H6. Frequency of mention of interpersonal relations is not related to:

a. education of male household head
b. urban experience of male household head
c. education of female household head
d. urban experience of female household head
e. total household income

None of these tested relationships achieved an acceptable level of significance even though the correlation coefficients were very low. These findings fail to provide support for H6.

Other Analyses

The original intent of this study was to consider only the evaluations of six dimensions of residential situation consisting of the combined responses to questions about likes and dislikes made by both male and female heads of household. However, it was decided to examine likes and dislikes as well as male head and female head responses separately in order to gain a better understanding of the combined responses. When this examination revealed differences in the distribution of likes and dislikes and in male and female head response patterns, additional indices were constructed which reflected these differences. Correlation analyses were undertaken to determine possible relationships between these new indices and education and urban experience of male and female household heads and total household income. The results of these analyses are reported in Tables G, H, and I of the Appendix. In general, the results of these correlation analyses were not very different from those obtained in the initial analyses. Few relationships were found to be significant and of those that were, the magnitude of the correlation coefficients was very slight.

CHAPTER V

SUMMARY, DISCUSSION, AND IMPLICATIONS

Summary of the Study

Given the general problem of the rapid growth of high density, low-cost housing in African, Asian, and Latin American cities, this study was undertaken to identify dimensions of residential situation which are important to members of squatter households in Lusaka, Zambia, and then to determine relationships between squatters' evaluations in these dimensions and selected characteristics of these individuals. Such information could contribute to an understanding of how and why decisions regarding housing are made and implemented at the level of the individual household, and thus provide insights for the formulation of relevant housing policies and programs.

Although set in the framework of a model of housing adjustment proposed by Morris and Winter (1975), this study did not attempt a full application of the model. The study involved evaluations of aspects of residential situation by male and female heads of squatter households and selected characteristics of those individuals. Because housing adjustment provided a conceptual basis for the study, findings could suggest possible directions for further research

in this subject area.

Secondary analysis of data collected in a 1973 study of housing in three Zambian cities was undertaken to serve the purposes of the study. Male and female heads of squatter households in Lusaka, the capital city, comprised the study sample. Measures of education for both male and female heads of household, years of urban residence of male and female heads of household, and total household income were the characteristics of those individuals selected for analysis. Their evaluations of their residential situation were indicated by indices of six dimensions of residential situation. The evaluation indices were created on the basis of the frequency of responses in each dimension.

The six dimensions were economic conditions, location, quality of house, quality of compound, services, and interpersonal relations. These dimensions were derived by grouping male and female household heads' responses to two open-ended questions: "What do you like best about this compound?" and "What do you dislike the most about this compound?" A household's score on each of the indices was calculated by counting the total number of responses given by male and female heads of household in the dimension it measured. Thus the higher the score on the index, the more important the dimension it measured was assumed to be.

It was generally hypothesized that frequency of responses in dimensions of economic conditions of residence and location would be negatively related to the characteristics of

household heads selected for analysis. It was also hypo-
thesized that frequency of responses in dimensions of house
quality, compound quality, and services would be positively
related to these characteristics. It was hypothesized that
there would be no relationship between frequency of response
in the dimension of interpersonal relations and these char-
acteristics.

Pearson Product Moment correlation coefficients and one-
tailed tests of statistical significance were calculated for
these relationships. The correlation analyses provided little
or no support for these hypothesized relationships. The few
significant relationships, although very weak ones, that were
found involved relationships of male head education to fre-
quency of mention of economic conditions, compound quality,
and services; of female head education to frequency of mention
of house quality; of urban experience of male and female
heads to frequency of mention of services; and of household
income to frequency of mention of economic conditions of resi-
dence and services. No significant relationships were found
between characteristics of household heads and frequency of
mention in the dimensions of location and interpersonal rela-
tions. These findings seem to imply that other factors than
education, urban experience, and household income may have
some relationship to evaluations of residential situation
made by squatters in Zambia.

In order to understand better the composition of the in-
dices, the frequency and distribution of responses comprising

them were examined. It was observed that likes of residential situation were strongly concentrated in the dimensions of economic conditions of residence, location, and interpersonal relations. Dislikes were concentrated in the dimensions of house quality, compound quality, and services. This seems to indicate that residential needs of squatters are being satisfied in some areas (likes of residential situation) and not in others (dislikes of residential situation). In general, the response patterns of male and female heads of household were very similar.

Of the 88 different response categories identified for the study population, several individual responses appeared with much greater frequency than all others. These included aspects of tenure, rent cost, general interpersonal relations, toilets, roads and transportation, water, schools, electricity, and clinics. One other response, "nothing," which had not been incorporated into any of the indices and therefore was not involved in the correlation analyses, was provided frequently by respondents. In fact it was the most frequent individual response given by female heads of household to the question about likes and the second most frequently given response by male heads of household to this question.

Limitations of the Study

This study was based on secondary analysis of data gathered in a study in which the author was not involved. Consideration of the design and implementation procedures

used in the original study led to the assumption that available data were reliable and valid. However, some problems were encountered in the conceptualization of the study problem and in the selection of specific variables for this analysis.

Ideally, empirical studies are designed such that data collected represent or measure concepts or variables encompassed by a particular conceptual or theoretical framework. In the design process, attention can be given to particular relationships to be tested as well as to relevant methods of analysis to be employed. Careful design may thus facilitate analysis and interpretation of findings.

In this secondary analysis, a model of housing adjustment was selected as a basis from which to select variables and relatonships for analysis. Although it was felt that this model served as a useful point of departure, it was also found that the fit between the model and the available data was not as close as would have been desirable. This problem was somewhat complicated by the fact that few applications of the model seem to have been undertaken outside of the continental United States. Consequently, the study lacks strong theoretical or empirically tested underpinnings for hypothesized relationships or general study design.

Of perhaps more significance as a problem to the study was the author's unfamiliarity with study data. There was no assurance that the data analyzed accurately measured the concepts that they were used to measure. Because the

distribution of cases on the selected variables was not known, the methods of analysis that were undertaken turned out to be problematic.

Responses to open-ended questions were used as the basis for the construction of indices. In general, open-ended questions must be approached with caution; although one assumes open-ended responses to be accurate and complete, there is no guarantee that they are. At the point where the author was constructing the evaluation indices, it was not known that each index would consist of either primarily likes or dislikes rather than a "neutral" combination of the two. This finding about the nature of the indices made the interpretation of analyses involving the indices somewhat more complicated than was originally intended.

Despite these methodological difficulties, the use of open-ended questions as the basis for this study provided detailed information about the evaluations of residential situation made by heads of squatter households. A limited amount of research has been undertaken previously in this field of study in an African context. The use of open-ended questions may therefore be justified in terms of the new insights that they generate. Such information could be incorporated into later studies of squatters, their evaluations of their residential situation, and their behaviors and decisions related to housing.

A household's score on an index of a dimension of residential situation was incremented by one each time that a

response was given in a particular dimension. If no response was given by household members in a dimension, the score on the index of that dimension was "0". It was discovered in the process of analysis that two dimensions, interpersonal relations and services, dominated the responses. As a result, the distribution of scores on these two indices showed some variation, but because the indices were developed out of the same pool of responses, most of the cases on the other indices were at the "0" level. The skewed distribution of scores on indices may have had some influence on the low correlation coefficients and the lack of significance that were revealed by analysis. Overall, the study permitted useful observations pertaining to dimensions of residential situation but the interpretation of findings of correlation analyses was difficult.

Discussion and Conclusions

Evaluations of Residential Situation

To serve the first purpose of this study which was to identify dimensions of residential situation that are important to members of squatter households, responses to open-ended questions were examined. This examination indicated that respondents' concerns center in a few areas. Aspects of residential situation which were most frequently liked had to do with aspects of interpersonal relations, location, and economic conditions such as rent cost and tenure. Dislikes focused on house quality, compound quality, and

services, particularly water, schools, and clinics.

Such findings were not unexpected as previous studies of squatters (Andrews et al., 1973; National Housing Authority, 1972) yielded similar results. Unanticipated, however, was the degree to which respondents seemed to agree in their evaluations. Aspects of interpersonal relations dominated the things liked, and services dominated the things disliked in nearly all cases. This distribution of responses seems to indicate that squatter housing is meeting some needs for most residents, i.e. those aspects of residential situation that are liked, and not meeting others, i.e. those things disliked by household members.

Some slight differences were found between responses provided by male and female heads of household. For example, male heads appeared to be relatively more concerned with issues related to interpersonal relations whereas female heads of household indicated more concern with some of the services to households. Such differences might be attributed in part to gender role differences. For example, in many African households it is women and female children who are responsible for carrying water to the house for use by all household members. Concern about distribution of water may be a response to this role.

A large percentage of the respondents also stated that they liked nothing. There is a need to understand better the meaning of this response. There might be a segment of the population that is completely dissatisfied with its

residential situation. Such an interpretation seems plausible given that respondents mentioned more dislikes than likes about their residential situation. If this is the case, it is important to determine the factors which differentiate these people from others. There is also the possibility that some of the respondents, because of the dynamics of the interview situation or other factors, were not inclined to respond and gave "nothing" as an easy answer.

Relationships between Evaluations and Characteristics of Household Members

In most cases where relationshps between education and urban experience of male and female household heads and total household income and evaluations of residential situation were tested, no significant relationships were found. Of those that were found to be statisically significant, the coefficients were very low. Most of the significant relationships seemed to exist within the index of services, with education of male head of household and total household income showing the strongest relationships.

Such findings seem to indicate that very few relationships exist between household heads' education, urban experience, and income and their evaluations of residential situation. These findings are not consistent with literature which suggests that there will be differences in residential priorities indicated in people's evaluations and that different personal characteristics, particularly those related to social class and urbanization, may account for variations.

There are several possible explanations for this inconsistency.

It has been suggested previously that the lack of statistically significant relationships or low correlation coefficients may be attributed, at least in part, to a methodological problem, i.e. the skewed distribution of scores on the indices. It is also possible that higher scores on indices may indicate a greater capacity on the part of the respondent to verbalize opinions rather than the relative importance of particular dimensions of residential situation. If this were true, one might find, for example, a strong positive relationship between education and index scores.

There is the possibility that those characteristics which were selected for analysis were not those most relevant to the study. Urban experience might have been measured differently including, for example, only years of urban residence at a certain stage of one's life cycle or encompassing more specific urban housing experiences. Some measure of socioeconomic status which combines effects of education, occupation, and income, and which may be related to different aspirations or expectations, might be more relevant to this kind of analysis than simple measures of income or education. It might be useful to study the effects of gender on evaluations.

Additional Analyses

Previous analyses with the same set of data on which this study is based revealed that some of the characteristics selected do not have a completely linear effect on housing behaviors. Effects of equal increments of some are different at different levels. Transformations of these variables can be made in order to linearize relationships. Earlier analysis of data from this population indicated that useful transformations were found to be square of education and log of income.[*] These transformations were applied to the variables used in this study, and correlation coefficients were calculated of the transformed variables with the indices. The coefficients obtained were compared with those obtained earlier. Tables J, K, L, and M in the Appendix (corresponding to Tables 10, G, H, and I respectively) summarize the results. Relationships did not change appreciably.

In addition to this correlation analysis, some regression analyses were performed using both non-transformed and transformed variables to determine the extent to which knowledge of characteristics of household members might permit prediction of index scores. As in the case of the correlation analysis, a sub-program of the Statistical Package for the Social Sciences (SPSS) (Nie et al, 1975) was used for these regression analyses. The multiple regression technique used involved forward (stepwise) inclusion in which the order of inclusion is determined by the respective

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[*]Personal communication from David S. Wiley.

contribution of each variable to explained variance. Independent variables are entered only if they meet certain statistical criteria. The SPSS program for forward stepwise inclusion will not enter independent variables that do not achieve satisfactory values of F and tolerance.

Few of the regressions were statistically significant. Results are summarized in Tables N, O, P, Q, R, and S. In general, it appears that the predictive capacity of education and urban experience of heads of household and total household income on index scores is minimal. However, it is interesting to note that those characteristics studied may serve as better predictors of residential evaluations by male heads of household than by female heads of household. Concerning the dimension of house quality, however, these variables do not significantly contribute to predictions of evaluations for male heads of household, but may have some predictive relations to evaluations by female heads of household.

Implications

Further Research

Although some methodological concerns were raised in this study, there appears to be little support for the general hypothesis that there is a relationship between education and urban experience of heads of squatter households and total income and household heads' evaluations of residential situation. In future tests of this hypothesis, a better

measure of evaluations of residential situation is needed. This study has yielded some information which can be incorporated into the development of such a measure.

It has been revealed that aspects of tenure, rent cost, interpersonal relations, toilets, roads and transportation, water, schools, electricity, and clinics appear most frequently in residential evaluations made by heads of squatter households. Measures should deal with these specific concerns in such a way as to determine how household members rank their importance. It might be possible, for example, to design a study which includes scales on which the perceived seriousness of problem areas is assessed.

The survey instrument used to collect the data used in this study did contain several questions which had respondents assess the seriousness of such problem areas as water, toilets, refuse, transportation, schooling, and health care. For example:

> 61. Do you consider getting water in this compound is a serious problem, somewhat of a problem, or not a problem at all?

These questions were not included in this study, however, as they did not seem to fit as well with the purposes of the study as did those open-ended questions that were used. Nevertheless, responses to such questions could be correlated with characteristics of household members while controlling for effects of actual residential conditions.

Certainly the relationships between characteristics of household members and their evaluations of residential

situation reflecting needs is but a part of a larger process of adjusting housing to housing needs. Further attention needs to be given to other relationships among household characteristics (other than education, urban experience, and income), level of satisfaction with housing conditions, aspirations and plans of household members, factors which constrain or facilitate implementation of plans (e.g. alternatives for action, resources, information), and actual decisions that are made.

For example, the differences found in this study between male and female household heads' evaluations of residential situation seem to indicate a need to understand more fully gender roles and how priorities, aspirations, and goals related to housing vary for different household members depending on these roles. In order to understand preferences, decisions, and behaviors related to housing at the level of the household unit; it would also be useful to investigate relationships among roles, aspirations, and goals of different household members and actual decisions and behaviors. Programs might be tailored to those different individuals who have specific influences on behaviors of all household members.

On a more conceptual level, more thought might be given to linking those characteristics studied and/or other characteristics of household members through the concept of household resources and testing relationships between resources and other components of the housing adjustment model.

Whereas resources, both economic and non-economic, are generally viewed as means through which people can achieve their goals, specific resources may conceivably be linked to people's aspirations, decisions, and actual behaviors concerning their residential situation. It would be useful as far as policy-making and program planning are concerned to understand whether certain resources such as specific information, skills, or money, are associated with residential decisions and behaviors of household members. It might then be possible to anticipate how residential patterns may change with other social changes such as expansion or decline of the labor force or of educational opportunities.

An attempt to control for effects of actual living conditions was not made in this study, thus leaving open the possibility that variations in evaluations are caused by the influence of actual conditions in addition to or instead of the influence of other factors such as the selected characteristics of household members. It is important that future studies control for such effects. For example, one might investigate variations in evaluations of individuals living in the same conditions by developing some objective measure of housing or compound quality or by grouping segments of the study population according to particular compounds of residence. Compounds in Lusaka vary according to such features as distance to city center, number of schools, and source of water (National Housing Authority, 1972).

Most of the studies on housing adjustment in the continental United States found family life cycle variables such as age of household head and number and age of children to be particularly useful predictors of housing adjustment plans and behaviors. Although there was no specific indication that such variables are relevant to the context of squatting, it could be useful to test relationships between these other characteristics of household members and residential evaluations among a population of squatters. For example, it might be hypothesized that those families with school age children give higher priority to schools than do families with infant children.

It is also important to determine whether relationships between characteristics of household members and evaluations of residential situation exist for only certain of the dimensions of residential situation, whereas other needs are so basic and important as to appear in evaluations of all residents. Clean water supply may be an example of this; it is important to everyone regardless of their income or education. Given this possibility it may be useful to give more attention to those aspects of a model of housing adjustment which could incorporate some assessment of whether basic needs are met, i.e. actual conditions of residential situation.

Lloyd (1979a) suggested that housing-related behaviors of squatters could be viewed as a rational decision-making process in which household members act in order to attain

certain goals and aspirations. However, their choices may
be forced upon them in some cases because of limited re-
sources or alternatives. This perspective, when considered
along with the findings of this study and other studies
of squatter housing, suggests that a model to understand
housing behaviors in the context of squatting would involve
the following components:

- actual housing conditions
- characteristics of household members
- household members' level of satisfaction
  with residential situation
- plans and goals of household members
- social, political, and economic constraints
  on household members
- actual decisions and behaviors

Policy Implications

Much of the recent literature on squatter housing,
urban development, and housing policy and standards, indicates
that squatter housing has proved to be a viable response to
acute housing shortages in areas undergoing rapid urbaniza-
tion. Squatters are able to meet some of their needs such
as low-cost shelter, access to work, and access to friends
and relatives through their own initiatives or self-help.
However, there are indications that in order to meet pressing
needs, squatters need technical, material, and financial
support. Policies that reflect these pressing needs and
that provide support are needed.

Findings of this study indicate that squatters would
like clean water supplies, better roads, more schools,

improved toilets, and better house structures. However,
such changes need to be implemented in a context which does
not jeopardize already existing benefits derived from living
in squatter settlements. This study indicates that squatters
like their economic and tenure situation and their access
to jobs and friends. In light of this finding, the construc-
tion of site and service schemes which may be more expensive
or farther away from jobs seems not to be the answer. Up-
grading of existing housing areas, a policy promoted by
Martin (1977) and others, seems to be a more viable alter-
native.

APPENDIX:

ADDITIONAL TABLES

Table A.   Likes and Dislikes of Residential Situation (Distribution of Scores on Indices)

Dimension of Evaluation	Number and Percent of Households at Each Score											Total[a]
	0	1	2	3	4	5	6	7	8	9	10	
	N %	N %	N %	N %	N %	N %	N %	N %	N %	N %	N %	N %[b]
Likes												
Economic conditions	637 74	152 18	61 7	7 1	2 0							859 100
Location	787 92	61 7	8 1	3 0								859 100
Interpersonal relations	320 37	303 35	185 22	35 4	14 2	1 0	1 0					859 100
Dislikes												
House quality	473 54	233 27	131 15	30 3	1 0	1 0						869 100
Compound quality	733 84	110 13	21 2	3 0	2 0							869 100
Services	58 7	102 12	213 25	166 19	156 18	78 9	47 5	32 4	13 1	4 0		869 100

[a]Total N is the number of households for which at least one response was given to questions on likes or dislikes of residential situation.

[b]Percents may not total 100 because of rounding.

Table B. Male Heads' Likes and Dislikes of Residential Situation (Distribution of Scores on Indices)

Dimension of Evaluation	Number and Percent of Households at Each Score																						Total[a]	
	0		1		2		3		4		5		6		7		8		9		10			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%[b]
Likes																								
Economic conditions	777	83	138	15	24	3																	939	100
Location	874	93	58	6	7	1																	939	100
Interpersonal relations	464	49	396	42	75	8	3	0	1	0													939	100
Dislikes																								
House quality	650	69	263	28	32	3	1	0															946	100
Compound quality	853	90	87	9	5	1	1	0															946	100
Services	175	18	332	35	225	24	146	15	57	6	11	1											946	100

[a]Total N is the number of households for which at least one response was given to the questions on residential likes or dislikes.

[b]Percents may not total 100 because of rounding.

Table C. Female Heads' Likes and Dislikes of Residential Situation (Distribution of Scores on Indices)

Dimension of Evaluation	Number and Percent of Households at Each Score																							Total[a]	
	0		1		2		3		4		5		6		7		8		9		10				
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%[b]
Likes																								
Economic conditions	833	85	133	14	16	2																	982	100
Location	959	98	21	2	2	0																	982	100
Interpersonal relations	651	66	285	29	45	5	1	0															982	100
Dislikes																								
House quality	689	70	261	26	38	4	1	0															989	100
Compound quality	909	92	69	6	11	1																	989	100
Services	157	16	416	42	245	25	121	12	47	5	2	0	1	0									989	100

[a]Total N is the number of households for which at least one response was given to the questions on residential likes or dislikes.

[b]Percents may not total 100 because of rounding.

Table D. Years of Education of Male and Female Heads of Household

Respondent	Years of Education							
	0	1-2	3-4	5-6	7-8	9-10	11 or more	Total[a]
Male head of household	216	42	222	199	180	63	32	954
Female head of household	484	67	183	103	91	13	2	943

[a]Includes those households for which information was provided.

Table E. Years of Urban Experience of Male and Female Heads of Household

Respondent	Years of Urban Experience						
	0-4	5-9	10-14	15-19	20-24	25 or more	Total[a]
Male head of household	110	251	168	135	126	162	952
Female head of household	241	277	132	103	91	94	938

[a]Includes those households for which information was provided.

Table F. Total Household Income

Number of Households at Each Level of Income (kwacha per month[a])						Total
0-20	21-40	41-60	61-80	81-100	over 100	
94	213	282	161	90	130	970

[a]1 kwacha is valued at approximately US$1.40

Table G. Relationships of Education and Urban Experience of Household Heads and Total Household Income to Likes and Dislikes of Residential Situation (Pearson Product Moment Correlations)

Characteristics of Household Heads	Dimension of Evaluation					
	Economic Conditions (Likes)	Location (Likes)	House Quality (Dislikes)	Compound Quality (Dislikes)	Services (Dislikes)	Interpersonal Relations (Likes)
Education of male head	-.056	.031	.039	.052	.138*	.009
Urban experience of male head	.030	-.005	-.010	.000	-.089*	-.004
Education of female head	-.008	.052	.072*	.074*	.054	-.047
Urban experience of female head	-.013	.001	-.013	.033	.049	-.004
Total household income	-.076*	.020	.035	.063*	.078*	-.027

*Significant at $p < .05$

Table H. Relationships of Education and Urban Experience of Male Head and Total Household Income to Male Heads' Likes and Dislikes of Residential Situation (Pearson Product Moment Correlations)

Characteristics of Household Heads	Dimension of Evaluation					
	Economic Conditions (Likes)	Location (Likes)	House Quality (Dislikes)	Compound Quality (Dislikes)	Services (Dislikes)	Interpersonal Relations (Likes)
Education of male head	-.064*	.058*	.059*	.075*	.120*	-.020
Urban experience of male head	.051	-.031	-.036	-.011	-.084*	.019
Total household income	.050	.017	.012	.093*	.094*	-.055

*Significant at p<.05

Table I. Relationships of Education and Urban Experience of Female Head and Total Household Income to Female Heads' Likes and Dislikes of Residential Situation (Pearson Product Moment Correlations)

Characteristics of Household Heads	Dimension of Evaluation					
	Economic Conditions (Likes)	Location (Likes)	House Quality (Dislikes)	Compound Quality (Dislikes)	Services (Dislikes)	Interpersonal Relations (Likes)
Education of female head	.035	.006	.083*	.028	.062*	-.051
Urban experience of female head	.016	.005	.026	.044	.040	.050
Total household income	.052	.004	.043	-.001	.021	.016

*Significant at $p < .05$

Table J. Relationships of Education (Square) of Household Heads and Total Household Income (Log) to Evaluations of Residential Situation (Pearson Product Moment Correlations)

Characteristics of Household Heads	Dimension of Evaluation					
	Economic Conditions (Likes)	Location (Likes)	House Quality (Dislikes)	Compound Quality (Dislikes)	Services (Dislikes)	Interpersonal Relations (Likes)
Squared education of male head	-.056	.024	.034	.084*	.139*	.016
Squared education of female head	-.014	.035	.068*	.066*	.028	-.032
Log of total household income	.042	.064*	.050	.031	.171*	-.028

*Significant at $p < .05$

Table K. Relationships of Education (Square) of Household Heads and Total Household Income (Log) to Likes and Dislikes of Residential Situation (Pearson Product Moment Correlations)

Characteristics of Household Heads	Dimension of Evaluation					
	Economic Conditions (Likes)	Location (Likes)	House Quality (Dislikes)	Compound Quality (Dislikes)	Services (Dislikes)	Interpersonal Relations (Likes)
Squared education of male head	-.039	.014	.037	.079*	.139*	-.014
Squared education of female head	-.007	.037	.065	.106*	.038	-.065
Log of total household income	.027	.062*	.054	.057	.127*	-.034

*Significant at $p < .05$

Table L. Relationships of Education (Square) of Male Head and Total Household Income (Log) to Male Heads' Likes and Dislikes of Residential Situation (Pearson Product Moment Correlations)

Characteristics of Male Heads	Dimension of Evaluation					
	Economic Conditions (Likes)	Location (Likes)	House Quality (Dislikes)	Compound Quality (Dislikes)	Services (Dislikes)	Interpersonal Relations (Likes)
Squared education of male head	-.062*	.044	.058*	.094*	.116*	-.039
Log of total household income	.030	.057*	.033	.098*	.122*	-.059*

*Significant at $p < .05$

Table M. Relationships of Education (Square) of Female Head and Total Household Income (Log) to Female Heads' Likes and Dislikes of Residential Situation (Pearson Product Moment Correlations)

Characteristics of Female Heads	Dimension of Evaluation					
	Economic Conditions (Likes)	Location (Likes)	House Quality (Dislikes)	Compound Quality (Dislikes)	Services (Dislikes)	Interpersonal Relations (Likes)
Squared education of female heads	.033	.011	.077*	.062*	.051	-.042
Log of total household income	.004	.031	.060*	-.021	.057*	-.008

*Significant at p<.05

Table N. Effects of Education and Urban Experience of Male and Female Household Heads and Total Household Income on Evaluations of Residential Situation (Regression Analysis[a])

Dimension of Evaluation	Independent Variables Beta					R^2	Signifi-cance
	Education of Male Head	Urban Experience of Male Head	Education of Female Head	Urban Experience of Female Head	Household Income		
Economic conditions	-.084	.058	b	-.021	.105	.016	.011
Location	.018	-.014	.040	.018	.010	.003	.795
House quality	-.020	.007	.073	-.009	.026	.005	.530
Compound quality	.047	-.048	.024	.049	.020	.007	.342
Services	.116	-.103	-.020	.114	.106	.041	.000
Interpersonal relations	.035	.057	-.036	-.033	-.022	.044	.646

[a]Forward stepwise inclusion of independent variables in which the order of inclusion is determined by the respective contribution of each variable to explained variance. Independent variables are entered only if they meet certain statistical criteria.

[b]Satisfactory values of F and tolerance required by the SPSS program for entry of a variable into a regression equation were not achieved.

Table 0. Effects of Education (Square) and Urban Experience of Male and Female Household Heads and Total Household Income (Log) on Evaluations of Residential Situation (Regression Analysis[a])

Dimension of Evaluation	Independent Variables Beta					R^2	Significance
	Education of Male Head	Urban Experience of Male Head	Education of Female Head	Urban Experience of Female Head	Household Income		
Economic conditions	-.063	.061	b	-.015	.054	.008	.182
Location	.008	-.017	.026	.017	.059	.005	.618
House quality	-.034	.007	.064	-.008	.042	.005	.557
Compound quality	.071	-.045	.035	.048	-.009	.011	.150
Services	.106	-.106	-.053	.117	.151	.053	.000
Interpersonal relations	.018	.056	-.042	-.036	-.034	.005	.523

[a]Forward stepwise inclusion of independent variables in which the order of inclusion is determined by the respective contribution of each variable to explained variance. Independent variables are entered only if they meet certain statistical criteria.

[b]Satisfactory values of F and tolerance required by the SPSS program for entry of a variable into a regression equation were not achieved.

Table P. Effects of Education and Urban Experience of Male Household Heads and Total Household Income on Male Heads' Likes and Dislikes of Residential Situation (Regression Analysis[a])

Dimension of Evaluation	Independent Variables Beta			R^2	Significance
	Education of Male Head	Urban Experience of Male Head	Household Income		
Economic condition (likes)	-.072	.047	.066	.010	.030
House quality (dislikes)	.051	-.028	b	.004	.199
Compound quality (dislikes)	.057	.005	.075	.011	.019
Services (dislikes)	.099	-.081	.070	.026	.000

[a]Forward stepwise inclusion of independent variables in which the order of inclusion is determined by the respective contribution of each variable to explained variance. Independent variables are entered only if they meet certain statistical criteria.

[b]Satisfactory values of F and tolerance required by the SPSS program for entry of a variable into a regression equation were not achieved.

Table Q. Effects of Education (Square) and Urban Experience of Male Household Heads and Total Household Income (Log) on Male Heads' Likes and Dislikes of Residential Situation (Regression Analysis[a])

Dimension of Evaluation	Independent Variables Beta			R^2	Significance
	Education of Male Head	Urban Experience of Male Head	Household Income		
Economic condition (likes)	-.073	.051	.050	.009	.052
House quality (dislikes)	.048	-.025	.015	.004	.338
Compound quality (dislikes)	.077	b	.069	.014	.002
Services (dislikes)	.076	-.082	.099	.028	.000

[a]Forward stepwise inclusion of independent variables in which the order of inclusion is determined by the respective contribution of each variable to explained variance. Independent variables are entered only if they meet certain statistical criteria.

[b]Satisfactory values of F and tolerance required by the SPSS program for entry of a variable into a regression equation were not achieved.

Table R. Effects of Education and Urban Experience of Female Household Heads and Total Household Income on Female Heads' Likes and Dislikes of Residential Situation (Regression Analysis[a])

Dimension of Evaluation	Independent Variables Beta			R^2	Significance
	Education of Female Head	Urban Experience of Female Head	Household Income		
Economic condition (likes)	.031	.025	.053	.005	.256
House quality (dislikes)	.079	.030	.037	.009	.051
Compound quality (dislikes)	.034	.040	-.005	.003	.533
Services (dislikes)	.049	.031	.014	.004	.381

[a]Forward stepwise inclusion of independent variables in which the order of inclusion is determined by the respective contribution of each variable to explained variance. Independent variables are entered only if they meet certain statistical criteria.

[b]Satisfactory values of F and tolerance required by the SPSS program for entry of a variable into a regression equation were not achieved.

Table S. Effects of Education (Square) and Urban Experience of Female Household Heads and
Total Household Income (Log) on Female Heads' Likes and Dislikes of Residential
Situation (Regression Analysis[a])

Dimension of Evaluation	Independent Variables Beta			R^2	Significance
	Education of Female Head	Urban Experience of Female Head	Household Income		
Economic condition (likes)	.038	.027	b	.002	.407
House quality (dislikes)	.077	.034	.052	.011	.027
Compound quality (dislikes)	.072	.038	-.035	.007	.123
Services (dislikes)	.032	.036	.049	.005	.229

[a]Forward stepwise inclusion of independent variables in which the order of inclusion is
determined by the respective contribution of each variable to explained variance. Inde-
pendent variables are entered only if they meet certain statistical criteria.

[b]Satisfactory values of F and tolerance required by the SPSS program for entry of a
variable into a regression equation were not achieved.

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